

Lithernet - Casambi Gateway v6.05_beta

User Manual Status: March 4, 2026

Table of contents

1. Hardware ... 8
   1.1. LED display ... 9
   1.2. Hardware revisions ... 11
      1.2.1. Hardware revision 0 ... 12
      1.2.2. Hardware Revision 1 ... 13
      1.2.3. Hardware Revision 2.X ... 14
         1.2.3.1. Upgrade from REV_2 to REV2.5 ... 16
         1.2.3.2. Downgrade from REV_2.5 to REV_2 ... 19
   1.3. Watchdog ... 21
   1.4. Reset button ... 22
   1.5. Compliance ... 24
   1.6. Bluetooth module ... 25
   1.7. Type plate ... 27
   1.8. Firmware versions ... 29
   1.9. Software libraries ... 30
2. Areas of application ... 32
   2.1. Gateway to Eutrac Netcomposer ... 33
   2.2. Gateway to the Helvar router system (HelvarNet) ... 35
   2.3. Gateway to a system via UDP/TCP commands ... 37
   2.4. Bridge between individual Casambi systems ... 39
   2.5. Connection to an existing evaluation system/visualization ... 41
   2.6. ArtNet gateway ... 43
   2.7. BacNet/IP gateway ... 44
   2.8. MQTT ... 46
   2.9. KNX/IP ... 47
   2.10. HomeAssistant ... 49
   2.11. WebAPI ... 50
   2.12. Example implementations ... 51
3. Login ... 54
4. General settings ... 56
   4.1. Firmware warning ... 58
   4.2. Network ... 59
      4.2.1. IP settings ... 62
      4.2.2. Web server ... 64
      4.2.3. NTP client ... 66
      4.2.4. Restart gateway ... 68
   4.3. System ... 69
      4.3.1. Control System Wizard ... 72
         4.3.1.1. Netcomposer System ... 74
         4.3.1.2. Art-Net ... 75
         4.3.1.3. Free commands via UDP ... 76
         4.3.1.4. HelvarNet (TCP) ... 77
         4.3.1.5. Free commands via TCP ... 79

4.3.1.6. UDP Casambi Command 80
4.3.1.7. TCP Casambi command 82
4.3.1.8. UDP Casambi Bridge 84
4.3.1.9. BacNet/IP 85
4.3.1.10. MQTT 89
4.3.1.11. KNX/IP 91
4.3.1.12. HomeAssistant 92
4.3.2. Casambi Settings 94
4.3.3. LED Settings 96
4.3.4. Date and Time 97
4.3.5. Automation 99
4.3.6. Restart Gateway 100
4.4. Memory 101
4.4.1. Update Firmware 102
4.4.2. File System 103
4.4.3. Import/Export 104
4.4.4. System Memory 105
4.4.5. UDP debug port 106
4.4.5.1. LanLog.exe 108
4.5. Reset device 109
5. Protocol-specific settings 111
5.1. ArtNet 112
5.1.1. To Casambi 113
5.1.2. From Casambi 117
5.2. BacNet/IP 118
5.2.1. View in gateway 119
5.2.1.1. To Casambi 120
5.2.1.1.1. Commands 121
5.2.1.1.2. Sensors 122
5.2.1.1.2.1. Light sensor 125
5.2.1.1.2.2. Presence 126
5.2.1.2. From Casambi 127
5.2.2. View in BacNet 128
5.2.2.1. To Casambi 131
5.2.2.2. From Casambi 133
5.2.2.3. Sensor Value To Casambi 134
5.2.2.4. Broadcast 136
5.2.2.5. Device 138
5.2.2.6. ungrouped 141
5.2.2.7. Groups 143
5.2.2.8. Scenes 145
5.2.3. Polling 147
5.3. Free commands TCP 148
5.3.1. To Casambi 149
5.3.1.1. Select storage space 150

5.3.1.2. Trigger 151
5.3.1.3. Action 152
5.3.2. From Casambi 154
5.3.2.1. Storage space selection 156
5.3.2.2. Trigger 157
5.3.2.3. Action 159
5.4. Free commands UDP 160
5.4.1. To Casambi 161
5.4.1.1. Select memory location 162
5.4.1.2. Trigger 163
5.4.1.3. Action 164
5.4.2. From Casambi 166
5.4.2.1. Storage space selection 168
5.4.2.2. Trigger 169
5.4.2.3. Action 171
5.5. HelvarNet (TCP) 172
5.5.1. To Casambi 173
5.5.1.1. Commands 174
5.5.1.1.1. Select storage location 175
5.5.1.1.2. Trigger 176
5.5.1.1.3. Action 177
5.5.1.2. Sensors 179
5.5.2. From Casambi 181
5.5.2.1. Memory space selection 183
5.5.2.2. Trigger 184
5.5.2.3. Action 186
5.5.3. HelvarNet Command Builder 187
5.5.3.1. Recall Scene (Group) 189
5.5.3.2. Recall Scene (Device) 190
5.5.3.3. Direct Level (Group) 191
5.5.3.4. Direct Level (Device) 192
5.5.3.5. Dimm (Group) 193
5.5.3.6. Dimming (Device) 194
5.6. MQTT 195
5.6.1. View in gateway 196
5.6.1.1. To Casambi 197
5.6.1.1.1. Commands 198
5.6.1.1.2. Sensors MQTT 199
5.6.1.1.2.1. Light sensor 200
5.6.1.1.2.2. Presence 201
5.6.1.2. From Casambi 202
5.6.2. Use in MQTT 203
5.6.2.1. Receiving MQTT data 204
5.6.2.1.1. Gateway 205
5.6.2.1.2. Broadcast 206

5.6.2.1.3. Devices 207
5.6.2.1.4. Ungrouped 211
5.6.2.1.5. Groups 212
5.6.2.1.6. Scenes 213
5.6.2.1.7. Button 214
5.6.2.1.8. Dali (D4i) 215
5.6.2.2. Send MQTT data 219
5.6.3. Polling 225
5.7. Netcomposer 226
5.7.1. To Casambi 227
5.7.1.1. Select storage space 228
5.7.1.2. Trigger 229
5.7.1.3. Action 230
5.7.2. From Casambi 232
5.7.2.1. Storage space selection 234
5.7.2.2. Trigger 235
5.7.2.3. Action 237
5.7.3. Netcomposer Command Builder 238
5.7.3.1. Device Level 240
5.7.3.2. Scene 241
5.7.3.3. Group with Scene 242
5.7.3.4. Group with Level 243
5.7.3.5. Sequence 244
5.8. KNX/IP 245
5.8.1. To Casambi 246
5.8.1.1. Commands 247
5.8.1.2. Sensors 250
5.8.2. From Casambi 252
5.9. HomeAssistant 253
5.9.1. To Casambi 254
5.9.2. From Casambi 258
5.10. UDP Casambi Command 259
5.10.1. View in gateway 260
5.10.1.1. To Casambi 261
5.10.1.2. From Casambi 262
5.10.2. Control in the network 263
5.10.2.1. Commands from the Casambi system 265
5.10.2.1.1. 0x0D - Scene called up 266
5.10.2.1.2. 0x1A - SetParameterValue 267
5.10.2.1.3. 0x1B - ParametersComplete 268
5.10.2.1.4. 0x28 - Receive time from the Casambi network 269
5.10.2.1.5. 0x39 - Node status 270
5.10.2.1.6. 0x3A - Notify node removed 272
5.10.2.1.7. 0x45 - Scene status 273
5.10.2.1.8. 0x46 - Target status 274

5.10.2.1.9. 0x49 - Target Color 275
5.10.2.1.10. 0x4B - NotifyControlValues Responses 276
5.10.2.1.11. 0x4B - NotifyButtonEvent Responses 279
5.10.2.2. Commands to the Casambi system 281
5.10.2.2.1. 0x10 - Push Button Pressed 282
5.10.2.2.2. 0x11 - Push Button Released 283
5.10.2.2.3. 0x1D - GetParameterValue 284
5.10.2.2.4. 0x1E - Set Level of a Scene 285
5.10.2.2.5. 0x1F - Set level of a group 286
5.10.2.2.6. 0x20 - Set level of a target 287
5.10.2.2.7. 0x21 - Set level of button target 289
5.10.2.2.8. 0x28 - Request time from the Casambi network 290
5.10.2.2.9. 0x28 - Set time in the Casambi network 291
5.10.2.2.10. 0x2B - Set presence sensor 292
5.10.2.2.11. 0x2C - Set light sensor 293
5.10.2.2.12. 0x2F - Set color via RGBW 294
5.10.2.2.13. 0x31 - SetTargetVerticalRatio 296
5.10.2.2.14. 0x38 - Set color via X / Y 298
5.10.2.2.15. 0x39 - Node status 300
5.10.2.2.16. 0x3D - Set color via Hue/Sat 301
5.10.2.2.17. 0x3E - SetTargetDimmers 303
5.10.2.2.18. 0x3F - SetTargetElements 305
5.10.2.2.19. 0x45 - Scene status 307
5.10.2.2.20. 0x46 - Target status 308
5.10.2.2.21. 0x48 - Set color temperature 309
5.10.2.2.22. 0x49 - Target Color 311
5.10.2.2.23. 0x4A - Resume automation 313
5.10.2.2.24. 0x4B - NotifyControlValues 314
5.10.2.2.25. 0x50 - NotifyButtonEvent 316
5.10.2.3. Demo programs 318
5.11. TCP Casambi Command 319
5.11.1. View in gateway 320
5.11.1.1. To Casambi 321
5.11.1.2. From Casambi 322
5.11.2. Control in the network 323
5.12. UDP Casambi Bridge 324
5.12.1. Bridge Mode Command Builder 325
5.12.2. To Casambi 326
5.12.2.1. Select storage location 327
5.12.2.2. Action 328
5.12.3. From Casambi 329
5.12.3.1. Storage space selection 331
5.12.3.2. Trigger 332
5.12.3.3. Action 334
5.13. Casambi 335

5.13.1. Ping 336
5.13.2. Set Level 337
5.13.3. Push Button Pressed 339
5.13.4. Push Button Released 340
5.13.5. Set Presence 341
5.13.6. Set Scene Level 342
5.13.7. Set Group Level 344
5.13.8. Set Push Button Level 346
5.13.9. Set lux sensor 348
5.13.10. Set Tc 349
5.13.11. RGBW set 350
5.13.12. Hue / Sat set 352
5.13.13. Vertical set 353
5.13.14. Start Automation 354
5.13.15. SetTargetDimmers 355
5.13.16. SetTargetElements 356
5.14. WebAPI 357
5.14.1. Set Target Value 358
6. Diagnostics 359
6.1. Console 362
6.1.1. Console 365
6.1.2. Parameters 366
6.2. System Status 369
7. Settings in the Casambi app 372
7.1. Profile selection 373
7.2. Behavior as a light fixture 375
7.3. Settings as a luminaire 376
7.4. Settings as pushbutton 379
7.5. Settings as PIR sensor 381
7.6. Settings as lux sensor 382
7.7. Identify 383
8. Firmware changelog 384
9. Support 385

1. Hardware



The device has only one network connection (RJ-45). Power is supplied via POE. The gateway uses one address in the Casambi network.

There are 4 LEDs on the front panel for status indication.

1.1. LED display



The gateway has four status LEDs on the front. They are arranged from bottom to top.

Operating LED

- Color: Green
- Behavior: Flashes every 1 second
- Meaning: The gateway is operating normally.

Network status LED

- Color: Yellow
- Behavior: Lights up continuously
- Meaning: A physical network connection (link) is present.

UDP status LED

- Red: No UDP connection established
- Green: UDP connection established
- Note: The LED only indicates the status of UDP communication.

TCP/IP status LED

- Red: No TCP/IP connection established
- Green: TCP/IP connection established
- Note: The LED indicates the status of an active TCP/IP connection.

Deactivation

All status LEDs can be deactivated via the device software.

Identification mode

If the gateway is set to identification mode via the user interface, LEDs 2 to 4 flash up and down in sequence for 10 seconds.

Behavior after restart

After a restart, it can take up to 60 seconds for the UDP and TCP/IP status LEDs to display the actual connection status.

1.2. Hardware revisions

1.2.1. Hardware Revision 0

Hardware Revision 0

Supports firmware versions 1.XX with "_REV0" in the name.



1.2.2. Hardware Revision 1

Hardware Revision 1

Supports firmware versions 1.XX, 2.XX, and 3.XX with "_REV1" in the name.





Identifiable on the type plate by the "01-XXXXX" at the beginning.



1.2.3. Hardware Revision 2.X

Hardware Revision 2

Hardware revision 2 supports the following firmware versions:

- Version 3.xx with the designation "_REV2"
- Version 4.xx with the designation "_REV2"

The corresponding profile "REV_2" must be selected in the Casambi app

Hardware Revision 2.5

The hardware of Revision 2.5 is mechanically and electrically identical to Revision 2.
However, due to adjustments in the Casambi profiles, separate profile assignment is required.

Revision 2.5 supports:

- Version 4.xx with the label "_REV2.5"
- Version 5.xx with the label "_REV2.5"
- Version 6.xx with the label "_REV2.5"

The corresponding profile "REV_2.5" must be selected in the Casambi app.

Features of Revision 2.X

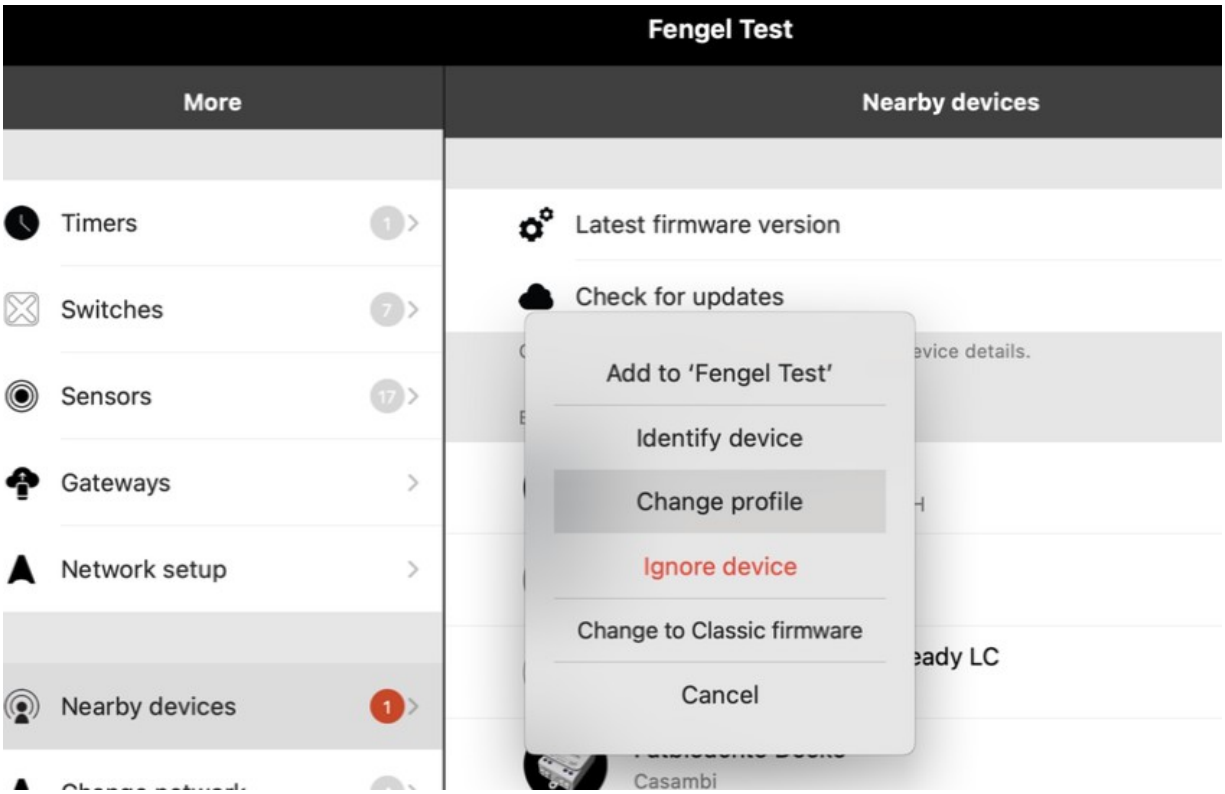




Identifiable on the type plate by the "02-XXXXX" at the beginning.

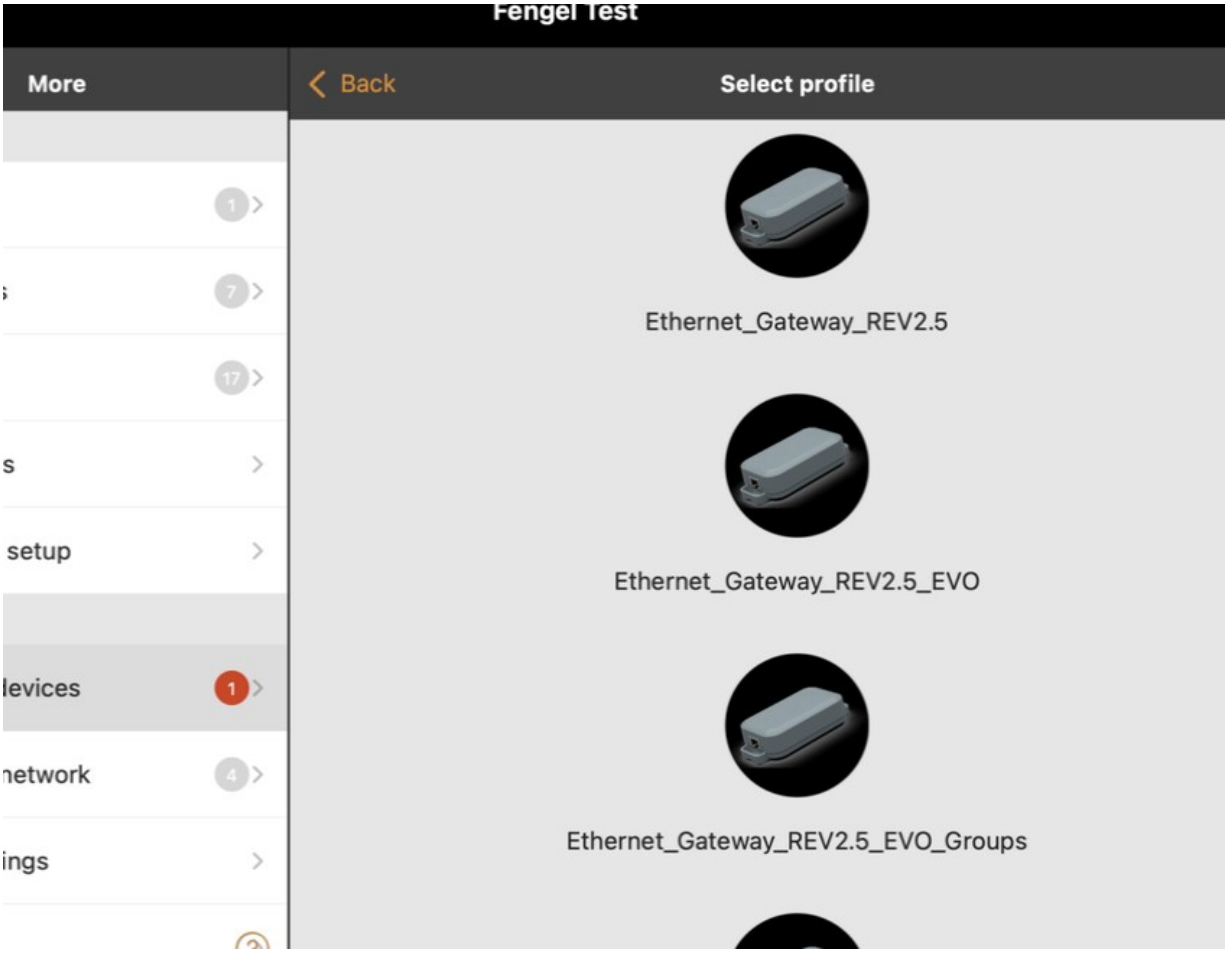

Lithernet - Casambi Gateway
02-02/2023-00000600
Licht Manufaktur Berlin GmbH
Stresemannstr.15
10963 Berlin
UK
CA

1.2.3.1. Upgrade from REV_2 to REV2.5



Profile change to revision 2.5

1. Open the "Nearby Devices" page in the Casambi app.
2. Select the appropriate gateway.
3. If the gateway is already connected to a network, it must first be unpaired.
4. Once it has been successfully unpaired, you can change the profile using the "Change profile" function.
5. Select the profile ending in "_REV2.5" from the list.
6. After successfully changing the profile, the gateway can be paired with the network again.



Firmware update to revision 2.5

After changing the profile, the appropriate firmware must also be installed.

1. Open the device web interface.
2. Perform a firmware update to a version that has "_REV2.5" in its name.

Checking the configuration

After successfully completing all steps:

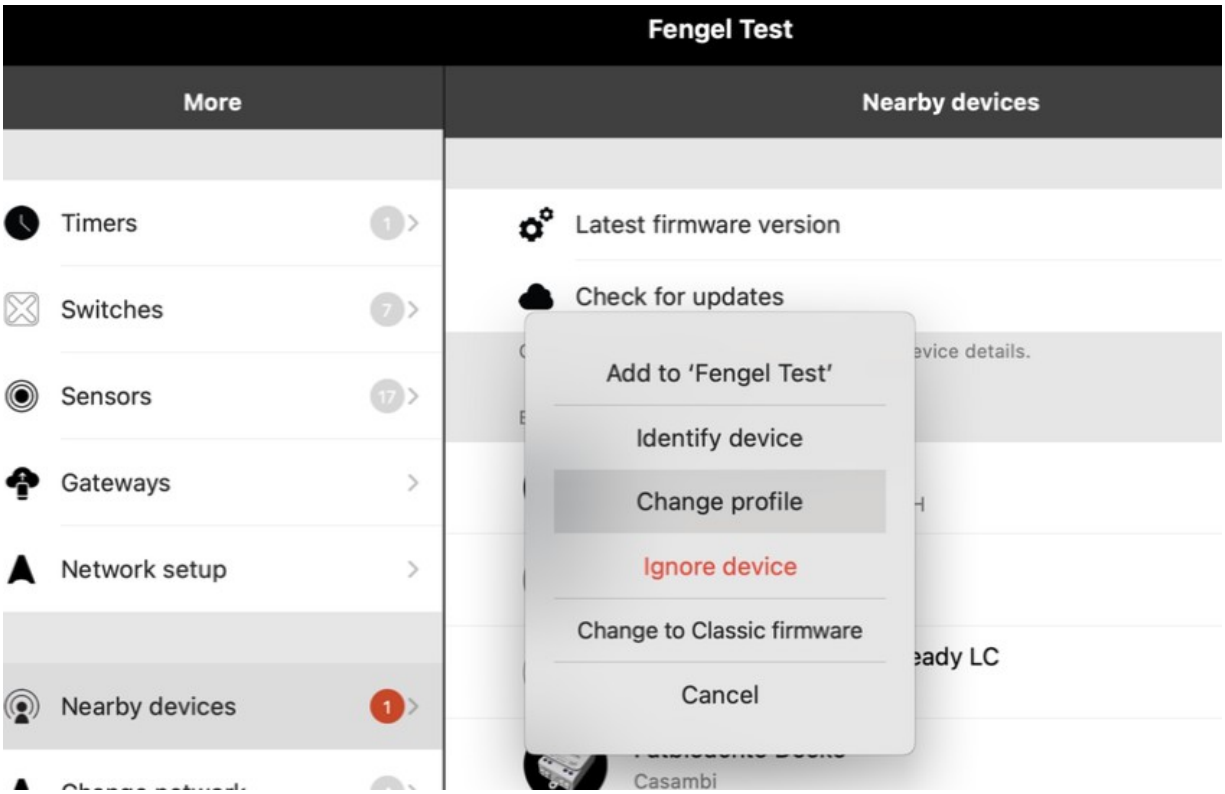
- Open the web interface.
- Navigate to "Casambi Settings."
- Check the "Profile" entry.

The previously selected profile must be displayed correctly there.

If an incorrect profile is still displayed, click on "Refresh Casambi Info" to retrieve the data from the Casambi module again.

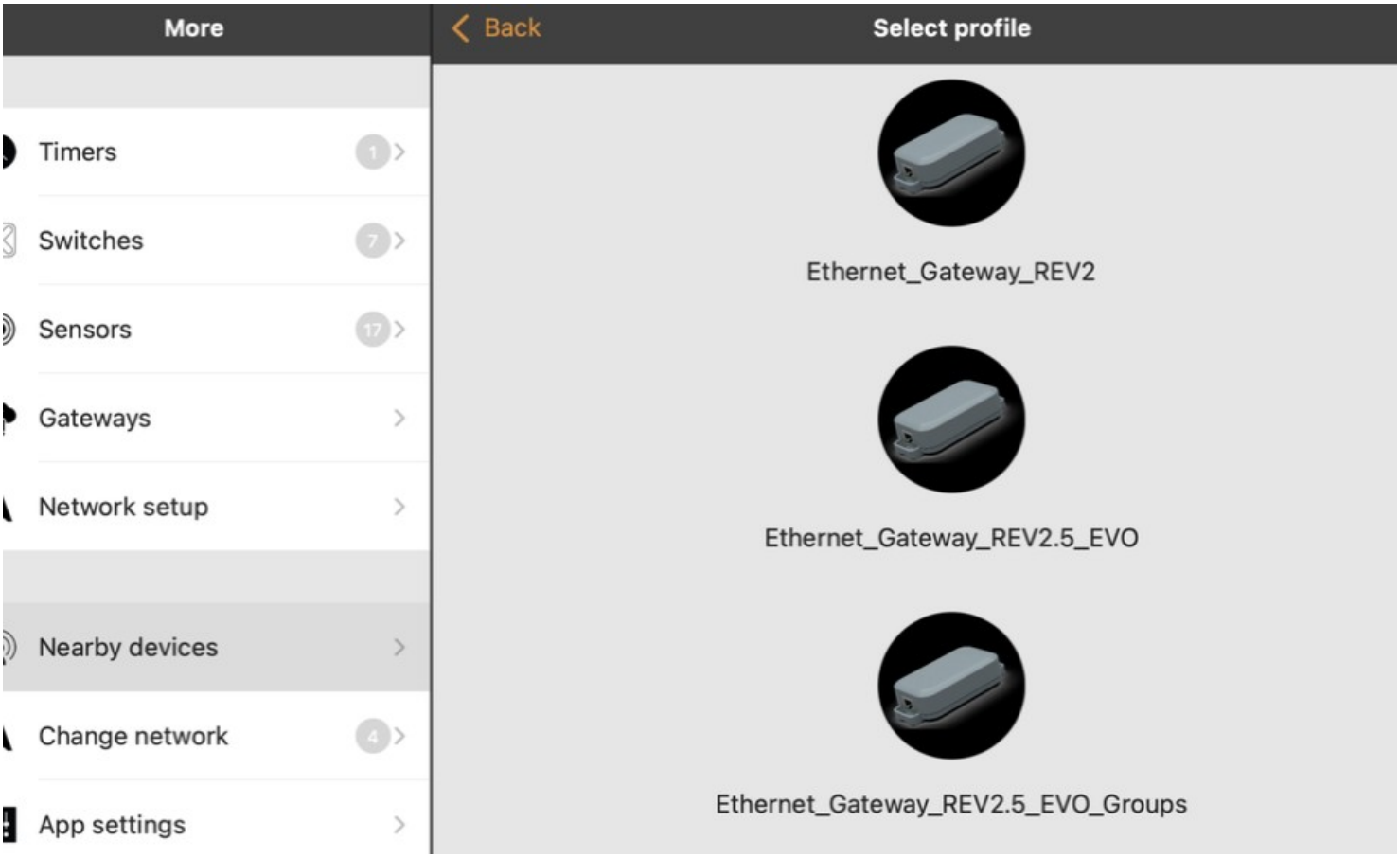

Casambi Settings
Casambi Version
40.84
Profile
Ethernet_Gateway_REV2.5
Casambi Network
paired
Polling Method
active
Save
Refresh Casambi Info

1.2.3.2. Downgrade from REV_2.5 to REV_2



Profile change to revision 2

1. Open the "Nearby Devices" page in the Casambi app.
2. Select the appropriate gateway.
3. If the gateway is already connected to a network, it must first be unpaired.
4. Once it has been successfully unpaired, the profile can be changed using the "Change profile" function.
5. Select a profile from the list that ends with "_REV2".
6. After successfully changing the profile, the gateway can be paired with the network again.



Firmware update to revision 2

After changing the profile, the appropriate firmware must also be installed.

1. Open the device web interface.
2. Perform a firmware update to a version that has "_REV2" in its name.

Checking the configuration

After successfully completing all steps:

• Open the web interface.
• Navigate to "Casambi Settings."
• Check the "Profile" entry.

The previously selected profile must be displayed correctly there.

If an incorrect profile continues to be displayed, click on "Refresh Casambi Info" to retrieve the data from the Casambi module again.

1.3. Watchdog

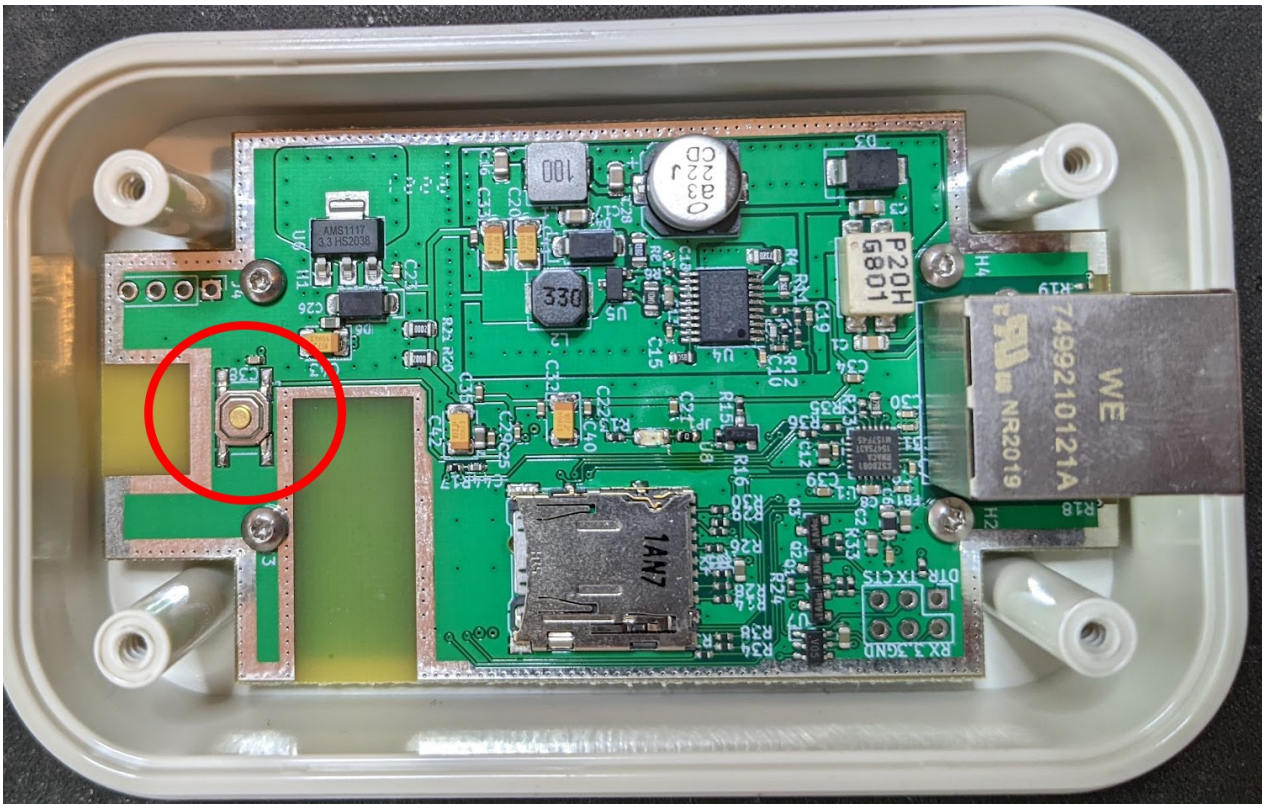
A watchdog mechanism is implemented in the gateway.

The watchdog monitors the proper operation of the system and is set to a time of 90 seconds.

If no regular system status is detected within this period, the gateway automatically restarts.

This function serves to increase operational reliability and ensures that the device automatically returns to a defined state in the event of a fault.

1.4. Reset button



Before opening the housing, the following measures must be taken:

- Disconnect the device completely from the power supply
- Ensure that there is no external power supply
- Secure against being switched back on

When working on the open circuit board, appropriate ESD protection measures must be observed (e.g., grounded wrist strap, ESD workstation).

Improper opening or working on the device can result in:

- Damage to the electronics
- Malfunctions
- Loss of warranty claims.

The device may only be operated when completely closed.

There is an integrated push button on the circuit board.

The button is accessible after removing the four screws on the bottom of the device and opening the housing.

Different functions are triggered depending on how long the button is pressed.

Button duration and function

0 s to < 15 s	LED test program
≥ 15 s to < 30 s	Soft reset
≥ 30 s	Hard reset

Soft reset

A soft reset resets the following settings to factory defaults:
- IP configuration
- Login data

Other device settings remain unchanged.

Hard reset

A hard reset resets all device settings to factory defaults. In addition, the internal memory is completely erased.



After a hard reset, the gateway must be completely reinitialized and reconfigured.

1.5. Conformity

EC Declaration of Conformity

Lichtmanufaktur Berlin GmbH hereby declares that the radio equipment type "Lithernet - Casambi Gateway Rev2" complies with Directive 2014/53/EU.

The full text of the EU Declaration of Conformity is available at the following Internet address: https:// archiv.intelligent-lighting.de/index.php/s/3xLdrSSi84A4AfA

UKCA

The full text of the UKCA Declaration of Conformity is available at the following Internet address: https:// archiv.intelligent-lighting.de/index.php/s/Qy36AdAkqBfwtY3

1.6. Bluetooth module

All information on this page refers only to the radio module used. Not to the complete product.

The CBM-002B module from Casambi Oy is used as the Bluetooth module.

The declaration of conformity for the radio module can be found at the following Internet address: https://f.hubspotusercontent40.net/hubfs/7177595/Data%20sheets/English/CBM-003/CBM-003_DoC_2022-01-14.pdf

---

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between equipment and receiver.

To comply with FCC RF exposure guidelines, the transmitter and your body must be separated from each other by a minimum of 20 cm and fully supported by the operating and installation configurations of the transmitter and its antenna(s).
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Contains FCC ID: 2ALA3-CBM003B

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

---

(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

This device complies with Industry CNR
Canada applicable to license-exempt radio devices. Operation is authorized under the following two conditions:

(1) the device must not cause interference;
(2) the user of the device must accept any radio interference
received, even if the interference is likely to compromise its operation.

The device has been evaluated as meeting general RF exposure requirements. To maintain compliance with RSS-102 radio frequency (RF) exposure guidelines, this equipment should be installed and operated with a minimum distance of 20 cm between the radiator (transmitter?) and your body.

The device has been evaluated as meeting general RF exposure requirements. To maintain compliance with RSS-102 radio frequency (RF) exposure guidelines, this equipment should be installed and operated with a minimum distance of 20 cm between the radiator (transmitter?) and your body.

Contains IC: 22496-CBM003B

1.7. Type plate

There are two nameplates on the back of the device.

Type plate 1 – Device identification



The first type plate contains device-specific information. This information is also encoded in the barcode.

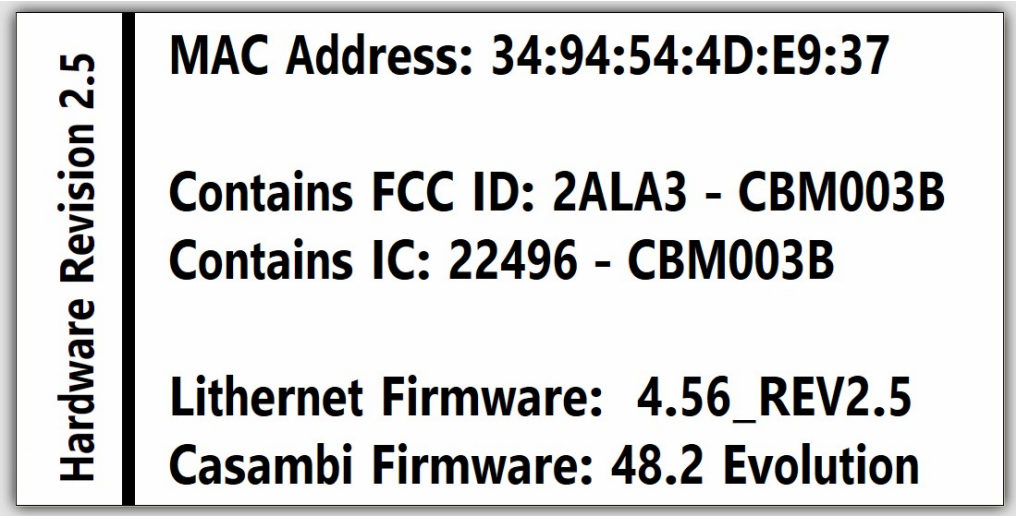
The label is structured as follows:

02
Product name: Lithernet – Casambi Gateway Revision 2

41/2020
Week and year of manufacture (example:
calendar week 41 in 2020)

00000001
Serial number of the device

Type plate 2 – Radio module



The second type plate contains the required markings for the installed CBM-003B radio module.

The information contained therein complies with the regulatory requirements for the radio module.

Packaging labeling

The same device-specific information (product variant, date of manufacture, and serial number) is also printed on the device packaging.

1.8. Firmware versions

Several major versions of the firmware are currently available for the gateway.
Compatibility depends on the Casambi firmware used.

Firmware 1.xx - Compatible with:

- Casambi Classic
- Casambi Evolution < 33.22

Firmware 2.xx - Compatible with:

- Casambi Evolution ≥ 33.22

Firmware 3.xx - Compatible with:

- Casambi Evolution ≥ 34.50

Firmware 4.xx - Compatible with:

- Casambi Evolution ≥ 39.50

Firmware 5.xx
This version served as the first implementation of IPv6 functionality.
The development status was transferred to version 6.xx and will not be continued.

Firmware 6.xx - Compatible with:

- Casambi Evolution ≥ 48.00

Backup files are not compatible between different major versions (e.g., 3.xx to 4.xx or 4.xx to 6.xx).

When updating to a different major version, the gateway must be completely reconfigured.

Changes were made to the storage structure between versions 3.04 and 3.10.

Backups created with a version prior to 3.10 may not be successfully restored in newer 3.x versions.

The system automatically checks the compatibility between gateway firmware and Casambi firmware. If the

Casambi version used is not compatible, a corresponding warning message is displayed.

1.9. Software libraries

The Lithernet – Casambi Gateway uses the following open source software libraries:

1. AsyncTCP
    - Version: 3.4.10
    - Project page: https://github.com/ESP32Async/AsyncTCP
    - License: GNU Lesser General Public License (LGPL-3.0)

2. MycilaMQTT
    - Version: 6.1.3
    - Project page: https://github.com/mathieucarbou/MycilaMQTT
    - License: MIT License

3. ArduinoJson
    - Version: 7.4.2
    - Project page: https://github.com/bblanchon/ArduinoJson
    - License: MIT License

4. NeoPixelBus
    - Version: 2.8.4
    - Project page: https://github.com/Makuna/NeoPixelBus
    - License: GNU Lesser General Public License (LGPL-3.0)

5. Espressif32 Framework for PlatformIO
    - Version: 3.3.7
    - Project page: https://github.com/pioarduino/platform-espressif32
    - License: Apache License 2.0

6. eModbus
    - Version: 1.7.4
    - Project page: https://github.com/eModbus/eModbus
    - License: MIT License

7. urlencode
    - Version: 1.0.1
    - Project page: https://github.com/plageoj/urlencode
    - License: MIT License

8. Ethernet
    - Version: 2.0.2
    - Project page: https://github.com/arduino-libraries/Ethernet
    - License: GNU Lesser General Public License (LGPL ≥ 2.1)

Open source license notice

This product contains software components that have been published under open source licenses (including MIT License, Apache License 2.0, and GNU Lesser General Public License – LGPL).

The respective license texts and copyright notices for the components used can be viewed on the specified project pages.

Note on MIT and Apache licenses

Software components under the MIT License and the Apache License 2.0 may be used, modified, and redistributed in accordance with the respective license terms.
The corresponding copyright and license notices remain unaffected by this.

Note on the GNU Lesser General Public License (LGPL)

Some components of this product are licensed under the GNU Lesser General Public License (LGPL). In

accordance with the provisions of the LGPL:

- the source code of the respective library remains available under the LGPL,
- modifications to the library may only be distributed under the terms of the LGPL,
- Dynamic or static linking is permitted in accordance with the license terms.

The full license text is available on the respective project pages.

Upon request, Lichtmanufaktur Berlin GmbH will provide the source code of the components covered by the LGPL and any changes made to them within the scope of its legal obligations.

Requesting source code

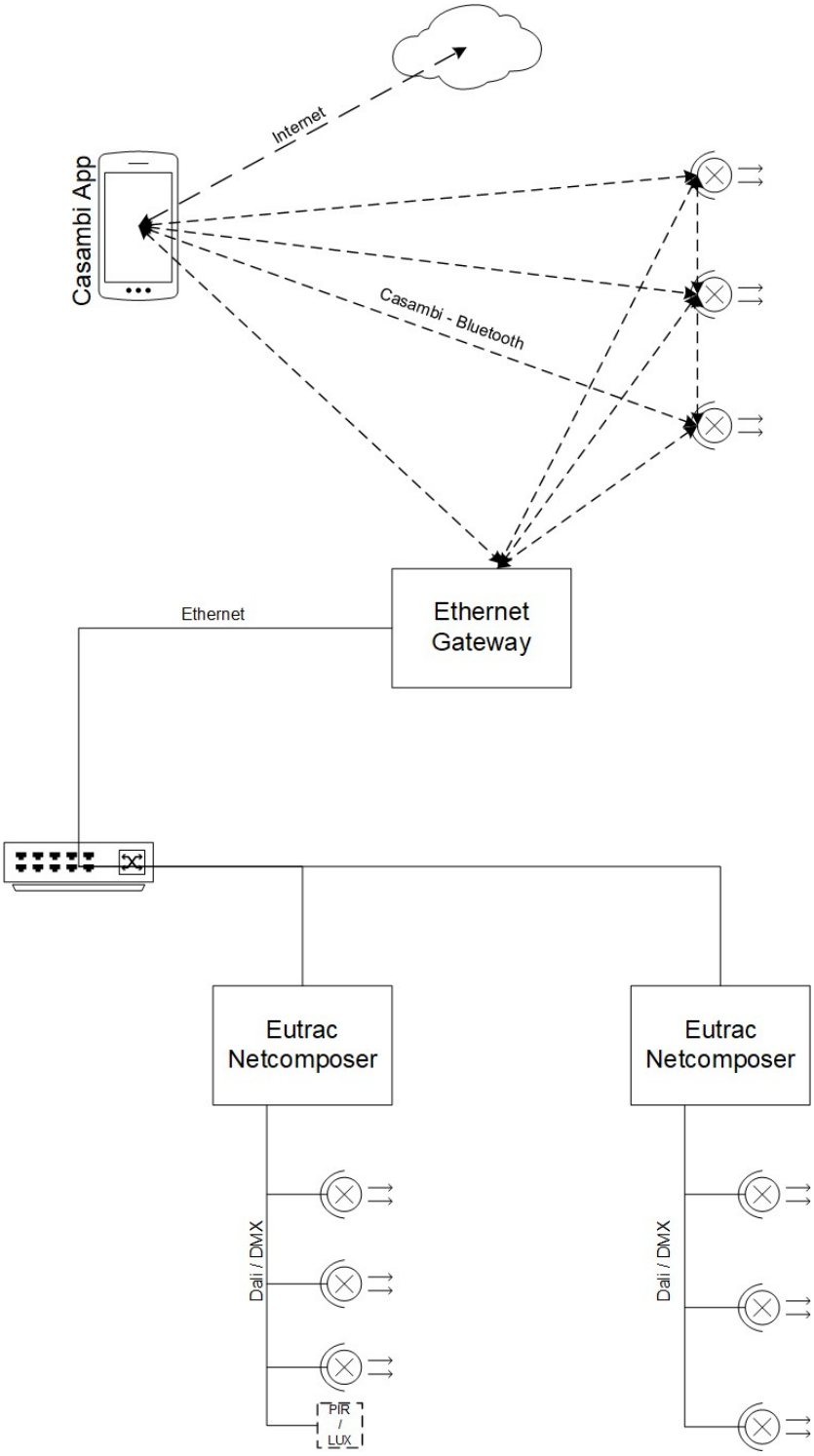
The source code of the software components licensed under LGPL can be requested for a period of at least three years from the date of release of the product.
Requests should be sent tan:kontakt@l-manufaktur.de

2. Areas of application

The Ethernet gateway can be used in various ways.

2.1 Gateway to an existing lighting control system (Netcomposer)
2.2 Gateway to an existing lighting control system (Helvar)
2.3 Gateway to a system using UDP or TCP (ASCII-based commands)
2.4 Bridge between individual Casambi networks
2.5 Connection to an existing evaluation system/visualization
2.6 ArtNet gateway
2.7 BacNet/IP gateway
2.8 MQTT
2.9 KNX/IP
2.10 HomeAssistant
2.11 WebAPI

2.1. Gateway to Eutrac Netcomposer



In this operating mode, the gateway can be connected to a system consisting of Eutrac Netcomposers.

Communication between the two systems is bidirectional.

Up to 32 triggers per direction can be configured per gateway:

- 32 triggers from the gateway to the Netcomposer system
- 32 triggers from the Netcomposer system to the gateway

Configuration

Programming is carried out using an integrated wizard.
This wizard assists in creating commands and simplifies the configuration of triggers. To use this function,

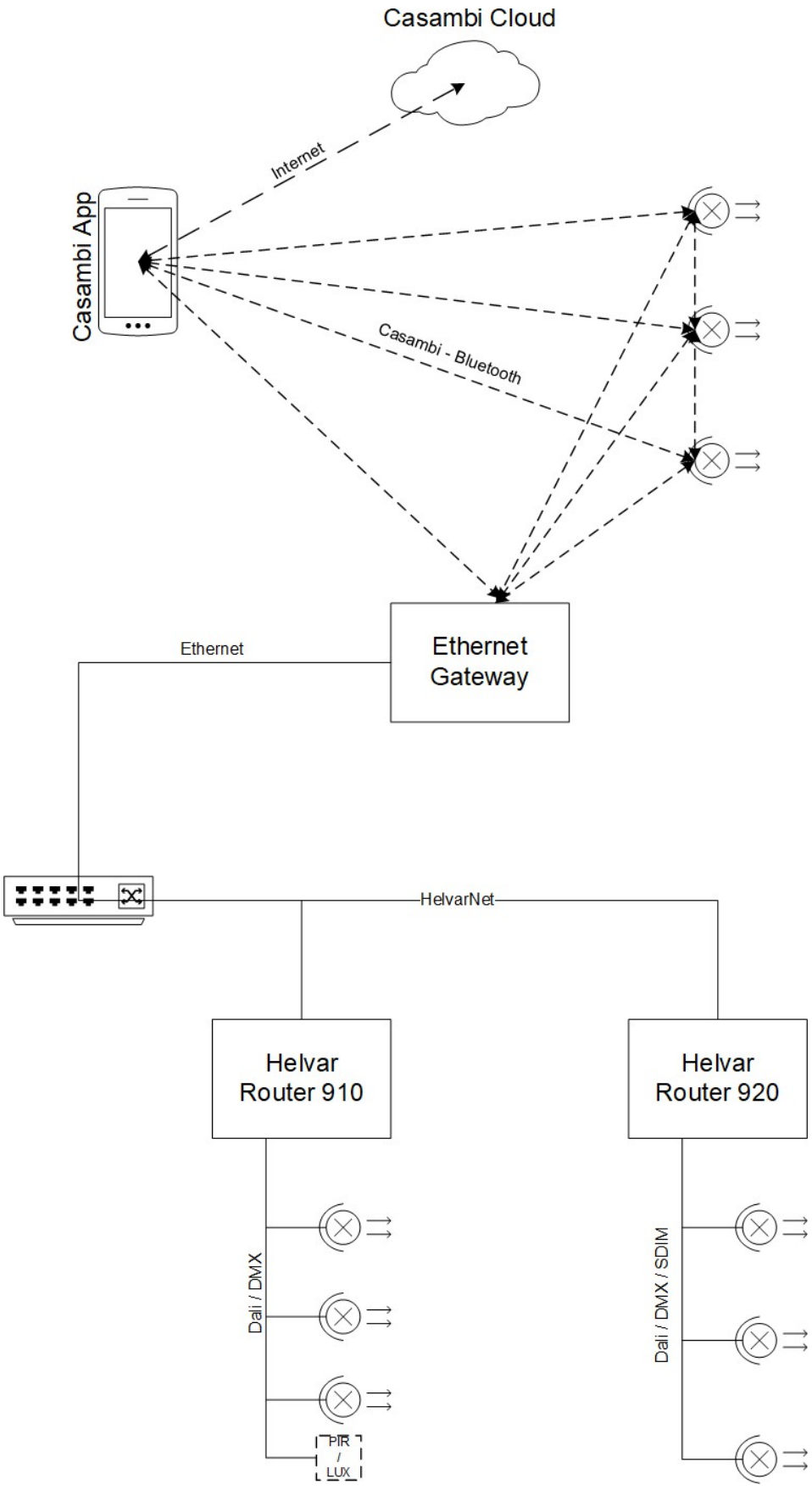
select the "Netcomposer" operating mode.

Further information

A detailed description of the connection can be found in the chapter "Protocols / Netcomposer." An

additional video tutorial is available at the following link: https://youtu.be/fxEkgmlicBc

2.2. Gateway to the Helvar router system (HelvarNet)



In this operating mode, the gateway can be connected to a Helvar router system.

Communication between the two systems is bidirectional.

Up to 32 triggers per direction can be configured per gateway:

- 32 triggers from the gateway to the Helvar system
- 32 triggers from the Helvar system to the gateway

Configuration

Setup is performed using an integrated wizard that supports the creation of commands and simplifies configuration.

The IP address of the corresponding Helvar router must be specified as the destination

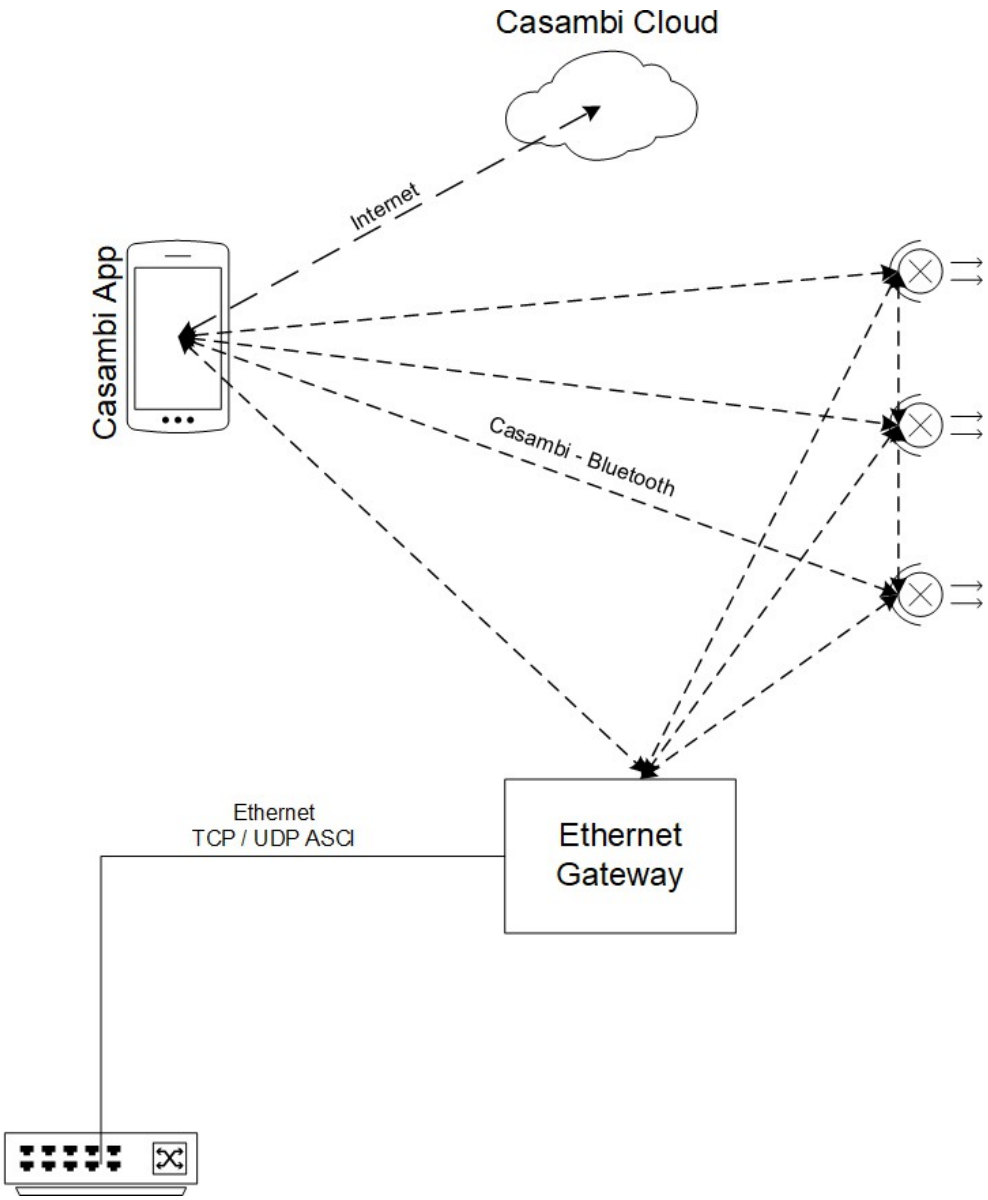
address. To use this function, select the "HelvarNet (TCP)" operating mode. **Further**

information

A detailed description of the connection can be found in the chapter "Protocols / HelvarNet."

An additional video tutorial is available at the following link: https://youtu.be/Uu9n5WTbBqI

2.3. Gateway to a system via UDP/TCP commands



In this operating mode, the gateway can be connected to a freely definable external system via UDP or TCP-based ASCII commands.

The connection is suitable, for example, for:

- Media controllers (e.g., Crestron)
- KNX systems with IP connection
- Loxone systems
- Other network-compatible control systems

Communication between the two systems is bidirectional.

Up to 32 triggers per direction can be configured per gateway:

- 32 triggers from the gateway to the external system
- 32 triggers from the external system to the gateway

Select operating mode

To use this function, select one of the following operating modes:

- "UDP Free Messages"
- "TCP Free Messages"

The selection depends on the transport protocol used by the target system.

Further information

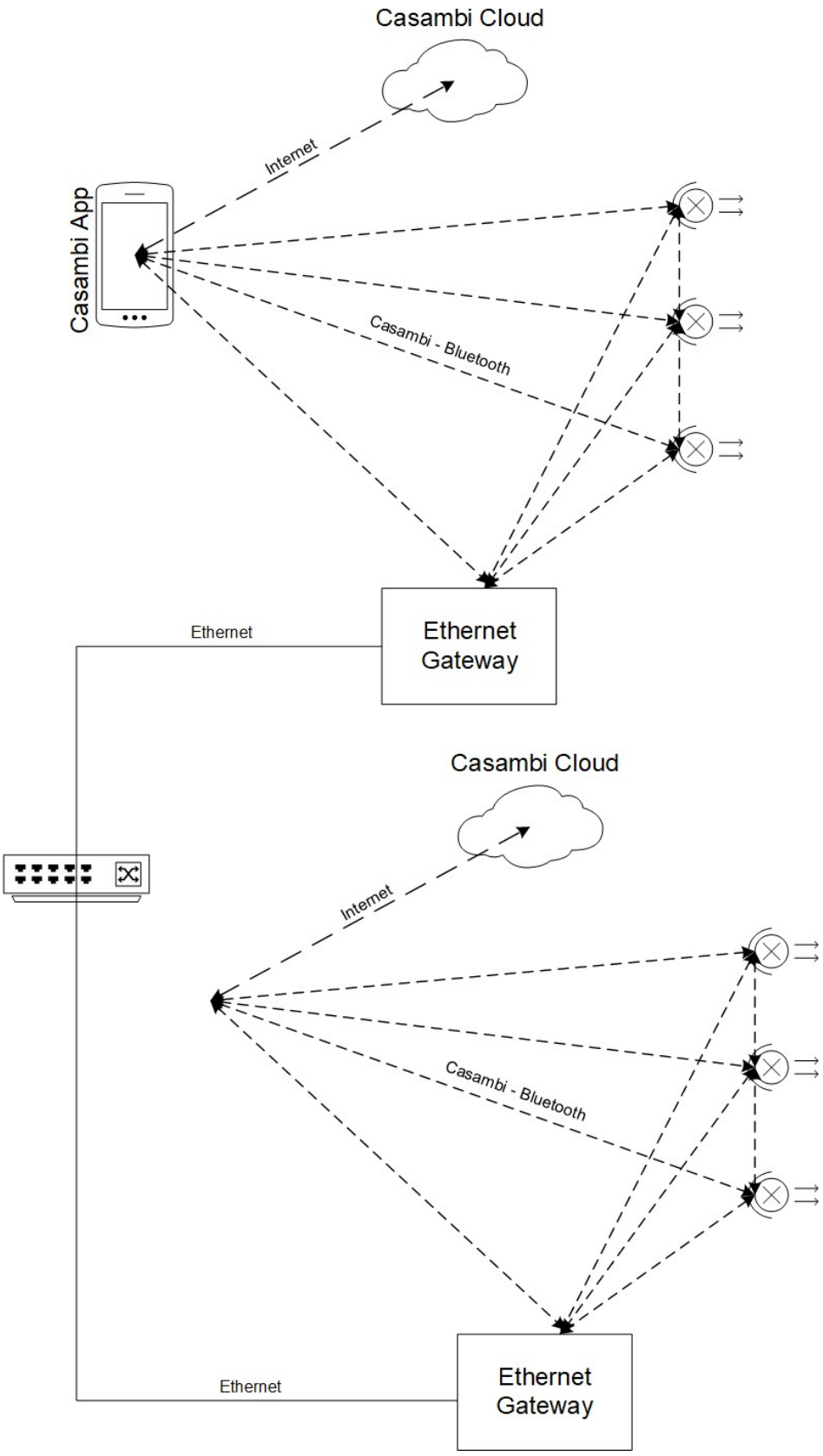
A detailed description of the connection can be found in the following chapters:

"Protocols / UDP Free Messages"
"Protocols / TCP Free Messages"

Videos

Crestron connection: https://youtu.be/gpAQnBhzsz8 KNX /
Loxone connection: https://youtu.be/04bY2onxfj4

2.4. Bridge between individual Casambi systems



In this operating mode, multiple independent Casambi networks can be connected to each other via gateways.

Communication takes place bidirectionally between the participating networks.

Up to 32 triggers per direction can be configured per gateway:

- 32 triggers from the local Casambi network to other networks
- 32 Triggers from external networks to the local Casambi network

It is possible to configure multiple gateways to respond to identical triggers.

Communication

Communication between the gateways takes place via UDP broadcast telegrams.

The UDP port used is freely configurable and must be set identically on all gateways involved.

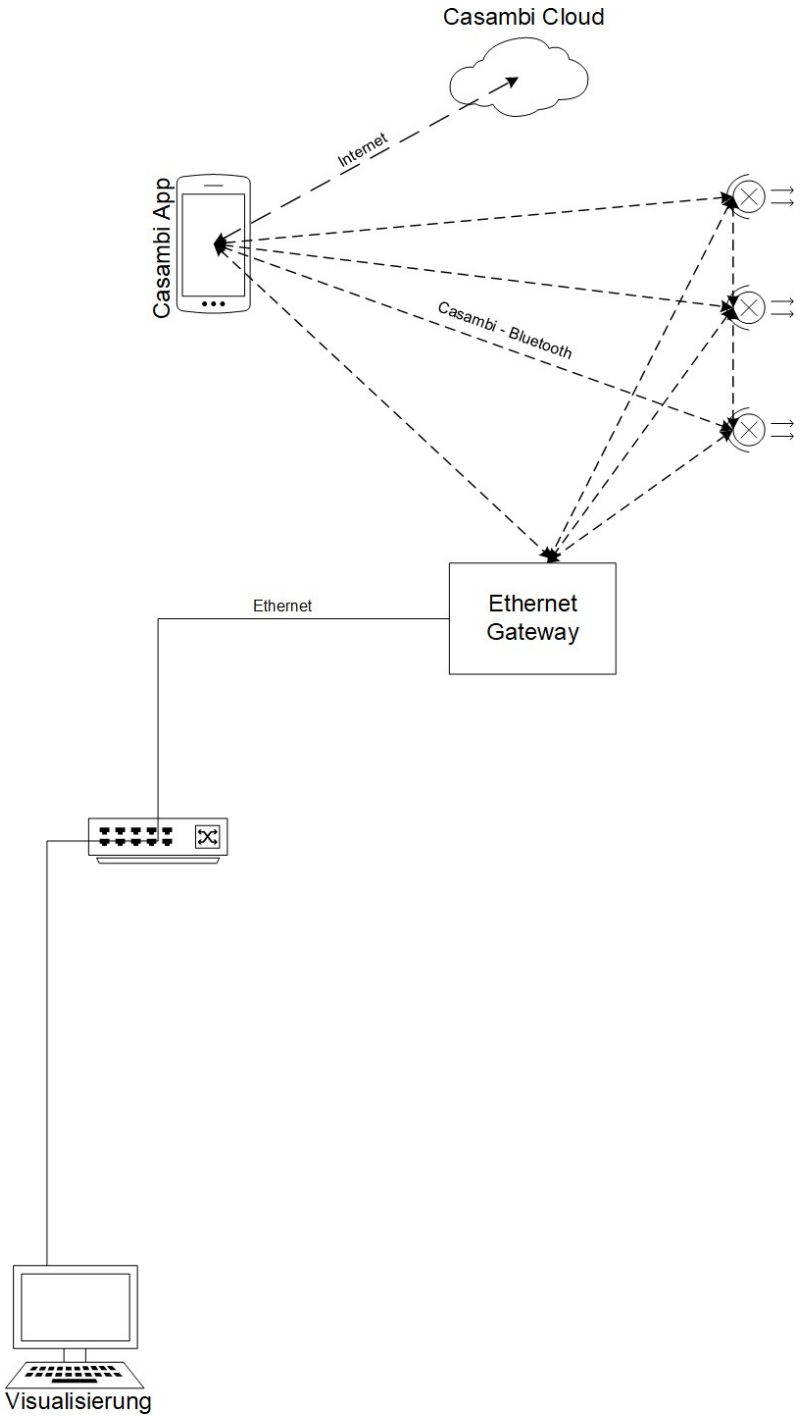
Select operating mode

The "UDP Casambi Bridge" operating mode must be selected for this function.

Further information

A detailed description of the connection can be found in the chapter "Protocols / Casambi Bridge."

2.5. Connection to an existing evaluation system / visualization



In this operating mode, the gateway can communicate directly with an external control system. Each

gateway is assigned a unique BridgeID.
This is used to identify the gateway within the transmitted commands. Communication is

bidirectional between the gateway and the external control system. **Range of functions**

In this operating mode, there are no restrictions on the commands transmitted.

All telegrams are transmitted transparently according to the selected transport type (UDP or TCP).

Communication

Data transmission takes place either via:

- UDP broadcast telegrams
- TCP connections

The port used can be freely configured and must be set according to the system configuration.

Select operating mode

One of the following operating modes must be selected for this function:

- "UDP Casambi Command"
- "TCP Casambi Command"

The selection depends on the transport protocol used by the external control system.

Further information

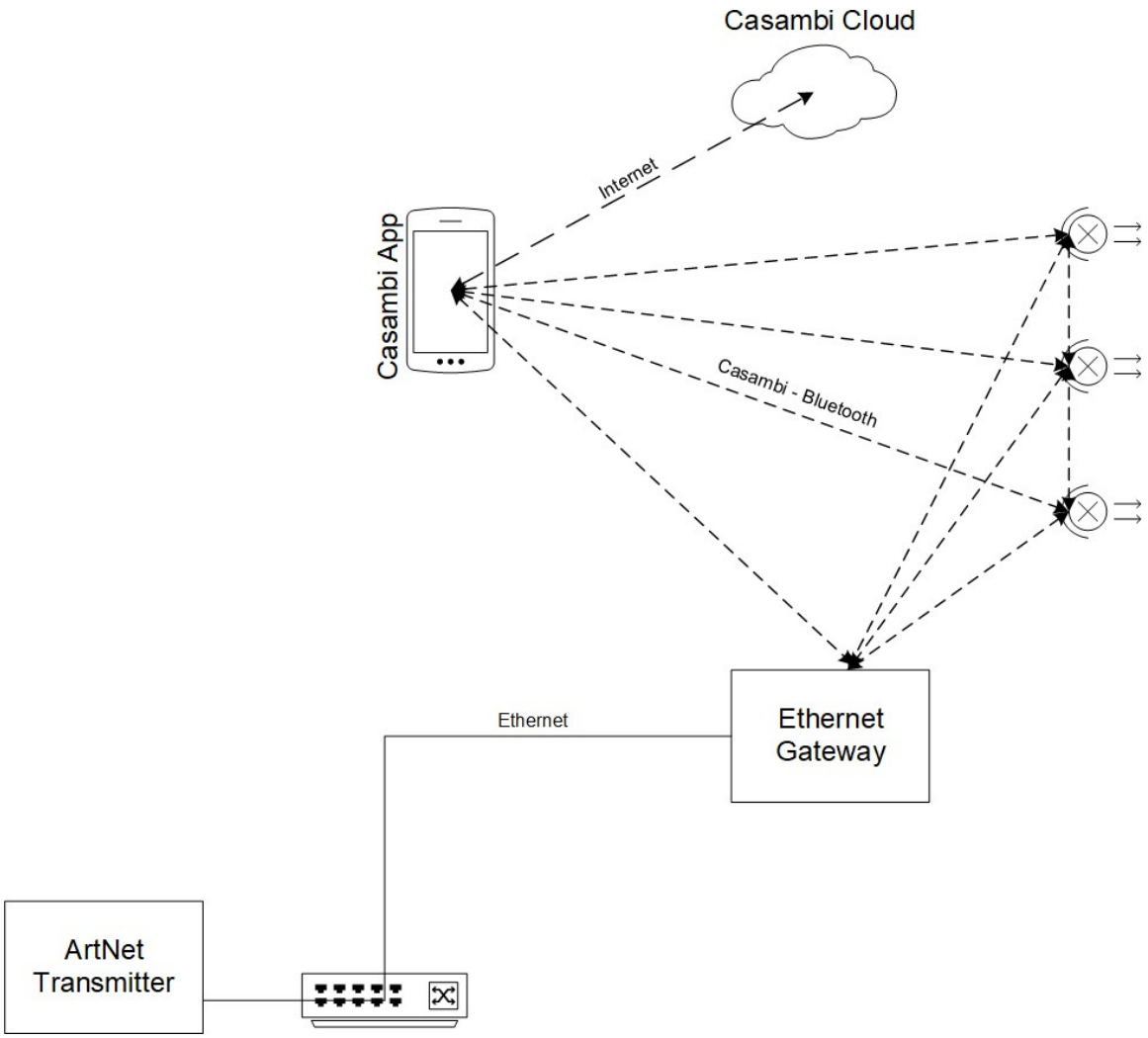
A detailed description of the connection can be found in the following chapters:

- "Protocols / UDP Casambi Command"
- "Protocols / TCP Casambi Command"

Demo programs

Demo programs are available to illustrate the connection and analyze the transmitted data.

2.6. ArtNet Gateway



In this operating mode, the gateway can be controlled directly via ArtNet telegrams. All 512 DMX channels

of an ArtNet universe can be evaluated.
Each individual channel can be assigned an action in the Casambi system (e.g., scene, group, level, or trigger).

Select operating mode

For this function, select the "ArtNet (Input Only)" operating mode.

Further information

A detailed description of the connection can be found in the chapter "Protocols / ArtNet." A video

tutorial is available at the following link: https://youtu.be/WNfn9LiD4Cw

2.7. BacNet/IP Gateway

In this operating mode, the gateway can be addressed directly via BacNet/IP.

When setting up the protocol, the number of Casambi devices to be controlled is defined.

Supported objects

The following objects can be controlled via BacNet/IP:

- Broadcast
- Individual devices
- Ungrouped devices
- Groups
- Scenes

The following values can be set:

- Brightness
- Scene
- Color temperature
- Fade time
- Color
- Start automation
- ....

Status feedback

The Casambi devices and groups are queried cyclically.
When a value changes, the corresponding status is updated in the BacNet system and made available.

Sensor data

Sensor data can also be transferred directly to the Casambi system via BacNet/IP.

Technical limitations

BacNet Vendor ID: 1287

Currently not supported:

- Multiple_Write
- Multiple_Read
- Range
- Segmentation

Select operating mode

The "BacNet/IP" operating mode must be selected for this function.

Further information

A detailed description of the connection can be found in the chapter "Protocols / BacNet/IP".

2.8. MQTT

In this operating mode, the gateway can be integrated directly into a higher-level system via MQTT.

Scope of functions

An unlimited number of commands can be sent to the Casambi system via MQTT. In addition, the Casambi system reports back the current status, for example:

- currently active scene
- D4i Dali values
- ....

Sensor data can also be transmitted directly to the Casambi system via MQTT.

Select operating mode

The "MQTT" operating mode must be selected for this function.

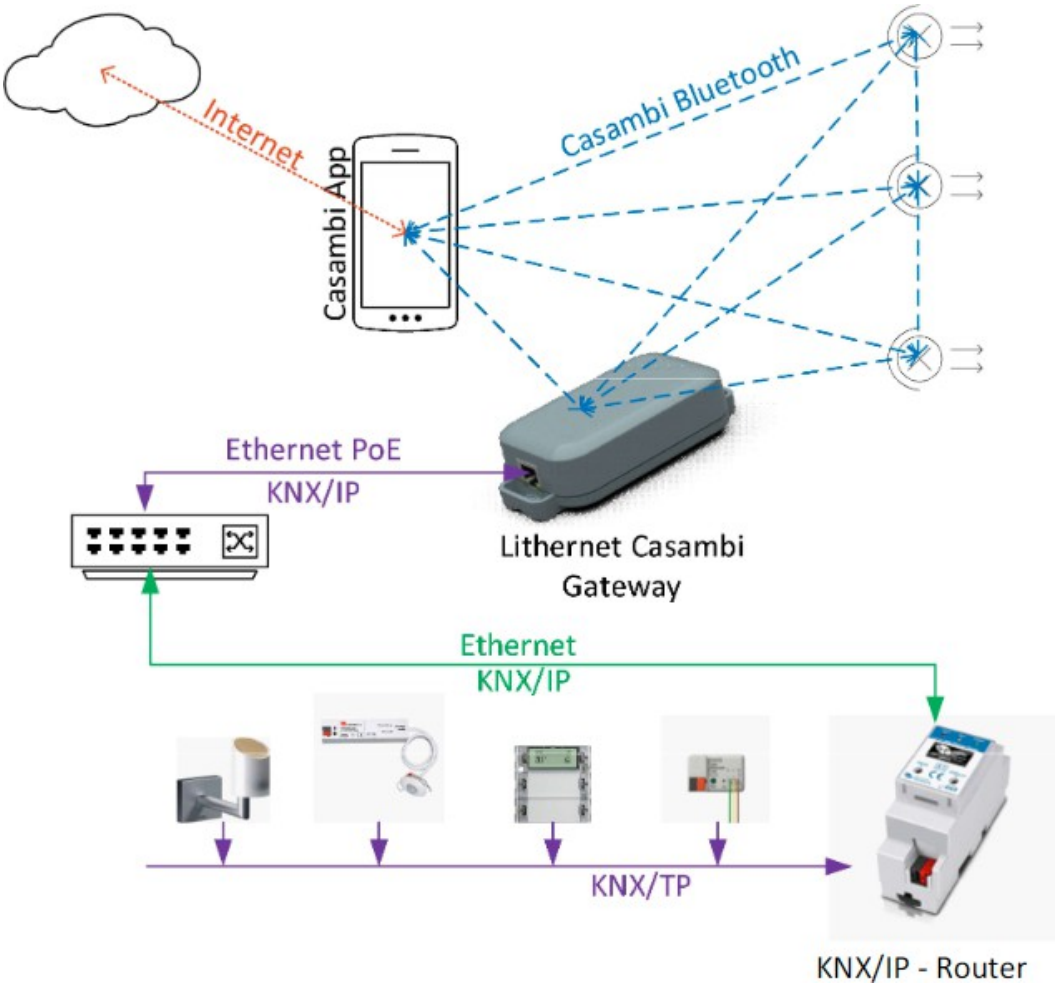
Further information

A detailed description of the connection can be found in the chapter "Protocols / MQTT." Video:

https://youtu.be/KNUSViU-HsY

Example Node-RED flow: https://flows.nodered.org/flow/21bc268af8cbcfbfb0658c02868ae294

2.9. KNX/IP



In this operating mode, the gateway can be integrated directly into a KNX system via KNX/IP.

Functionality

Up to 64 KNX group addresses can be linked to actions in the Casambi system.

Each group address can be assigned a corresponding Casambi function (e.g., scene, group, level, or trigger).

Restrictions

- KNX Secure is not supported.
- Only KNX systems without encryption are supported.
- Only three-digit group addresses (main/middle/subgroup) are supported.

Select operating mode

The "KNX/IP" operating mode must be selected for this function.

Further information

A detailed description of the connection can be found in the chapter "Protocols / KNX/IP." Video:

https://youtu.be/E_KRk5UExxM

2.10. HomeAssistant

In this operating mode, Casambi elements can be integrated directly into Home Assistant via MQTT.

Functionality

Up to 63 Casambi elements can be integrated into Home Assistant as "Light" entities. Support by Casambi type:

Device

- Status changes are reported directly to Home Assistant and displayed there.

Group

- No status feedback to Home Assistant.

Scene

- No status feedback to Home Assistant.

Restrictions

Sensor data is currently not transmitted to Home Assistant. Status feedback is only

available for the Casambi "Device" type. **MQTT functions**

The following MQTT mechanisms are supported:

- MQTT Auto Discovery
- Birth messages

This enables automatic setup of entities in Home Assistant.

Select operating mode

The "HomeAssistant" operating mode must be selected for this function.

Further information

A detailed description of the connection can be found in the chapter "Protocols / HomeAssistant."

2.11. WebAPI

In this operating mode, the Casambi system can be accessed via an integrated WebAPI. The range of functions is currently limited.

Range of functions

Currently, only the control of Casambi elements is supported. Status feedback or cyclical synchronization is not provided.

Restrictions

- No complete system mapping
- No status feedback
- No bidirectional data exchange

The WebAPI is primarily used for direct control of individual functions.

Select operating mode

The "WebAPI" operating mode must be selected for this function.

2.12. Example implementations

Demo programs for the Lithernet – Casambi Gateway API

Two test programs (including source code) are available at the following URL.
These demonstrate communication with the gateway in "UDP Casambi Command" operating mode via UDP.

https://github.com/KLKG/Casambi_Gateway_API_Test

Available programs:

UDP_Test

- Console application in C++
- Cyclically queries all Casambi participants.

UDP_WPF

- C# application with graphical user interface
- Enables the sending of additional commands in addition to cyclical queries.

Note
Both applications are demonstration programs. They are intended solely to
illustrate possible integrations.

Demo programs for various control systems

Sample programs for different control systems are available at the following URL. The content will be expanded as needed.

https://archiv.intelligent-lighting.de/index.php/s/Xkr2mGYHZ4ttAYx Currently

available examples:

1. Node-RED
   - Communication with Casambi via MQTT, including a simple user interface
   - Communication with Steinel MQTT sensors, including a simple user interface

2. Loxone
   - Communication with Loxone in "UDP Free Command" mode
   - Communication with Loxone in "UDP Casambi Command" mode, including transmission of analog values

3. Crestron
   - Visualization and CP2 program for communication in "Netcomposer" mode
   - Visualization and CP2 program for communication in "UDP Casambi Command" mode, including transmission of analog values

4. ArtNet

• Configuration file for use with QLight software for transferring ArtNet DMX commands to the gateway

1) Demo programs for API Lithernet Casambi Gateway

At the following URL, we offer two test programs (including source code) that show how to communicate with the gateway in "UDP Casambi Command" mode using UDP.

https://github.com/KLKG/Casambi_Gateway_API_Test

There is a program (UDP_Test) that cyclically queries all Casambi participants in a command line. Source code in C++.

The other program (UDP_WPF) is a C# application with a graphical user interface. Here, commands other than just the cyclical query can also be sent.

Both are demonstration programs and only show what is possible.

2) Demo programs for different control systems
At the following URL, we offer sample programs for different control systems. Depending on demand, these will also be expanded.

https://archiv.intelligent-lighting.de/index.php/s/Xkr2mGYHZ4ttAYx

Currently available:
1) Node Red
1.1) Node Red for communication with Casambi via MQTT. Includes a small user interface.
1.2) Node Red for communication with Steinel MQTT sensors. Includes small interface

2) Loxone
2.1) Communication with Loxone in "UDP Free Command" mode
2.2) Communication with Loxone via "UDP Casambi Command" mode, including transfer of analog values

3) Crestron
3.1) Visualization + CP2 program for communication with Casambi in "Netcomposer"
3.2) Visualization + CP2 program for communication with Casambi in "UDP Casambi Command" including transfer of analog values

4) ArtNet
4.1) File for sending ArtNet DMX commands to the gateway using the QLight software.

3) BacNet Monitor and readout program

A slightly modified version of the YABE software is also available at https://archiv.intelligent-lighting.de/index.php/s/wwF3SdELB5RGZxT in the BacNet folder, in which the readout timeout has been shortened slightly. This allows for faster reading of variables from our gateway.

3. Login

Network configuration upon delivery

The gateway is configured for DHCP upon delivery.

If no DHCP server is available on the network, the device automatically uses the fallback IP address:

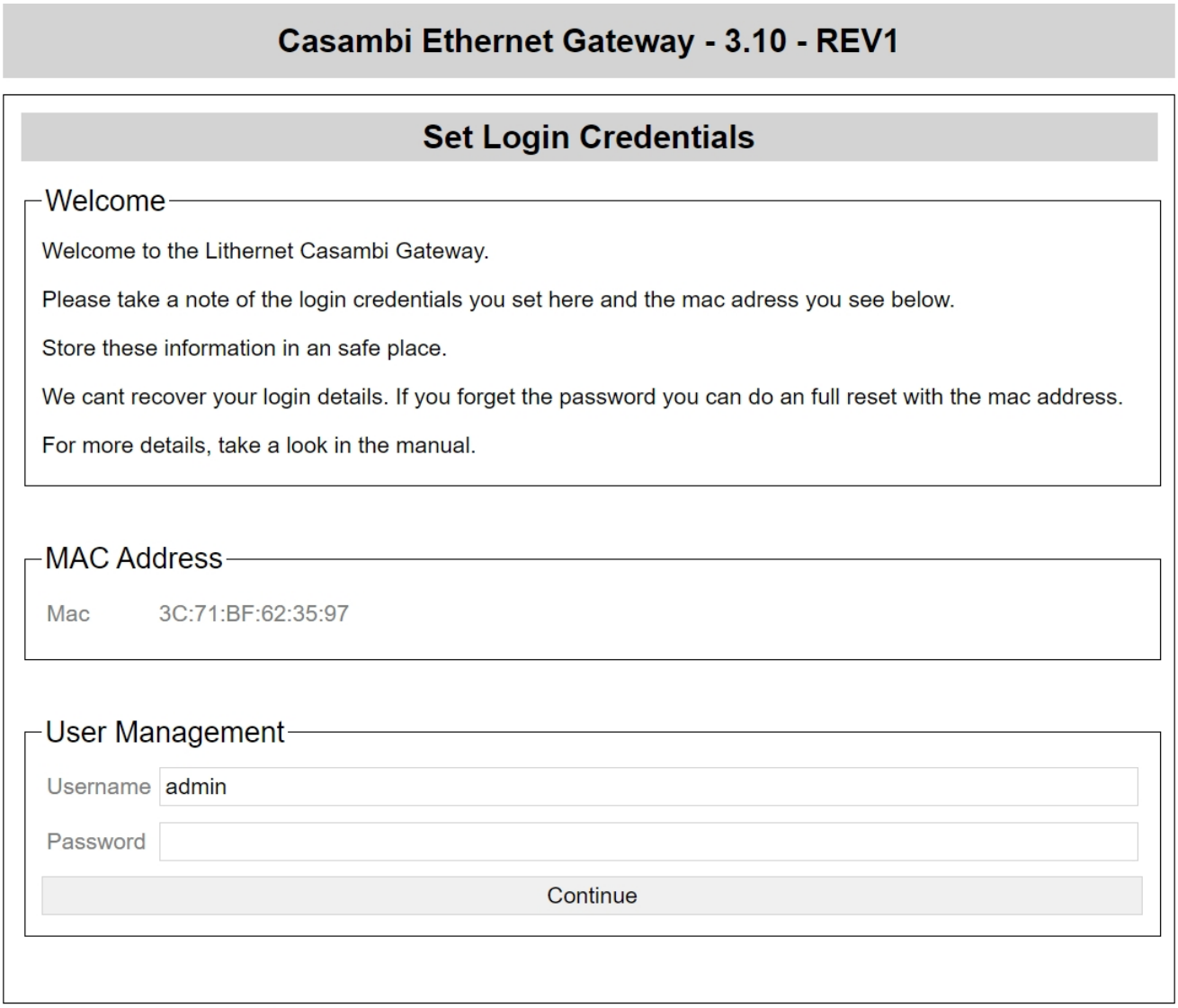
- 192.168.1.90

There is no check to see whether this IP address is already assigned in the network.

Access to the web interface

Open the device's currently assigned IP address in a web browser. Once opened, the gateway's

start page will be displayed.



Initial setup

Before further use, a user name and password must be assigned. In addition, the MAC address of the

device is displayed on the start page.

The MAC address should be documented and kept in a safe place. It is
required for an emergency reset in the event of service.

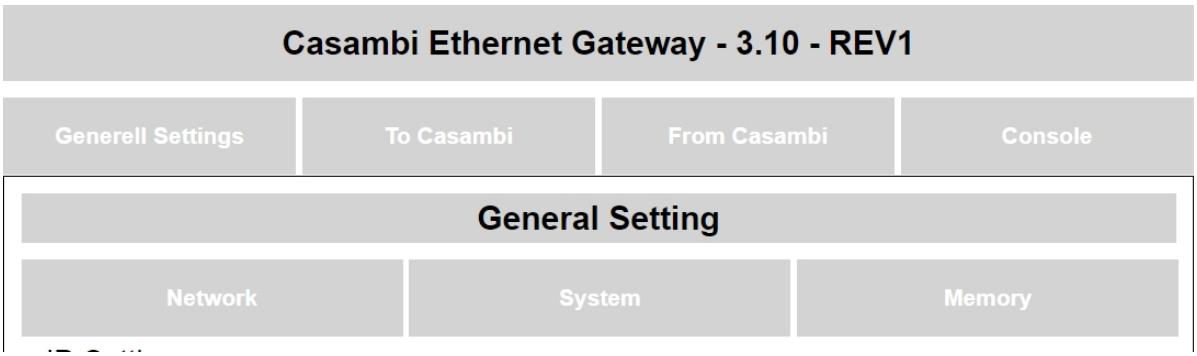
Password storage

The password is stored in encrypted form and cannot be read in plain text.

Continue

After clicking the "Continue" button, an intermediate page is displayed first. After a short time, this automatically redirects you to the settings page.

4. General Settings



The basic configurations of the gateway can be made on the settings page. The settings are divided into three main

categories:

Network

All network-related parameters are configured in this area. These include, among

others:

- IP configuration
- DHCP / static IP
- Subnet mask
- Gateway
- Other network-specific settings

System

This section contains all system-related settings. These include:

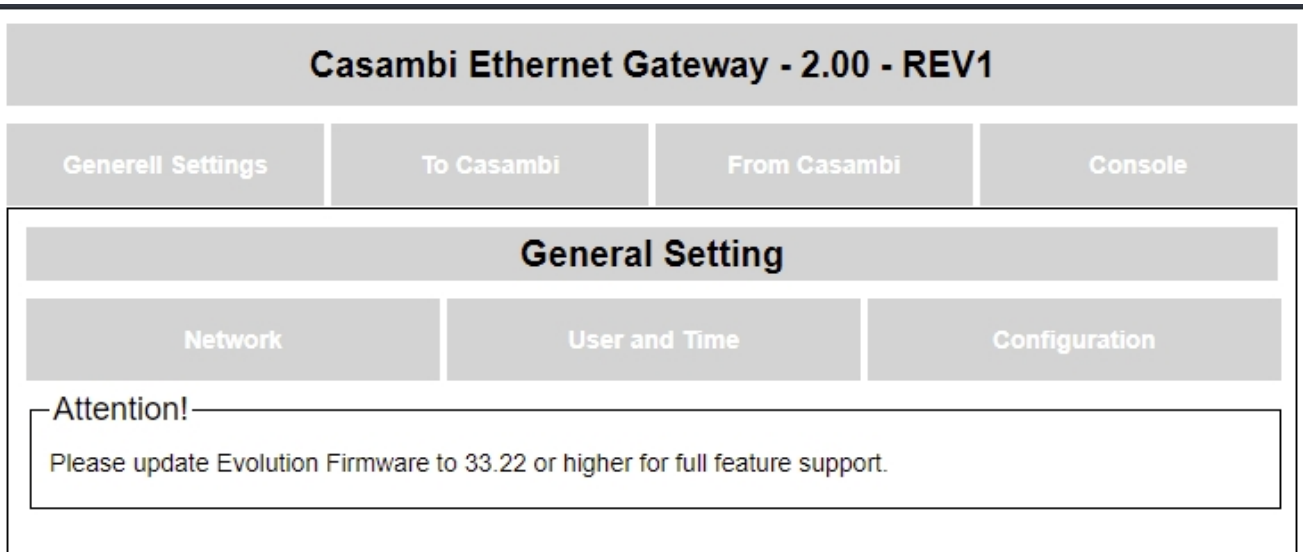
- Selection of the operating mode ("Control System")
- Casambi-specific settings
- Date and time

Memory

This section provides administrative functions. These include:

- Firmware update
- Creating a backup
- Restoring a backup
- Diagnostic functions

4.1. Firmware warning



This warning message appears if the installed Casambi firmware version is lower than the version required for the gateway to function fully.

In this case, not all commands and functions supported by the gateway will be executed correctly.

Recommendation for older Casambi firmware

If older Casambi firmware is used, a compatible older major version of the gateway firmware should be used.

The compatibility of the firmware versions is described in the section "Firmware versions and compatibility."

4.2. Network



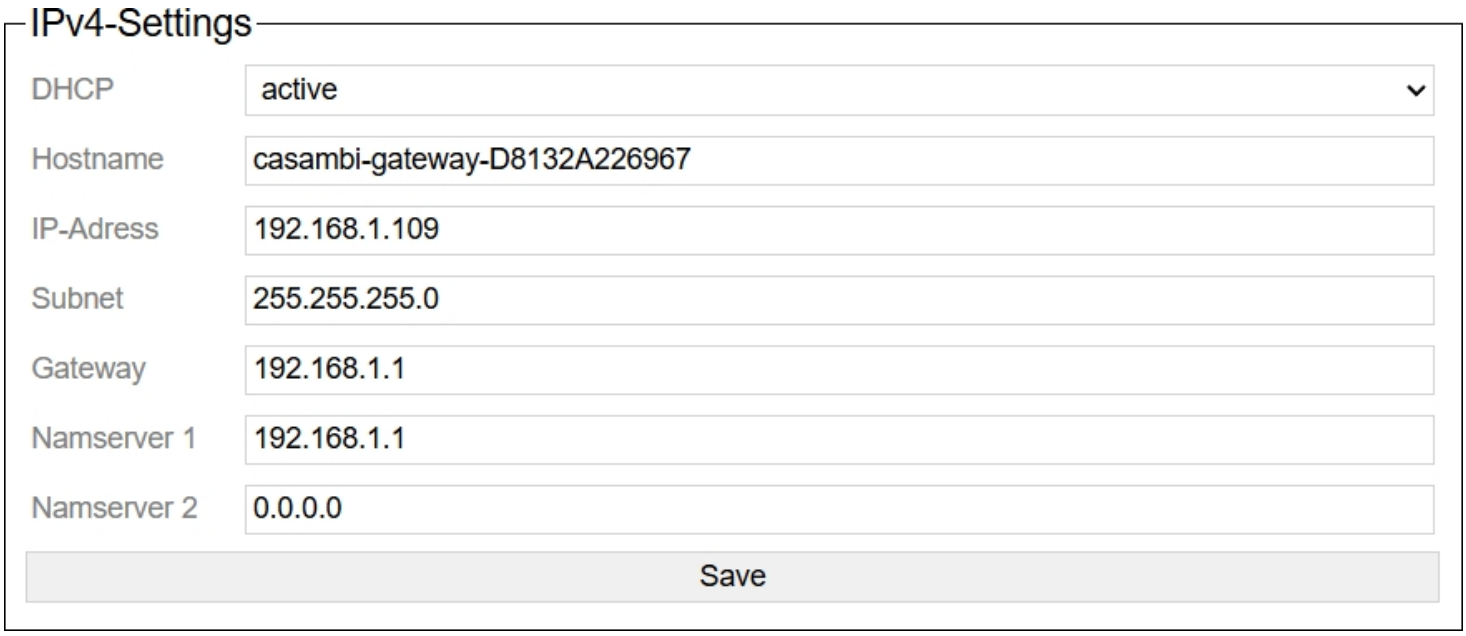
Licht Manufa<tur Berlin GmbH 2026

4.2.1. IP settings

This section is used to configure the IP settings for the gateway. The gateway is

preconfigured with the IP address 192.168.1.90 in its factory default state. **IPv4**

configuration



The following parameters can be set:

DHCP
Enables or disables automatic IP address assignment by a DHCP server.

Host
Device name in the network.

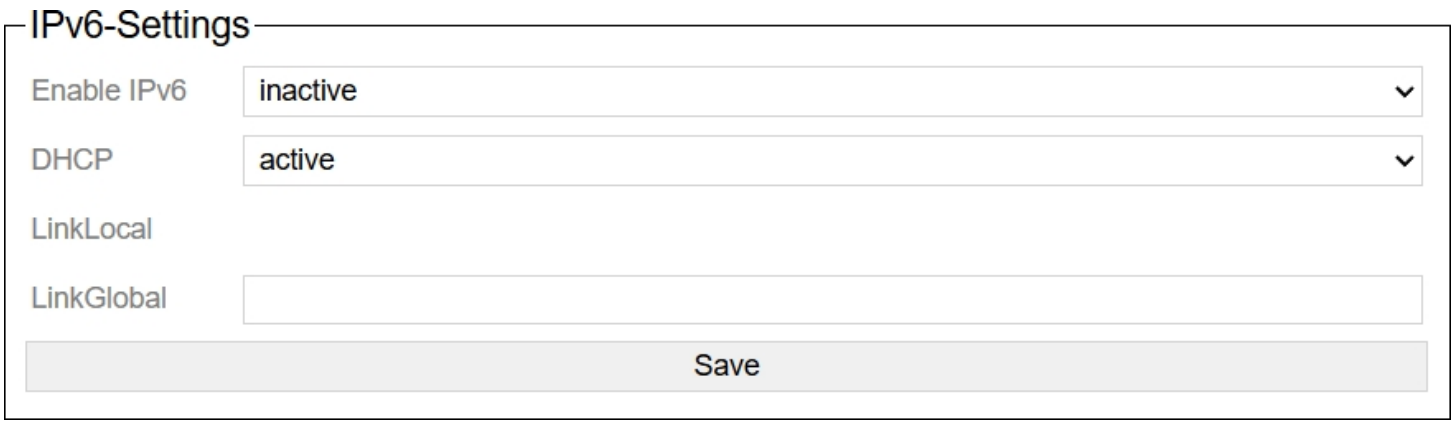
IP address
Manually assigned IPv4 address of the device (when DHCP is disabled).

Subnet
Subnet definition of the network.

Gateway
Address of the default gateway.

Name server 1 / Name server 2
DNS servers used by the gateway. Click "Save" to

apply the settings. **IPv6 configuration**



The following parameters are displayed or configured: DHCP
Enables or disables automatic IPv6 address assignment.

LinkLocal
Local IPv6 address of the device.

LinkGlobal
Global IPv6 address of the device.

Click "Save" to apply the settings.

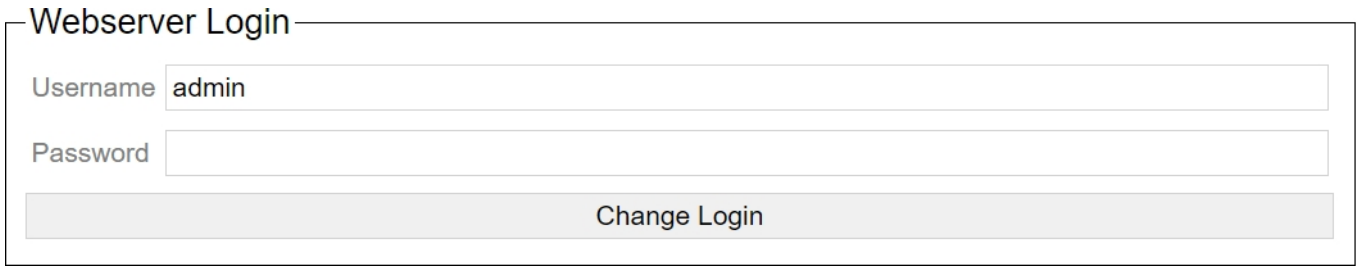
After saving the network settings, the gateway must be restarted for the changes to take effect.

4.2.2. Web server

Username and password

In this section, you can set the username and password for accessing the web interface. Only one user account

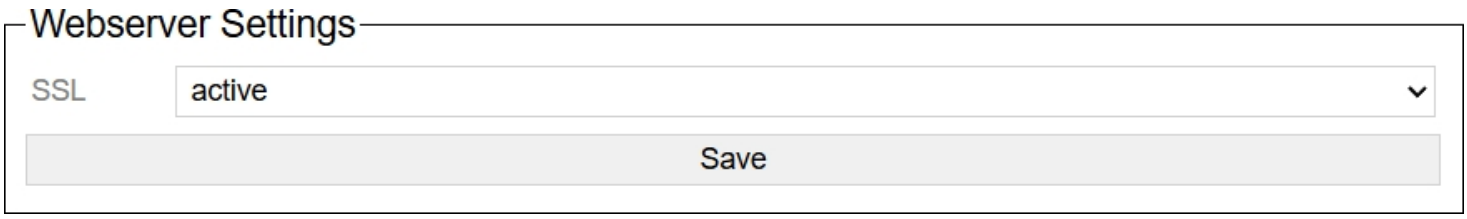
can be set up.
This account has full access to all system functions.



The "Change Login" button is used to apply the username and password.

The password field is always displayed empty.
The password is stored in encrypted form and cannot be read in plain text.

SSL configuration



Here, SSL (HTTPS) can be enabled or disabled for the integrated web server. Under the

"Memory" menu item, you can store your own SSL certificates.

If no custom certificate is installed, the gateway uses an internal, self-signed certificate. This is valid until 2046.

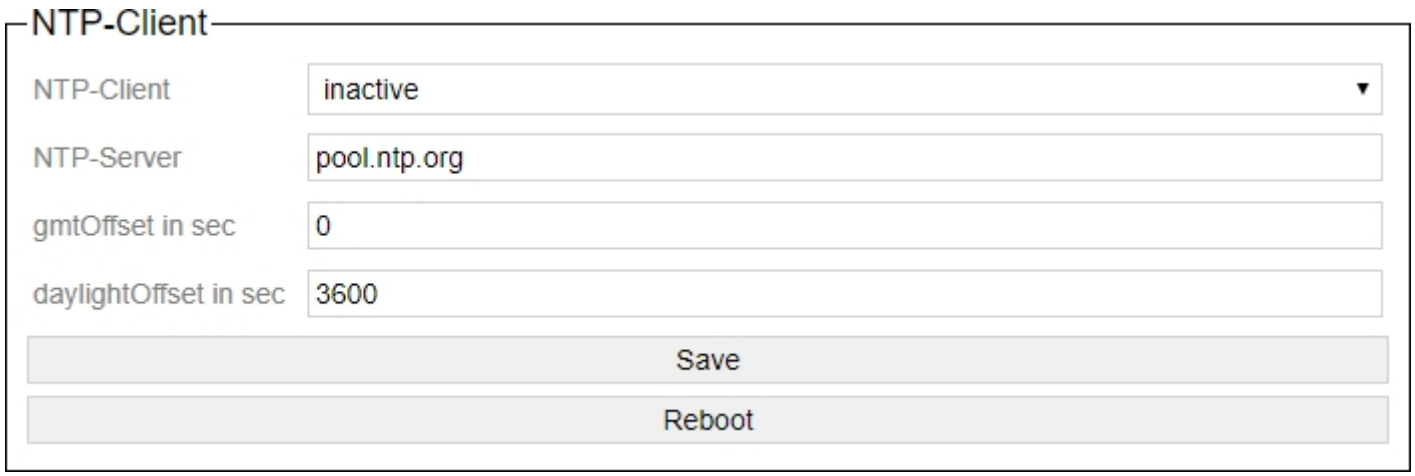
When using the self-signed certificate, web browsers display a corresponding security warning.

Saving the settings

The "Save" button saves the current status.

Any changes to the SSL status will only take effect after the device has been restarted.

4.2.3. NTP client



The parameters of the integrated NTP client are configured in this area. The NTP client is

used for automatic synchronization of the system time.

NTP client

This field can be used to enable or disable the NTP client. If the NTP client is

enabled:

- the gateway automatically synchronizes the current time with the configured NTP server when it starts up
- the time can also be updated manually using the "Date and Time" function

NTP Server

The address or URL of the NTP server is entered here. The address

can be:

- be provided automatically via DHCP
- be entered manually (e.g., for static IP configuration)
- be an external or local NTP server

gmtOffset

Specifies the time zone in seconds relative to UTC (Greenwich Mean Time). Example:
Central European Time (CET) = 3600 seconds

daylightOffset

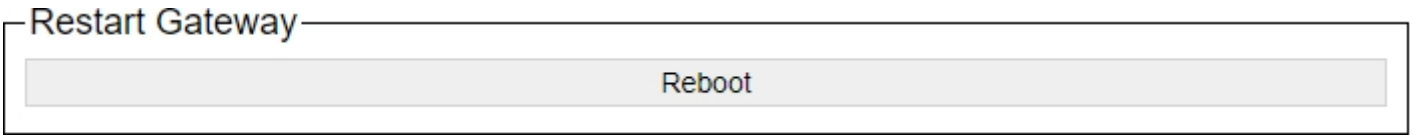
Specifies the additional time offset for daylight saving time in seconds.

Example:
Daylight saving time = 3600 seconds



Incorrect NTP or offset settings can lead to an incorrect system time, which can affect time-dependent functions.

4.2.4. Restart Gateway



This function can be used to restart the gateway manually.

After triggering the restart, the system will shut down in a controlled manner and restart automatically.

During the restart, the gateway will be temporarily unavailable.
The network connection and active communication connections will be interrupted during this time.

4.3. System

Casambi Ethernet Gateway - 6.05_beta - REV2.5

Generell Settings | To Casambi | From Casambi | Diagnostics

General Setting

Network | System | Memory

Control System

Type	MQTT
MQTT-Port	1883
MQTT IP	10.254.1.1
Bridge ID	0
Authentication	inactive
Use Broadcast	true
Devices	1 / 250
Groups	1 / 254
Scenes	1 / 254
State	connection to Broker(10.254.1.1:1883) failed (broker unreachable)

Wizard

Casambi Settings

Casambi Version	48.2
Profile	Ethernet_Gateway_REV2.5
Casambi Network	paired
Polling Method	passive_39_52

Save

Refresh Casambi Info

LED Settings

LED Level	25%
invert Colour	normal

Save

Identify Device for 10s

Date and Time

System Date	9	.	1	.	2026
System Time	2	:	42	:	31

Casambi Time	19:00:30
Casambi Day	26.2.2026
NTP Time	00:00:00
NTP Day	1.1.2020

Get Date and Time from Casambi

Get Date and Time from NTP

Send Date and Time to Casambi

Refresh

Automation

Auto Time Update	0

Save

Restart Gateway

Reboot

© Licht Manufaktur Berlin GmbH 2026

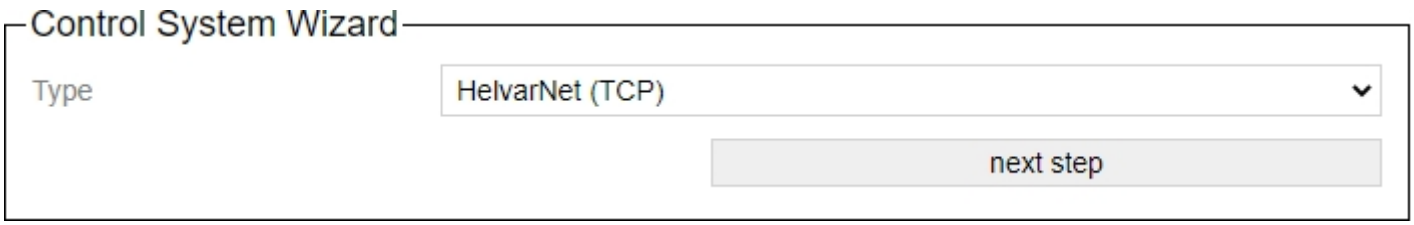
4.3.1. Control System Wizard



This area shows the user all currently active settings for the gateway. In addition, the current connection status of

the device is displayed under "State."
This indicates the current operating or communication status of the gateway.

The "Wizard" button opens the guided settings dialog.
The wizard assists with the configuration of the selected operating mode and simplifies setup.



Wizard – Configuration of the control system

The wizard assists with the setup and configuration of the selected control system. It guides you step by

step through the necessary settings and simplifies parameterization.

Under "Type," you can choose from various systems with which the gateway can communicate. The available options correspond to the supported operating modes.

After selecting the desired type, the required configuration parameters are displayed.

- Netcomposer
- ArtNet
- Free commands via UDP
- HelvarNet (TCP)
- Free commands via TCP
- UDP Casambi Command
- TCP Casambi Command
- BacNet/IP
- MQTT
- KNX/IP

- HomeAssistant

Navigation in the wizard

The "Next Step" button takes you to the next configuration step in the wizard. The "Step Back" button

allows you to return to the previous step.

This allows you to carry out the configuration step by step and make corrections if necessary.



Applying the settings

Once all configuration values have been entered, the device can be restarted directly using the "Reboot" function.

The settings you have made will be applied and activated when the device restarts.

A restart is necessary for all changed parameters to take full effect.

4.3.1.1. Netcomposer system



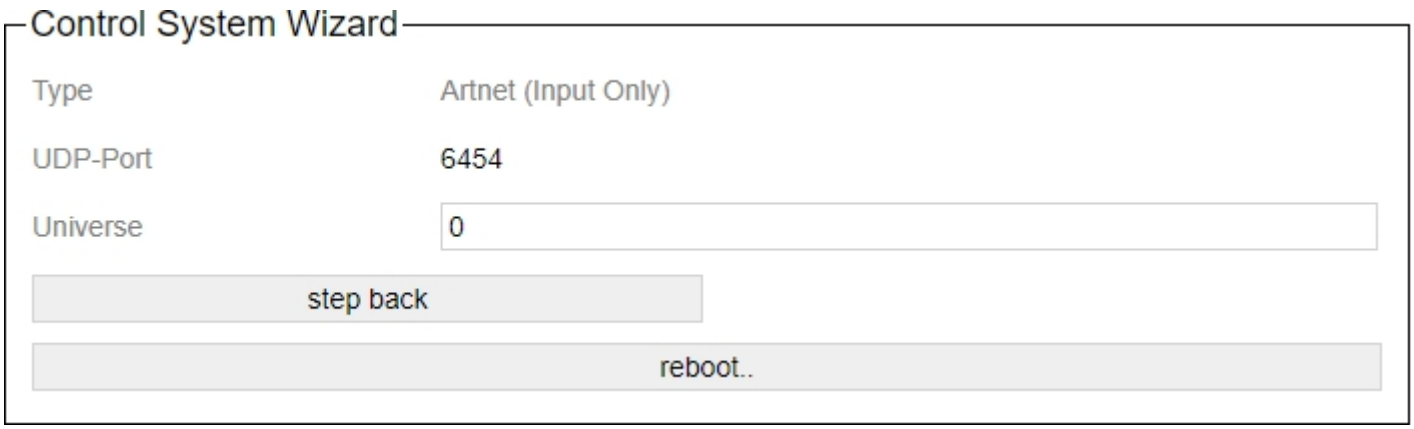
The Netcomposer system from Eutrac transmits its data via UDP broadcast. Standard port:

10009

These communication parameters are stored permanently in the corresponding profile and cannot be changed.

> The gateway must be in the same broadcast domain as the Netcomposer system for communication to be possible.

4.3.1.2. Art-Net



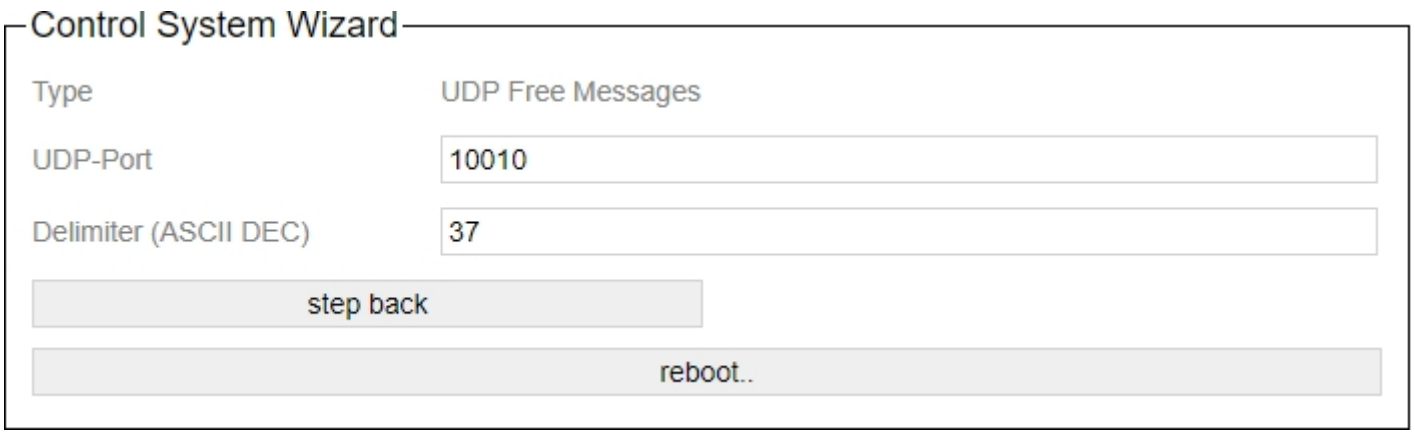
The gateway can be addressed via ArtNet using DMX data. Communication parameters:

Port
The UDP port used is fixed at 6454 (ArtNet standard).

Universe
The ArtNet universe is freely configurable.

Legal notice
Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd.

4.3.1.3. Free commands via UDP



In this operating mode, commands are sent via UDP broadcast to the configured port. The following parameters

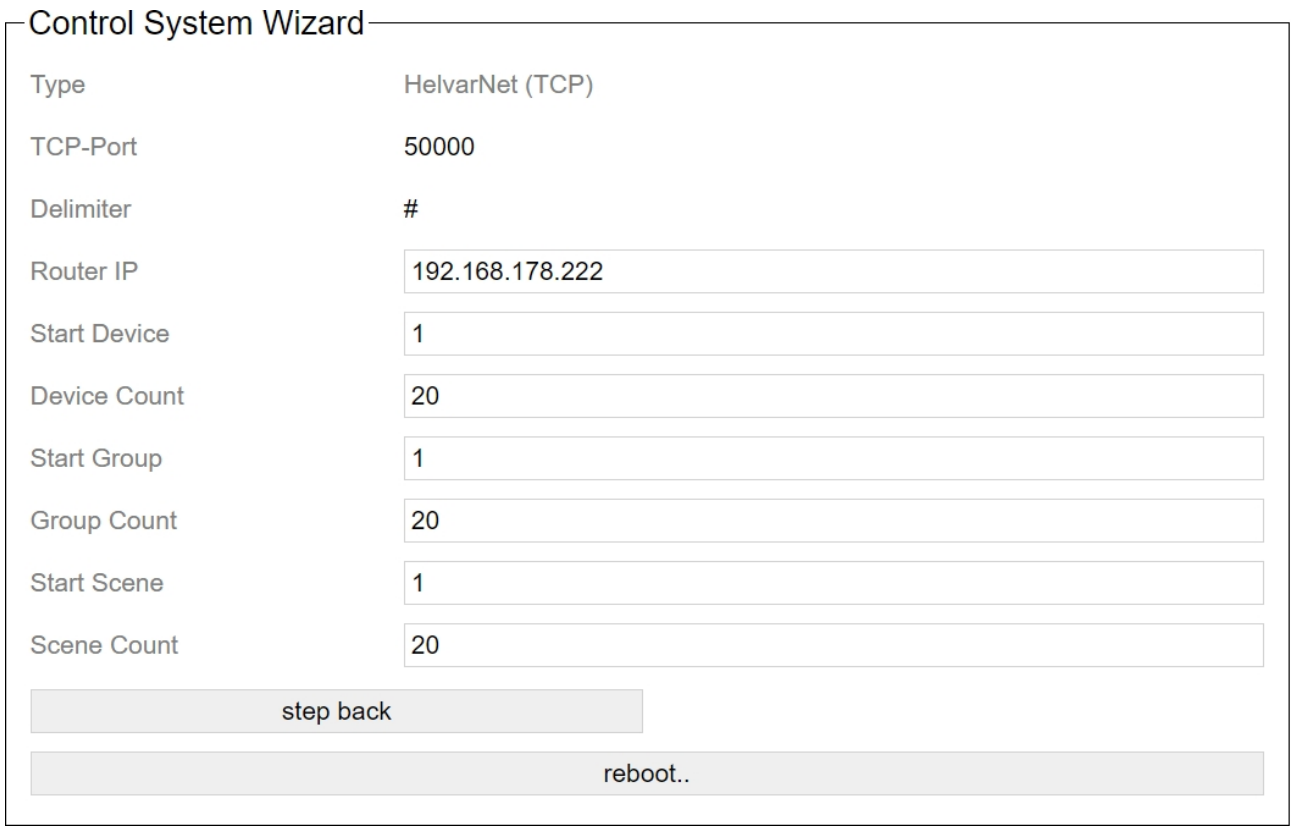
can be freely set:

Port
The UDP port to which the broadcast telegrams are sent.

Delimiter
Separator for the ASCII telegrams.

The delimiter character is specified as the decimal value of the corresponding ASCII character. Example:
37 corresponds to the character "#".

4.3.1.4. HelvarNet (TCP)



Communication parameters

The TCP port and the delimiter character between commands are fixed by the HelvarNet protocol and cannot be changed.

IP address of the router

Enter the address of an existing HelvarNet router under "IP Address." The gateway then establishes a TCP connection to this router.

Query parameters

The parameters "Device Count," "Group Count," and "Scene Count" define the scope of the queried objects.

A value of 0 means that the respective area is deactivated and will not be taken into account.

Device
Start Device / Device Count (0 to 250)
Starting from the specified start device, as many devices are queried as defined in the "Device Count" field.

Group
Start Group / Group Count (0 to 255)
Starting from the specified start group, as many groups as defined in the "Group Count" field are queried.

Scene

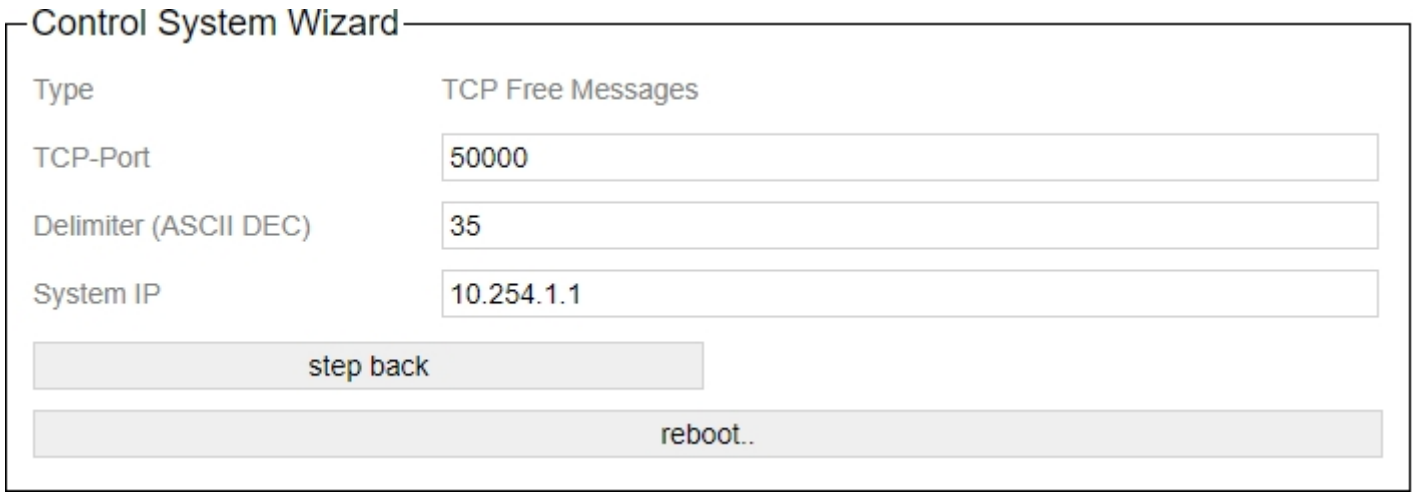
Start Scene / Scene Count (0 to 255)

Starting from the specified start scene, as many scenes are queried as defined in the "Scene Count" field.



The selected areas must match the project structure in the Helvar system to ensure correct communication.

4.3.1.5. Free commands via TCP



System IP

The "System IP" is the IP address of the controller or server to which the gateway is to establish a TCP connection.

Delimiter

The "delimiter" defines the separator between individual commands within TCP communication. The delimiter character must be specified as the ASCII decimal value of the corresponding character.

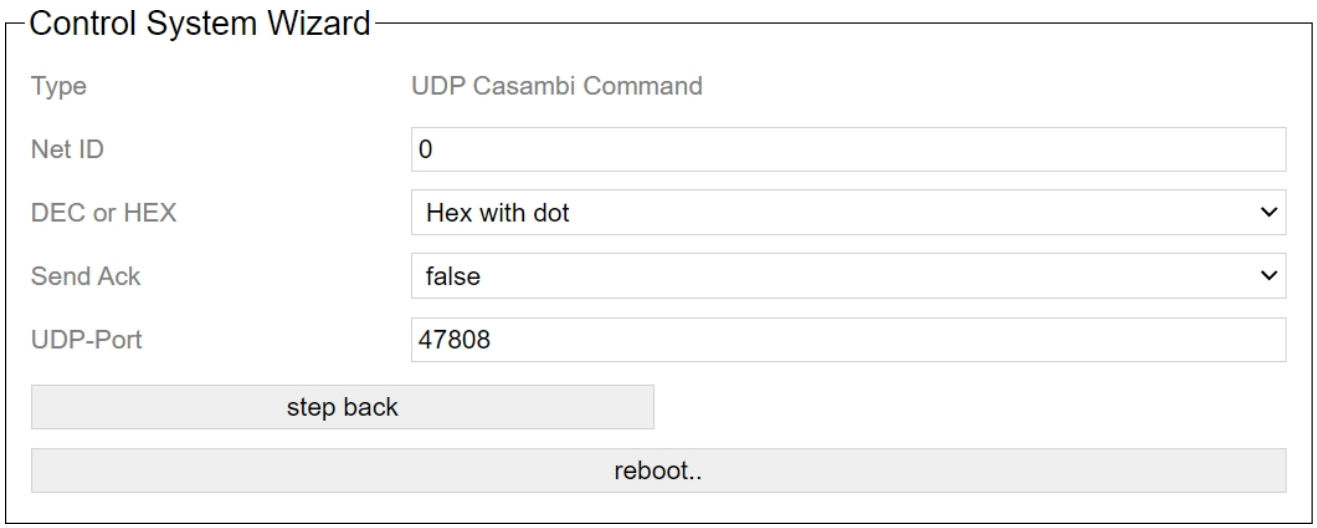
Example:
35 corresponds to the character "#".

Port

The TCP port used can be freely selected and must match the configuration of the target system.

> The IP address, port, and delimiter must match the settings of the communication partner exactly to ensure error-free transmission.

4.3.1.6. UDP Casambi Command



Net ID

The "Net ID" is used to identify which gateway (bridge) a command originates from. Value range: 0 – 254

ID 255 is reserved as a broadcast ID and cannot be configured as a fixed Net ID.
However, it can be used within commands to address all gateways in the same network.

UDP connection parameters

Send Ack

If the "Send Ack" option is enabled, the gateway sends a confirmation as soon as a command has been successfully received.

UDP port

The "UDP port" parameter is used to specify the port on which the gateway receives incoming commands.

- receives incoming commands
- sends outgoing commands

The port must match the configuration of the remote station.

Data format – "DEC or HEX"

The "DEC or HEX" field is used to specify the transmission format of the

commands. The following options are available:

Decimal with hash
The commands are transmitted as decimal values with three digits each.

The individual values are separated by the character "#".

Hex with dot
The commands are transmitted as two-digit hexadecimal values. The individual values are separated by a period "."

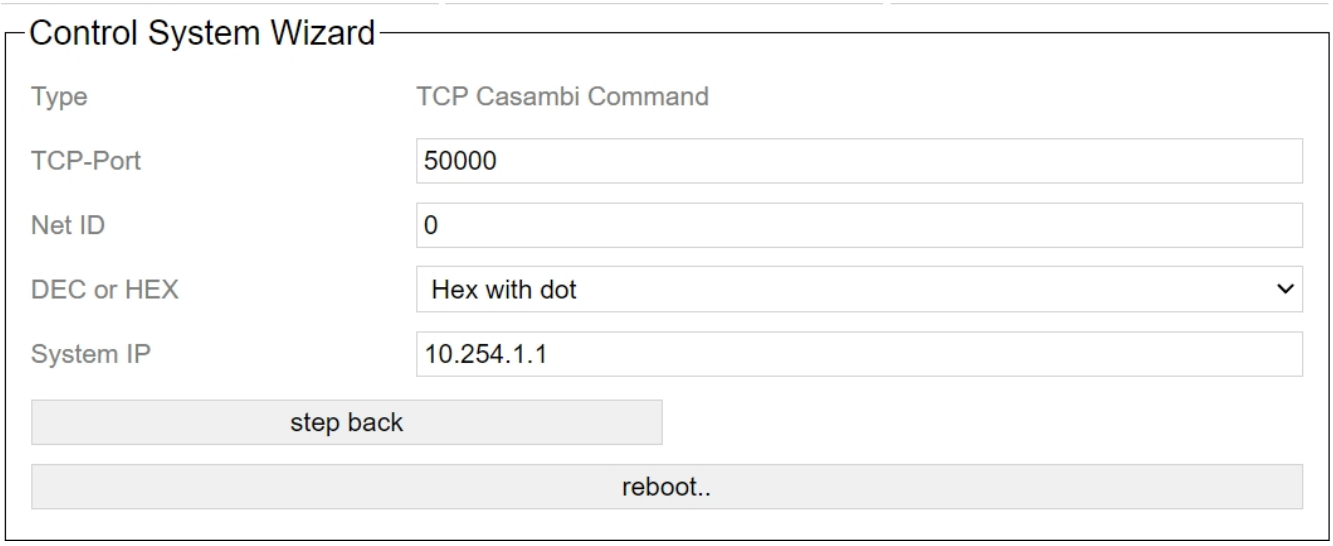
Regardless of the format, each command is terminated with "\a\n".

Use of formats

Hexadecimal format
Suitable for integration into freely programmable systems. Reduces network traffic due to shorter telegrams.

Decimal format
Used in particular for systems such as Loxone, where analog values need to be transmitted and processed.

4.3.1.7. TCP Casambi Command



Net ID

The "Net ID" is used to identify which gateway (bridge) a command originates from. Value range: 0 – 254

ID 255 is reserved as a broadcast ID and cannot be configured as a fixed net ID.
However, it can be used within commands to address all gateways on the same network.

TCP connection parameters

The following parameters are defined for TCP operation:

System IP
IP address of the server to which the gateway should connect.

TCP port
Port number of the destination server.

> The IP address and port must match the configuration of the remote station so that the connection can be established successfully.

Data format – "DEC or HEX"

The "DEC or HEX" field is used to specify the transmission format for the

commands. The following options are available:

Decimal with hash
The commands are transmitted as decimal values with three digits each. The individual values are separated by the character "#".

Hex with dot
The commands are transmitted as two-digit hexadecimal values. The individual values are separated by a dot "."

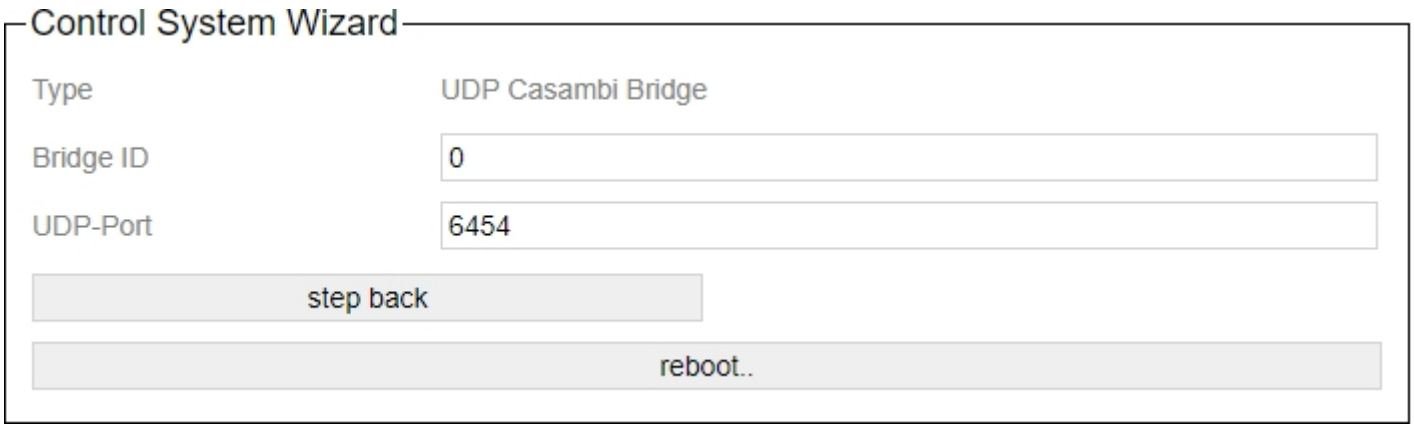
Regardless of the format, each command is terminated with "\a\n".

Use of formats

Hexadecimal format
Suitable for integration into freely programmable systems. Reduces network traffic due to shorter telegrams.

Decimal format
Used in particular for systems such as Loxone, where analog values need to be transmitted and processed.

4.3.1.8. UDP Casambi Bridge



Bridge ID

The "Bridge ID" is used to identify which gateway (bridge) a command originates from. Value range: 0 – 254

Each gateway within a shared network must have a unique Bridge ID to ensure correct assignment of telegrams.

UDP port

The "UDP port" parameter is used to specify the port on which the gateway receives incoming UDP telegrams.

- receives incoming UDP telegrams
- sends outgoing UDP telegrams

All gateways involved must use the same UDP port to enable communication.

4.3.1.9. BacNet/IP

Control System Wizard

Type	BacnetIP
Local Device ID	400001
UDP Port	47808
Use BacNet Routing	false v
BacNet Data Type	PIV
Use BBMD Server / FDT	false v
BBMD Server IP	192.16B.1.255
Use Broadcast	true v

Broadcast Values

Level	☐ tc	Duration
Scene	☐ red	green
blue	☐ White	hue
sat	☐ vertical Ratio	active Automation

Start Device	1
Device Count	250

Device Values

Level	☐ tc	Duration
Scene	☐ red	green
blue	☐ White	hue
sat	☐ poll online vertical	poll condition
poll scene	☐ Ratio active	sensor pir cm
sensor lux	☐ Automat on cm	onoff
cm button	☐ pushbuJon	
	☐	

Use Ungrouped	true v

Ungrouped Values

Level	tc	Duration
	green	blue
☐ red	☐ hue	sat
☐ White Vertica Rat o	☐ active Automation	

Start Group Group	1
Count	254

Group Values

Level	tc	Duration
	green	blue
☐ red	☐ hue	sat
☐ White Vertica Rat o	☐ active Automation	

Start Scene	1
Scene Count	254

Scene Values

Level	tc	Duration
rea	☐ green	blue
White	☐ hue	sat
poll active	☐ active Automation	
	☐	

step back

reboot..

General parameters

Local Device ID
Unique device ID of the gateway in the BacNet/IP network.

UDP port
Port for BacNet/IP communication. Default
value: 47808

Use BacNet Routing
Enables routing functionality for BacNet telegrams.

BacNet Data Type
Specifies the data type in which the data points are represented in BacNet.

The following options are available:

- PIV (Positive Integer Values)
- AV (Analog Values)

BBMD / Foreign Device

Use BBMD Server / FDT
Activates the connection to a BBMD server (Foreign Device Registration).

BBMD Server IP
IP address of the BBMD server to which a connection is to be established.

Object areas and polling parameters

The parameters "Device Count," "Group Count," and "Scene Count" define the scope of the integrated objects.

A value of 0 means that the respective area is deactivated and not used.

Use Broadcast
Enables the entries for broadcast control when the value is set to 1.

Use Ungrouped
Enables entries for "ungrouped" devices when the value is set to 1.

Device
Start Device / Device Count (0 to 250)
Starting from the specified start device, as many devices as defined in the "Device Count" field are taken into account.

Groups
Start Group / Group Count (0 to 255)
Starting from the specified start group, as many groups as defined in the "Group Count" field are taken into account.

Scenes
Start Scene / Scene Count (0 to 255)
Starting from the specified start scene, as many scenes as defined in the "Scene Count" field are taken into account.

Polling behavior and data points

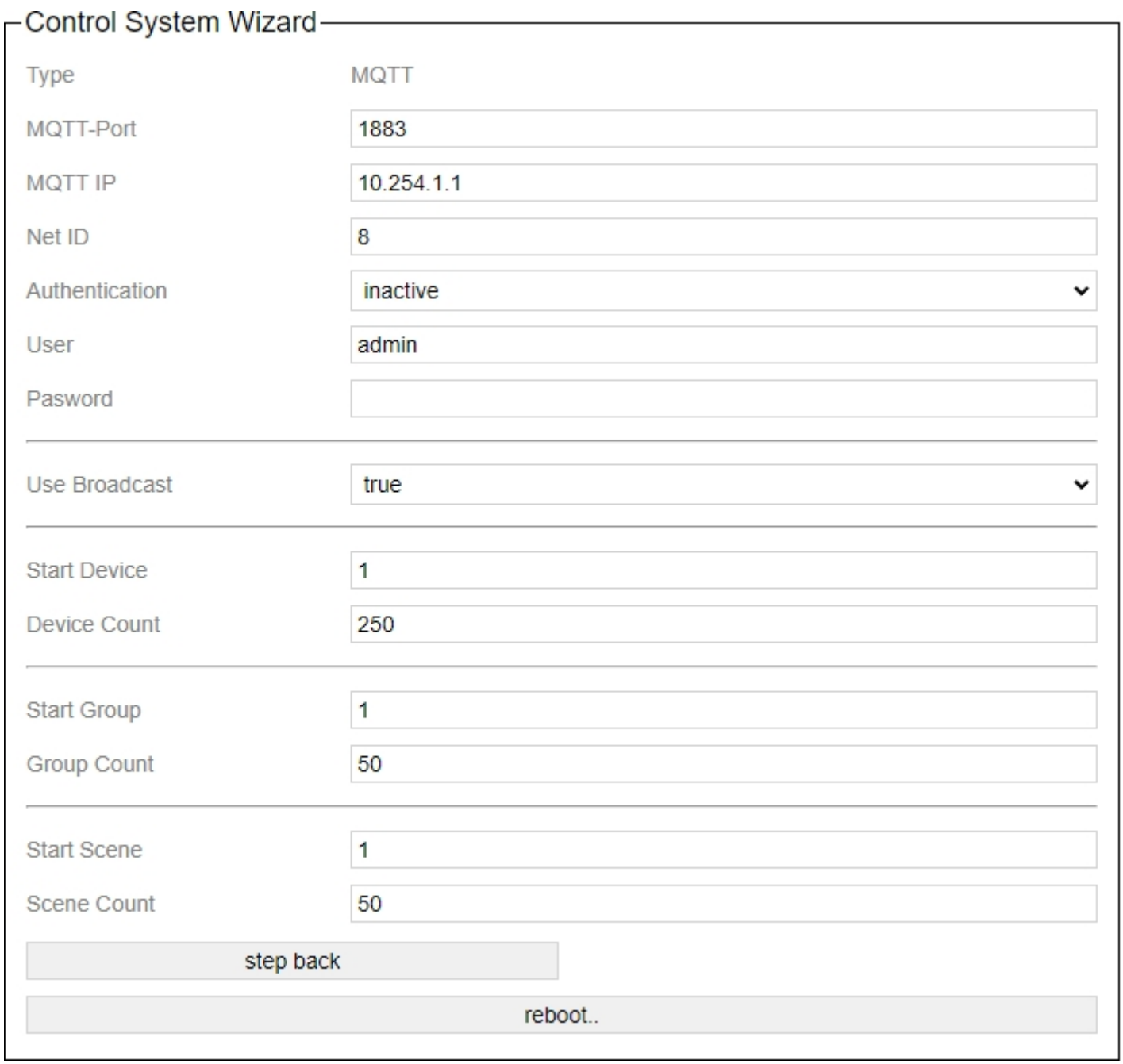
The areas defined above are also used for cyclical polling of the Casambi network. Only within the set limits:

- devices, groups, or scenes are queried for status changes
- corresponding values are displayed in BacNet/IP mode

The respective polling settings indicate which values are available as BacNet data points.

Only the data points listed there can be read in BacNet.

4.3.1.10. MQTT



Connection parameters

IP
IP address of the MQTT broker to which the gateway should establish a connection.

Port
Standard MQTT port: 1883
If port 8883 is used, the gateway attempts to establish an SSL/TLS-secured connection.

> Note on SSL connections
> When using port 8883, the corresponding server certificate must be uploaded on the "Memory" page.

Net ID

The "Net ID" is a unique identifier in the range 0–255.
This ID is used to identify the gateway within MQTT communication.

Authentication

Enables or disables authentication with the MQTT broker.

When authentication is enabled, the username and password are used for the connection.

Object ranges and polling parameters

The parameters "Device Count," "Group Count," and "Scene Count" define the scope of the queried objects.

A value of 0 means that the respective area is disabled and will not be taken into account.

Use Broadcast
Enables polling of the broadcast value when the value is set to 1.

Device
Start Device / Device Count (0 to 250)
Starting from the specified start device, as many devices as defined in the "Device Count" field are taken into account.

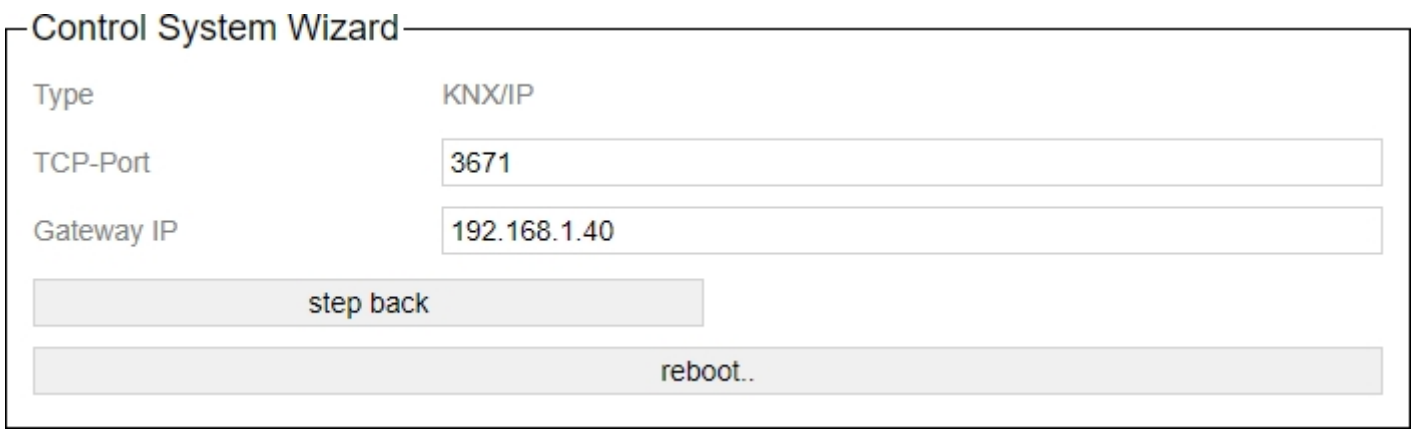
Group
Start Group / Group Count (0 to 255)
Starting from the specified start group, as many groups as defined in the "Group Count" field are taken into account.

Scene
Start Scene / Scene Count (0 to 255)
Starting from the specified start scene, as many scenes as defined in the "Scene Count" field are taken into account.



The selected areas determine which objects are taken into account and queried cyclically in MQTT operation.

4.3.1.11. KNX/IP



TCP port

The set TCP port must match the port configured in the KNX IP router. Default value: 3671

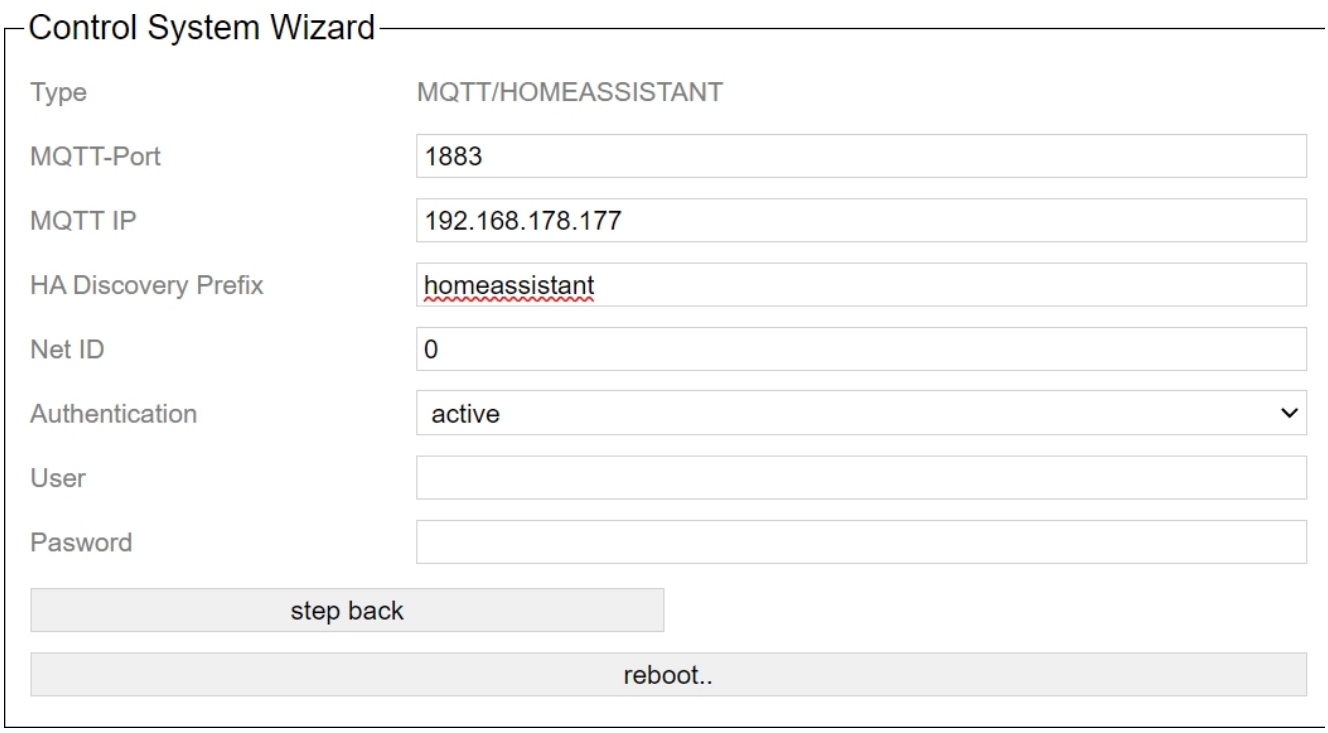
Gateway

The IP address of the KNX IP router must be entered in the "Gateway" field.

The gateway then establishes the connection to this router.

The port number and IP address must match the configuration of the KNX IP router exactly in order for the connection to be established successfully.

4.3.1.12. HomeAssistant



IP address

IP address of the MQTT broker to which Home Assistant is connected.

Port

Port of the MQTT broker.

HA Discovery Prefix

The "HA Discovery Prefix" defines the topic prefix for:

- MQTT Auto Discovery
- Birth messages

Default value: homeassistant

The value can be adjusted if necessary and must match the configuration in Home Assistant.

Net ID

The "Net ID" is a unique identifier in the range 0–255.

This ID is used to generate the unique device identifiers (UIDs) of Casambi participants in Home Assistant.

This makes it possible to operate multiple gateways in parallel in a single Home Assistant instance.

Authentication

Enables or disables authentication with the MQTT broker.

When authentication is enabled, the credentials of a Home Assistant MQTT user must be used.

Username

The credentials of an MQTT user created in Home Assistant must be entered as the username.

4.3.2. Casambi Settings



The "Casambi Version" displays the Casambi firmware version currently installed on the device.

Profile

"Profile" displays the name of the profile selected in the Casambi app. Available variants:

Ethernet_Gateway_REV[X]
16 scenes, 16 groups on the console page

Ethernet_Gateway_REV[X]_EVO
32 scenes, 32 groups on the console side

Ethernet_Gateway_REV[X]_EVO_Groups 64
groups on the console side

Ethernet_Gateway_REV[X]_EVO_Scenes 64
scenes on the console side

Casambi Network

"Casambi Network" displays the current connection status. It shows

whether:

- there is a connection to a Casambi network
- there is no network connection

Polling Method

The "Polling Method" determines how operating and status data is queried from the Casambi network.

inactive
No status queries are performed.

active
All Casambi participants are queried cyclically.
This can lead to slightly delayed status messages, but is very stable.

passive
Casambi devices report status changes via notification.
After a notification, the current values are actively queried.
Scenes and groups continue to be queried cyclically, as no notifications are available for them.

passive_37_80
Devices report status changes via notification and are then queried. In periods without notifications, devices are queried cyclically one after the other.
Scenes and groups continue to be queried cyclically.

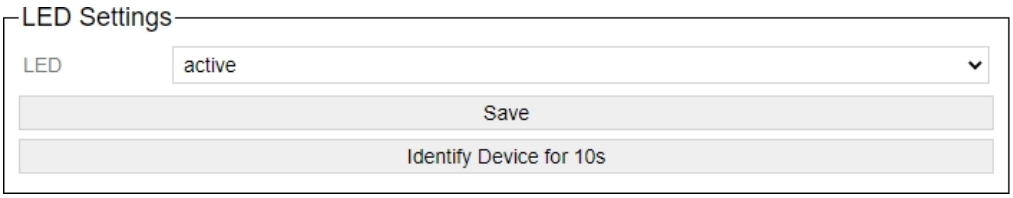
passive_37_90
Devices report their status exclusively via notification and are no longer actively queried. Scenes and groups continue to be queried cyclically.

passive_39_52
Devices report their status exclusively via notification and are no longer actively queried. Scenes and groups continue to be queried cyclically.
In addition, extended notifications have been implemented.

Polling interval

Queries that are not based on notifications are performed at intervals of 300 ms per queried value.

4.3.3. LED settings



Various LED functions can be activated or deactivated in this area.

LED inactive

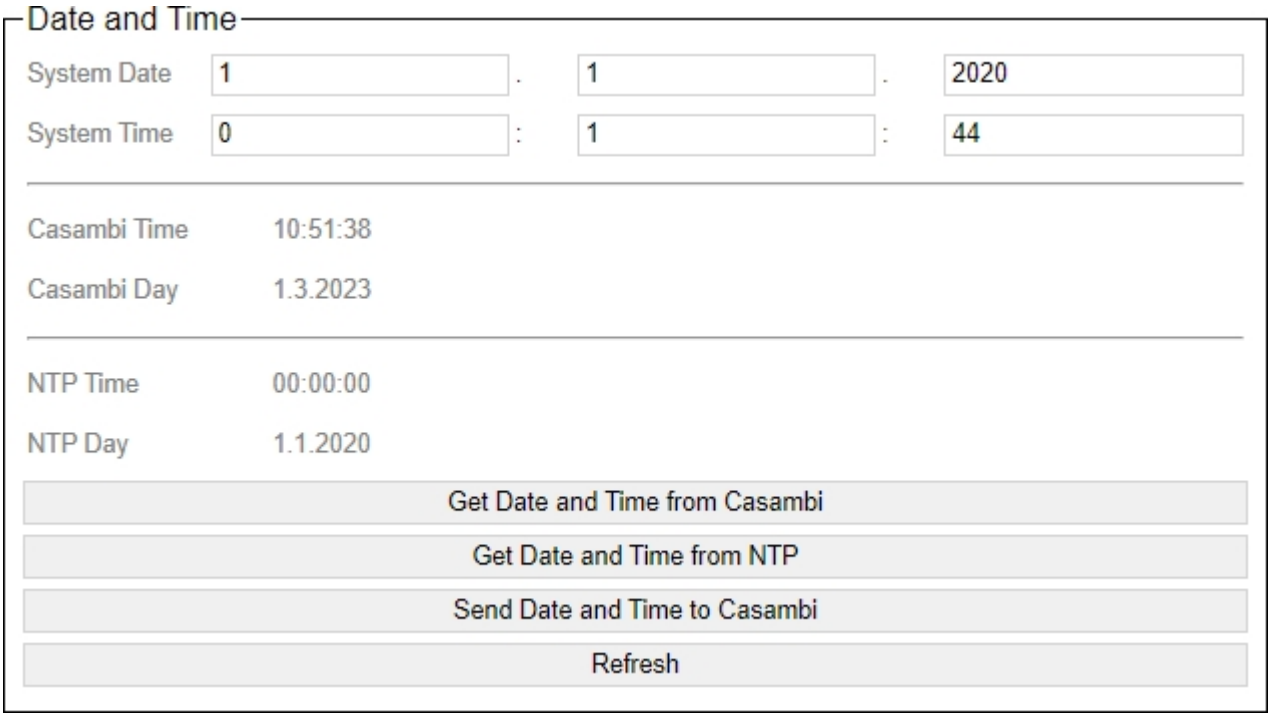
If this option is enabled, all status LEDs are permanently disabled.
In this state, the LEDs do not indicate any function and remain switched off.

Identify function

The "Identify" button activates the identification mode.

The three upper LEDs on the device will begin to flash on and off in ascending and descending order.
This function is used to uniquely identify the device within an installation.

4.3.4. Date and time



The various time sources of the gateway are displayed and synchronized in this area.

System Date / System Time

The system time currently used in the gateway is displayed under "System Date" and "System Time." The system time serves as an internal reference and as a time buffer between the connected systems.

Casambi Date / Time

The current time of the connected Casambi system is displayed here.

The "Get Date and Time from Casambi" button queries the current time from the Casambi network.

> Since the time transfer by Casambi may be delayed, the "Refresh" button should then be used to reload the page.

The time transmitted by the Casambi system is transferred to the gateway's system time.

NTP Date/Time

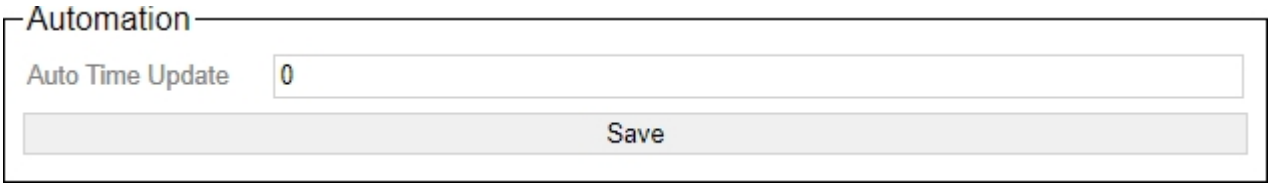
The current time of the configured NTP server is displayed here.

The "Get Date and Time from NTP" button queries the current time from the set NTP server. The received time is then transferred to the gateway as the new system time.

Send Date and Time

"Send Date and Time" transmits the currently displayed system time to the Casambi network.

4.3.5. Automation



In this area, you can define a synchronization interval in hours. Once the set interval has

elapsed, the current time is automatically updated:

- If the NTP client is activated, the time is queried from the configured NTP server.
- If no NTP client is active, the time is taken from the Casambi system.

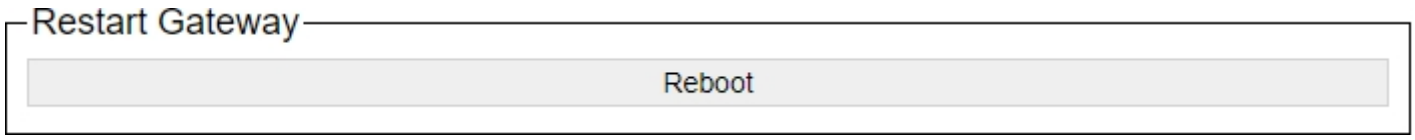
The updated time is then set as the system time.

If the NTP client is activated, the time received from the NTP server is also transferred to the Casambi system at the defined interval.

Deactivation

If the interval is set to 0 hours, automatic time synchronization is deactivated.

4.3.6. Restart gateway

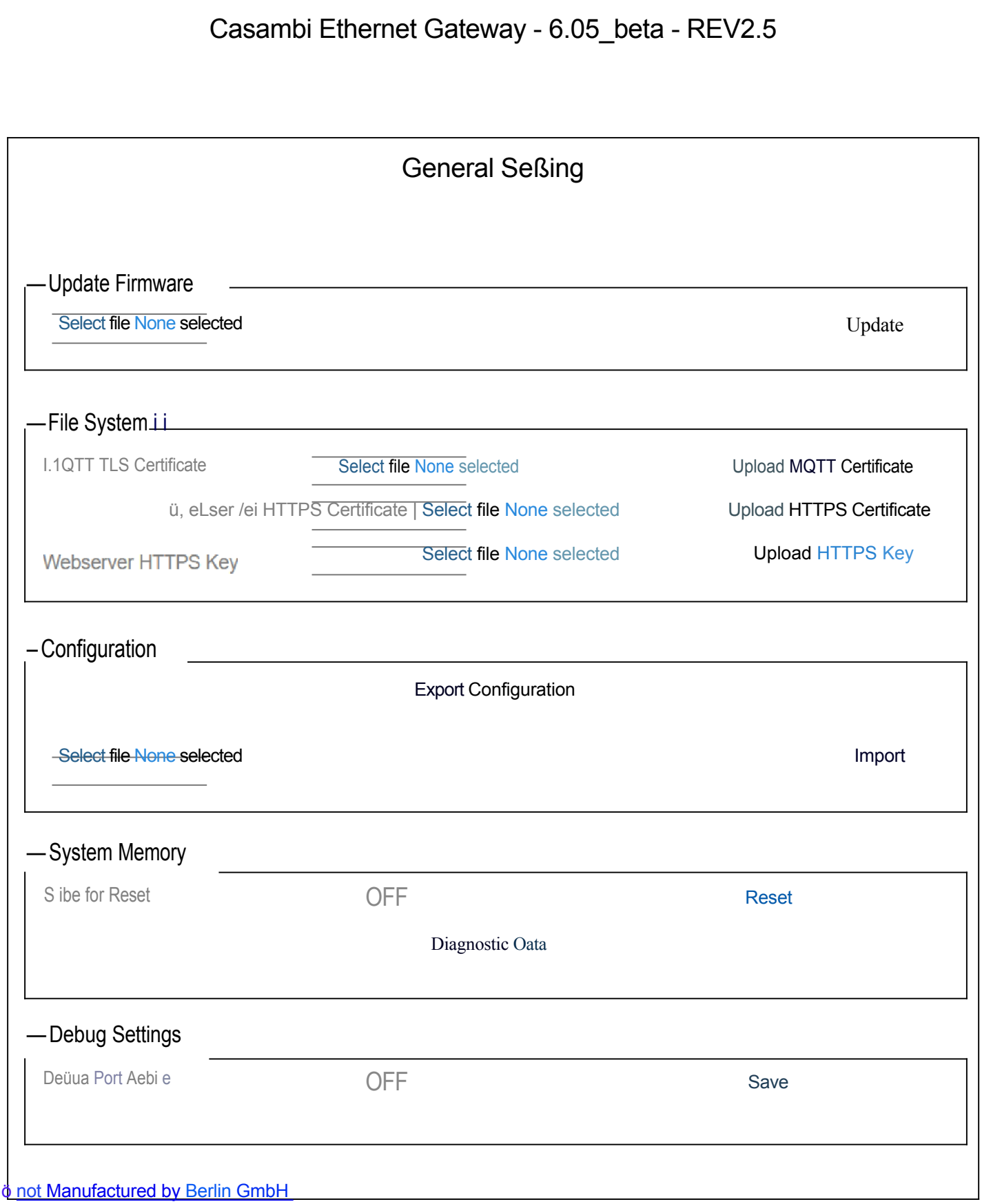


This function can be used to restart the gateway manually.

After triggering the restart, the system is restarted in a controlled manner and all active services are reinitialized.

During the restart, the gateway will be temporarily unavailable.
Network connections and ongoing communication processes will be interrupted during this time.

4.4. Memory


Casambi Ethernet Gateway - 6.05_beta - REV2.5
General Seßing
Update Firmware
Select file None selected
Update
File System
I.1QTT TLS Certificate
Select file None selected
Upload MQTT Certificate
ü, eLser /ei HTTPS Certificate | Select file None selected
Upload HTTPS Certificate
Webserver HTTPS Key
Select file None selected
Upload HTTPS Key
Configuration
Export Configuration
Select file None selected
Import
System Memory
S ibe for Reset
OFF
Reset
Diagnostic Oata
Debug Settings
Deüua Port Aebi e
OFF
Save
ó not Manufactured by Berlin GmbH
2026

4.4.1. Update Firmware

In this section, you can perform a firmware update on the gateway.



Procedure:

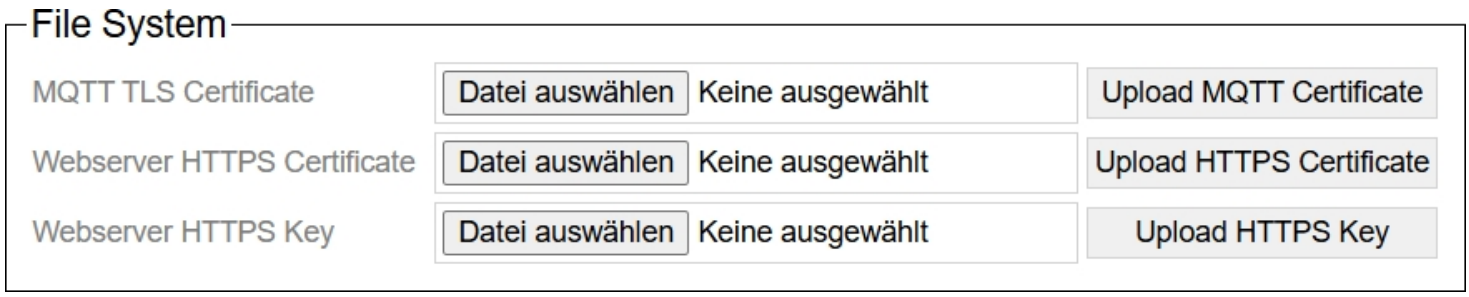
1. Select the appropriate firmware file using "Select file."
2. Start the update process by clicking the "Update" button.

Once the firmware has been successfully transferred and installed, the device will restart automatically.

Once the update has been successfully completed, you will be automatically redirected to the start page of the web interface after a short time.

> ⚠ The power supply to the device must not be interrupted during the update process.
> Interrupting the update may cause the device to malfunction.

4.4.2. File System



Various certificate files for secure connections can be uploaded on this page. Available upload types:

MQTT TLS certificate
Certificate for securing the MQTT connection (e.g., when using port 8883).

Web server HTTPS certificate
Certificate for the integrated HTTPS web server.

Web server HTTPS key
Private key for the web server's HTTPS certificate.

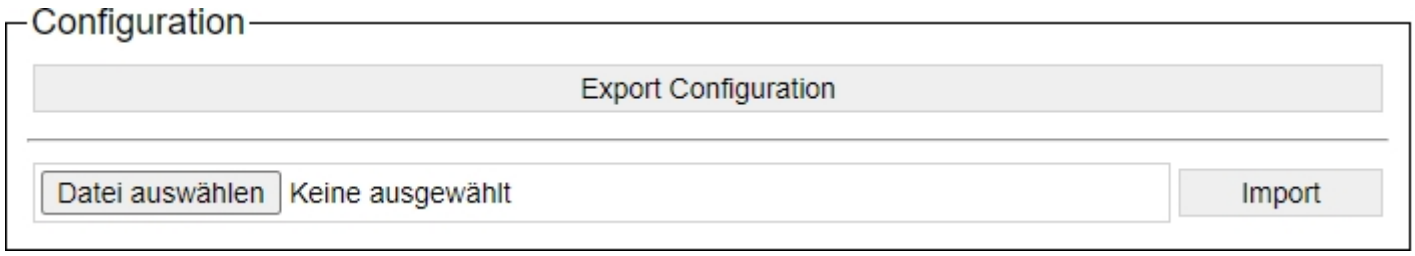
File upload

Use "**Select file**" to select the corresponding file on the local computer.

The "Upload" button next to it transfers the selected file to the gateway and saves it.

It is not possible to download the uploaded files again.
The certificate and key files are stored exclusively on the device and are not exported.

4.4.3. Import/Export



Export

The "Export" button creates a backup file in "*.ceg" format.

The file is downloaded automatically and can be saved as a backup.

The file name is generated automatically and has the following format: export_[IP address with _ instead of .].ceg

Example: export_192_168_1_90.ceg

Import

The "Import" button can be used to select a previously created "*.ceg" file and import it into the gateway.

When importing:

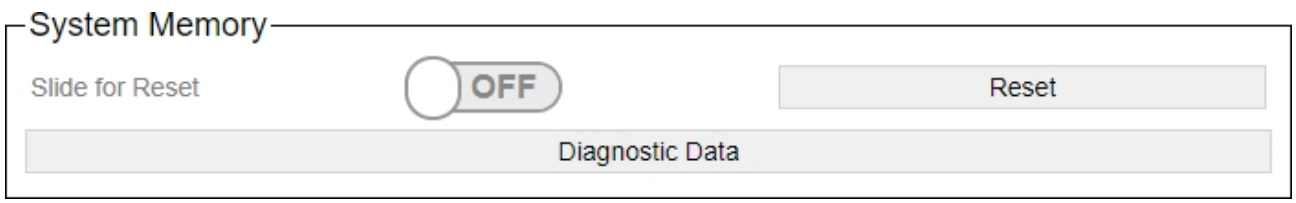
- All settings contained in the file will be applied
- These are saved in the gateway
- The device will then restart automatically.

Compatibility of backup files

Backup files are not compatible between different major versions of the firmware.

If you switch to a different major version as part of an update, the gateway must be completely reconfigured.

4.4.4. System memory



Reset to factory settings

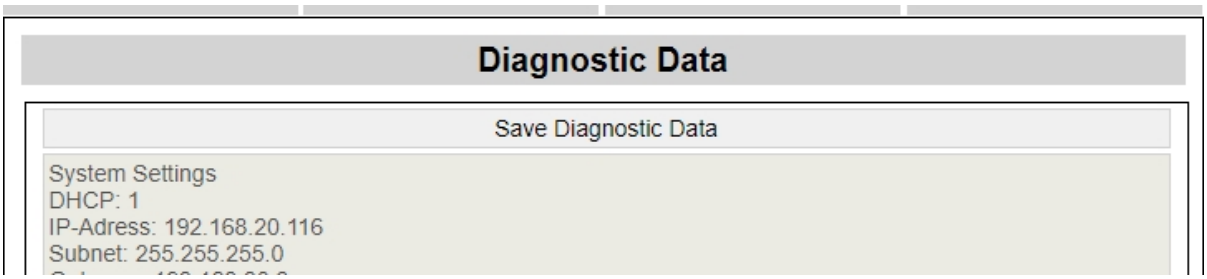
The gateway can be reset to factory settings using the "Reset" button. To do this, the "Slide for Reset" slider must be set to "On".

After performing the reset procedure, all settings will be deleted and the device will restart.

Diagnostic Data

The "Diagnostic Data" button displays a page showing the parameters currently stored in the gateway.

This data is used for analysis and troubleshooting.

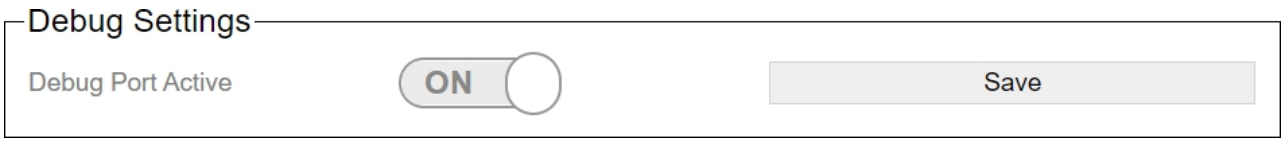


Save Diagnostic Data

Clicking on "Save Diagnostic Data" creates a file with the following name: Casambi_GW_[IP address]_DD.txt

The file is automatically downloaded by the browser and can be saved for documentation or forwarding (e.g., to support).

4.4.5. UDP Debug Port



A debug port can be activated in this area.

The debug port sends diagnostic data but does not receive any data. Communication parameters:

- Protocol: UDP Broadcast
- Port: 10006

All debug information is output via UDP broadcast in the network.

```
17.01.2022 15:23:26                    Connected to 192.168.1.100:10006
17.01.2022 15:23:28  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:28  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:29  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:29  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:32  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:33  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:34  192.168.1.90:10006  local:10006  System: -------------------------
17.01.2022 15:23:34  192.168.1.90:10006  local:10006  System: Free Memory:
17.01.2022 15:23:34  192.168.1.90:10006  local:10006  System: Time: 06:09:32
17.01.2022 15:23:34  192.168.1.90:10006  local:10006  System: Free heap: 189348
17.01.2022 15:23:34  192.168.1.90:10006  local:10006  System: Startup: 717
17.01.2022 15:23:34  192.168.1.90:10006  local:10006  System: -------------------------
17.01.2022 15:23:35  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:35  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:38  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:39  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:41  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:41  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:44  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:45  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:47  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:47  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:50  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:51  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:54  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:54  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:23:56  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:23:57  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:24:00  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:24:00  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:24:02  192.168.1.90:10006  local:10006  Casambi Output: 1.68
17.01.2022 15:24:02  192.168.1.90:10006  local:10006  Casambi Input: 13.44.90.37.4c.a8.20.82.25.6a.64.d5.22.99.69.49.0.0.0.22
17.01.2022 15:24:02  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
17.01.2022 15:24:02  192.168.1.90:10006  local:10006  Casambi Input: 5.46.0.0.ff.7f
17.01.2022 15:24:04  192.168.1.90:10006  local:10006  System: -------------------------
17.01.2022 15:24:04  192.168.1.90:10006  local:10006  System: Free Memory:
17.01.2022 15:24:04  192.168.1.90:10006  local:10006  System: Time: 06:10:02
17.01.2022 15:24:04  192.168.1.90:10006  local:10006  System: Free heap: 189348
17.01.2022 15:24:04  192.168.1.90:10006  local:10006  System: Startup: 717
17.01.2022 15:24:04  192.168.1.90:10006  local:10006  System: -------------------------
17.01.2022 15:24:06  192.168.1.90:10006  local:10006  Casambi Output: 2.70.0
```

Usage

With a suitable receiving program, the transmitted diagnostic data can be recorded for analysis and service purposes.

A suitable tool for displaying the debug output is "LanLog.exe," which is provided by us.

Behavior on restart

If the debug port is activated, the gateway remembers this status.

After a restart, the debug port is automatically reactivated if it was previously active.

However, if the device is reset or completely switched off, the debug function is deactivated.

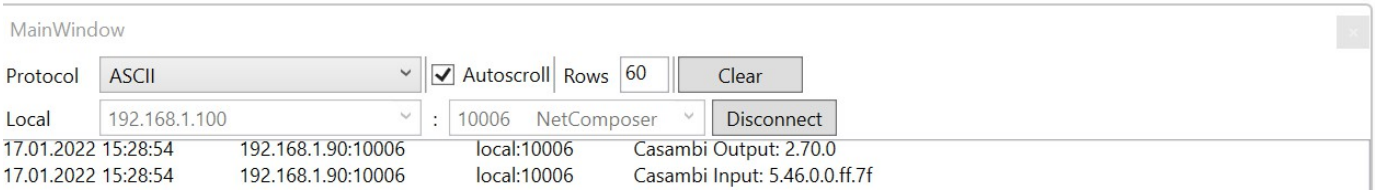


Since the debug data is sent via broadcast, it should only be activated in suitable service or test environments.

4.4.5.1. LanLog.exe

The "LanLog.exe" tool can be downloaded from the following URL:

https://archiv.intelligent-lighting.de/index.php/s/V6uglwZDel3HR3V



Configuring the tool

After starting the program, the following settings must be made:

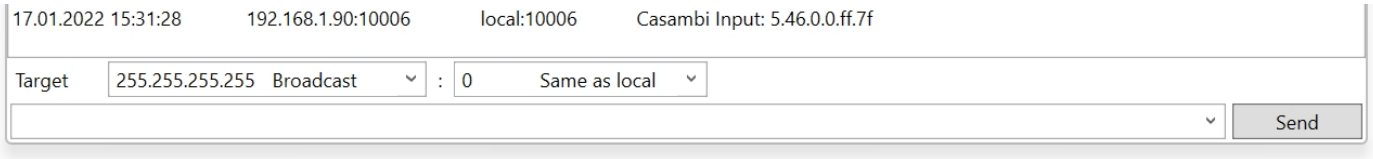
Protocol
Select "ASCII."

Local
Select the appropriate network interface based on the local IP address of your PC.

Port
Enter port 10006.

The connection can then be established via "Connect."

Once the connection has been successfully established, the first debug entries are displayed in the upper output area.



The lower input area of the tool has no function in this application case, as the gateway does not receive any data on port 10006, but only sends debug information.

4.5. Reset device

Reset via internal button

For devices manufactured after 03/2022, a reset can be triggered via an internal button.

For more information, see the section "Reset button."

Complete flash reset (from firmware 2.11)

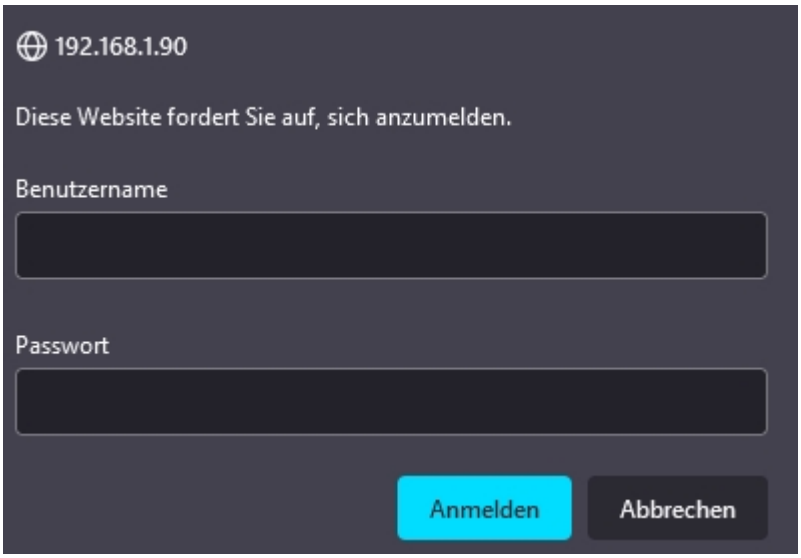
From firmware version 2.11 onwards, it is also possible to reset the entire device memory via the following URL:

/reset_full_flash

The complete address is, for example: http://[IP

address of the gateway]/reset_full_flash **Login**

After entering the URL, the login screen will appear if you are not already logged in.



Log in using

- with the username and password assigned during setup or
- alternatively, with the MAC address of the device as the username and password

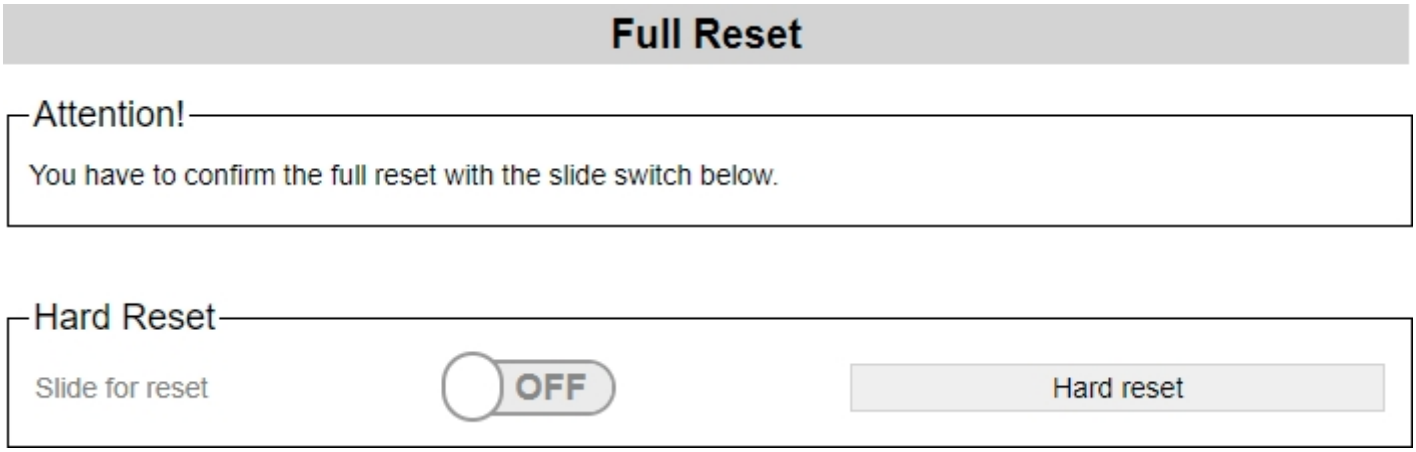
Example (MAC address of the device):

- User: 4C:75:25:5C:E1:E7
- Password: 4C:75:25:5C:E1:E7

Logging in with the MAC address is only valid for this URL

Performing the reset

After successfully logging in, the reset page will be displayed.



To perform the reset:

1. Activate the slide switch to confirm.
2. Press the reset button.

This process will erase the entire flash memory. The device will be completely reset to factory settings.

The reset process can take between 30 and 180 seconds. During this time,

the device will be unavailable.

5. Protocol-specific settings

This section describes the configurable settings for the selected control system.

The settings are basically divided into two areas:

- "To Casambi"
- "From Casambi"

These two tabs are located within the respective protocol and define the direction of communication.



To Casambi

This section describes settings that are used to transfer commands from the external system to the Casambi system.

From Casambi

This section describes settings that are used to transfer status information or events from the Casambi system to the external system.

Advanced settings

If a protocol has additional, specific parameters, these are explained separately in the corresponding protocol chapter.

Possible protocols:

- Artnet
- BacNet/IP
- Free commands TCP
- Free commands UDP
- HelvarNet
- MQTT
- Netcomposer
- UDP Casambi Command
- TCP Casambi Command
- UDP Casambi Bridge
- KNX/IP
- HomeAssistant
- WebAPI

5.1. ArtNet

In "ArtNet (Input Only)" operating mode, various actions in the Casambi system can be assigned to an ArtNet universe.

All 512 DMX channels of a universe are available.

Each channel can be assigned to a corresponding Casambi action.

Device identification

ESTA Manufacturer ID: 0x02F1

OEM Code (Artistic Licence): 0x2AB4

These identifiers are used in the ArtNet protocol to identify the device.

ArtNet configuration via network

Once the gateway has been set to "ArtNet" operating mode, it can also be configured on the network side using ArtNet commands.

For example, the following parameters can be set using ArtIp commands:

- IP address
- Subnet mask
- Port

ArtPoll support

The gateway responds to ArtPoll requests.

This allows it to be automatically detected and displayed in media controllers or ArtNet management tools.



For reliable communication, the gateway should be located in the same network segment as the ArtNet control system.

5.1.1. To Casambi

Address range (page selection)

The DMX address range to be displayed can be selected in the upper section of the page. 25 DMX

channels are displayed per page.

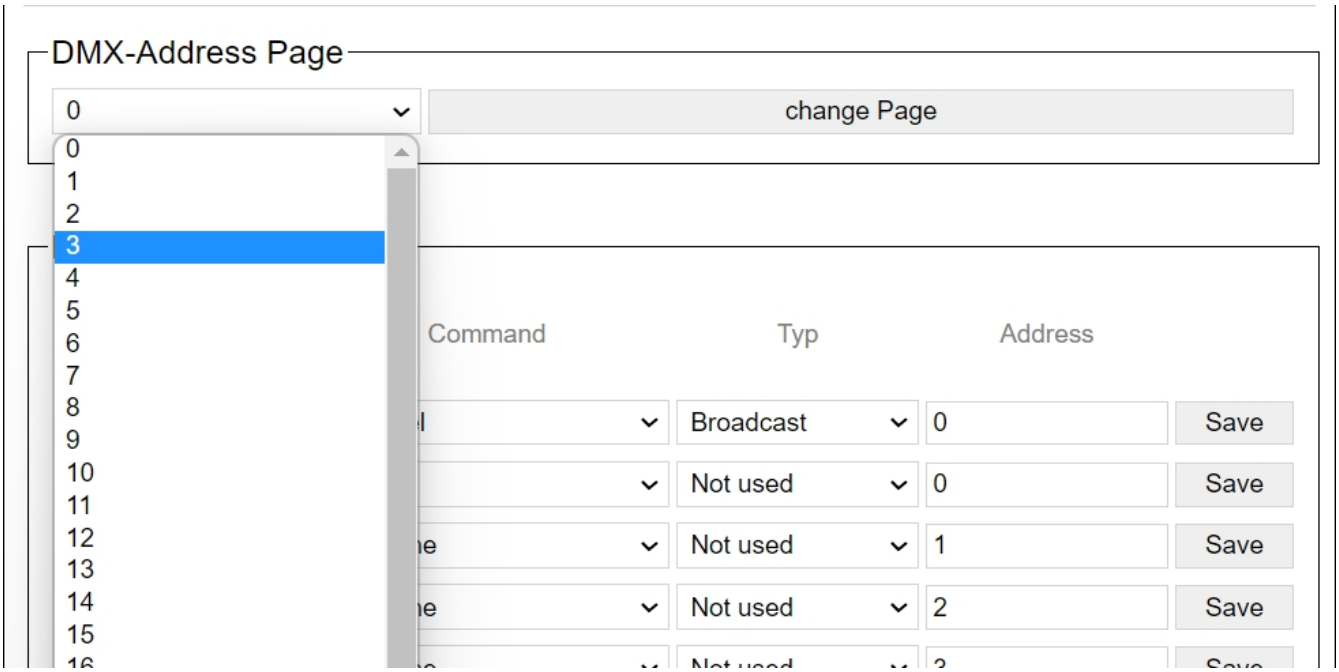
Page layout:

Page 0
DMX address 1 – 25

Page 1
DMX address 26 – 50

...

Page 20
DMX address 501 – 512



Channel and function assignment

The individual DMX channels and their respective functions are displayed below the page selection.

DMX-Address 1 - 25

DMX-Address	DMX-Value	Command	Typ	Address	
1	0	Set Level	Broadcast	0	Save
2	0	none	Not used	0	Save
3	0	Set Scene	Not used	1	Save
4	0	Set Scene	Not used	2	Save
5	0	Set Scene	Not used	3	Save
6	0	Set Scene	Not used	13	Save
7	0	Set Scene	Not used	14	Save
8	0	Set Scene	Not used	15	Save
9	0	none	Not used	0	Save
10	0	Set Level	Device	18	Save
11	0	Set Color Red	Device	18	Save
12	0	Set Color Green	Device	18	Save
13	0	Set Color Blue	Device	18	Save
14	0	Set Color White	Device	18	Save

A function (command) can be defined for each channel.

Available functions:

1. none
    - No function

2. Set Level
    - Type and address required
    - The DMX value (0–255) is transmitted to Casambi as a brightness value.

3. Set Scene
    - Address 1–255 defines the scene address in the Casambi system
    - The type is ignored
    - The DMX value (0–255) is transmitted to Casambi

4. Set PushButton Level
    - Address 1 – 4 defines the virtual push button input
    - The type is ignored
    - The DMX value (0 – 255) is transmitted to Casambi

5. Set Color Temperature

- Type and address required
- The DMX value is transferred as color temperature
- (0 = warm white, 255 = cool white)

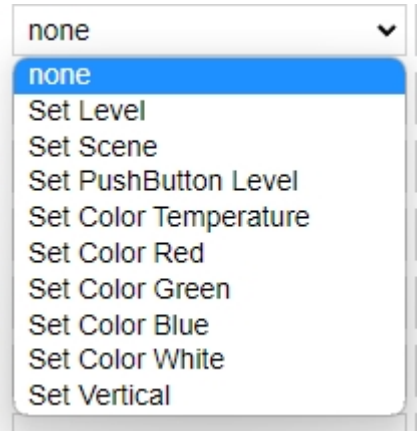
6. Set Color Red
    - Type and address required
    - The DMX value is transmitted as the red component

7. Set Color Green
    - Type and address required
    - The DMX value is transmitted as the green component

8. Set Color Blue
    - Type and address required
    - The DMX value is transmitted as the blue component

9. Set Color White
    - Type and address required
    - The DMX value is transmitted as the white component

10. Set Vertical
    - Type and address required
    - The DMX value is transmitted as a vertical position value



Type and address definition

After selecting the command, the type and target address must be defined.



Types:

1. Not used
    - No additional information required

2. Broadcast
    - No additional information required

3. Device
    - Address 1 – 250
    - The command affects the corresponding device

4. Group
    - Address 0
    - Controls all ungrouped Casambi modules.
    - Address 1 – 255
    - Controls the respective group

5. Scene
    - Address 1 – 255
    - Controls the respective scene

5.1.2. From Casambi

Communication from Casambi Network

Warning!

This settings are not used in "ArtNet" mode.

This page is not used in "ArtNet" operating mode.

The settings shown here have no function in ArtNet mode and are not evaluated.

5.2. BacNet/IP

In this operating mode, the gateway can be accessed via BacNet/IP.

The gateway can be integrated into a BacNet/IP network and receives control commands via this network.

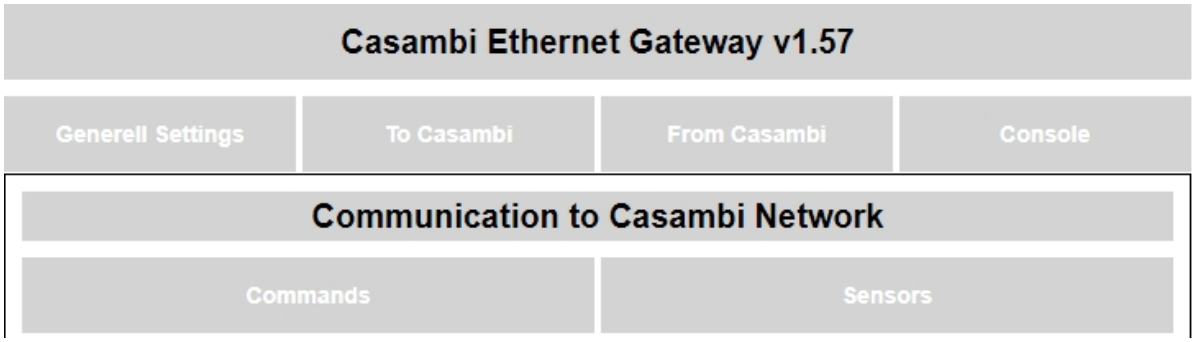
Communication is bidirectional, provided that the corresponding objects are configured.

5.2.1. View in the gateway

The gateway settings are configured via the internal web interface.

5.2.1.1. To Casambi

This section is used to specify which actions are to be performed in the Casambi system when a corresponding command is received from the network at the gateway.



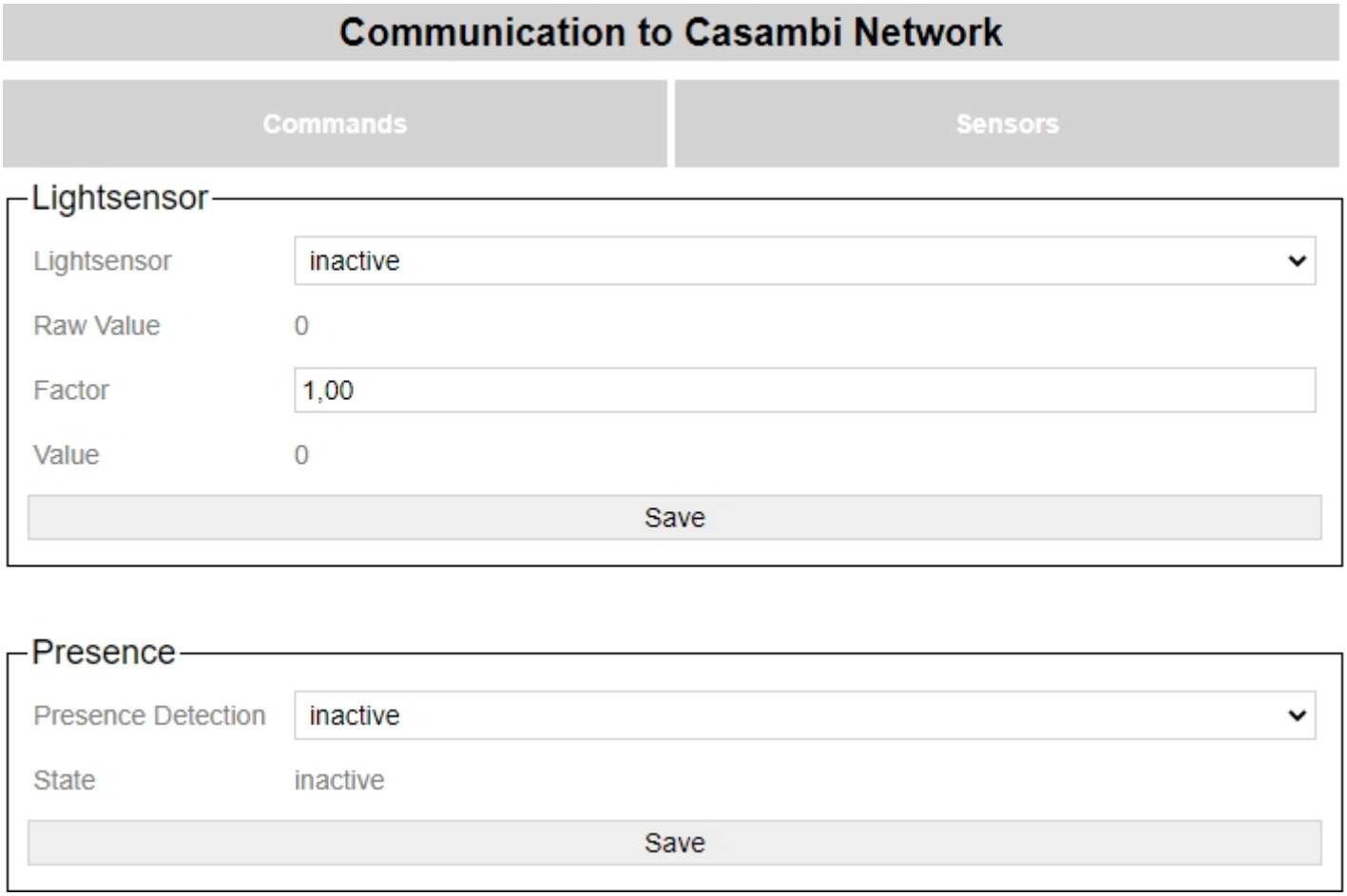
5.2.1.1.1. Commands

Warning!

This "Command"settings are not used in "Bacnet" mode. Please Refer to the Manual.

These settings are not used in "BacNet/IP" operating mode.

5.2.1.1.2. Sensors

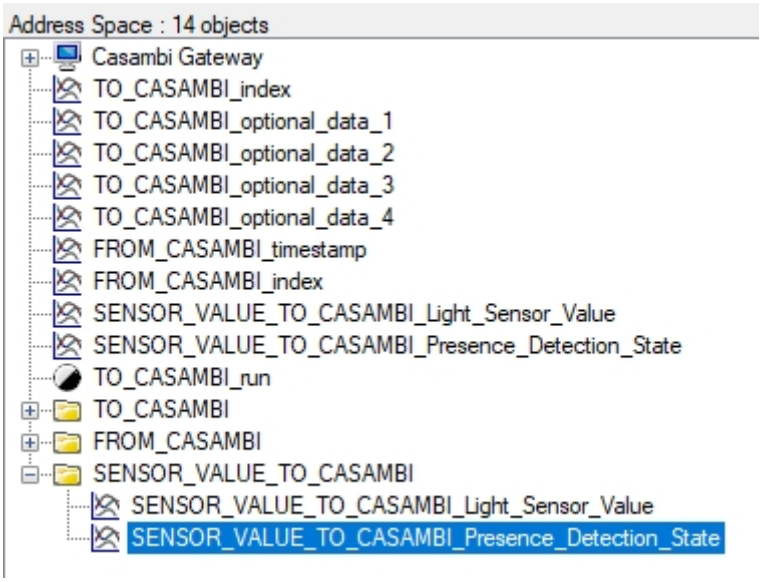


In this section, you can configure the parameters for transmitting sensor messages.

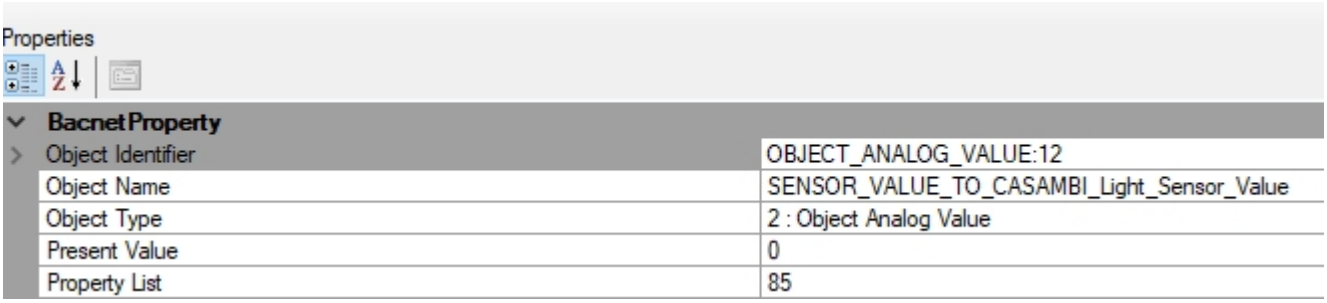
The settings defined here determine which sensor data is forwarded to the higher-level system.

In BacNet/IP operation, the sensor data is displayed accordingly as data points in BacNet. The display in

BacNet is as follows:



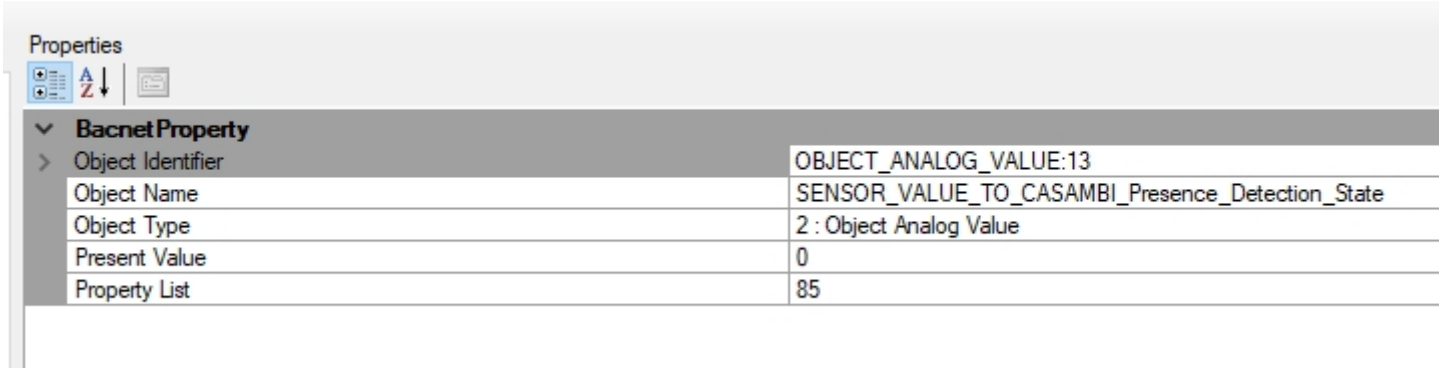
For the light sensor section:



For the light sensor, the current measured value can be transferred directly via the "Present Value" field.

The entered value is displayed in the BacNet system as the current sensor value and processed accordingly.

For the motion detector part:

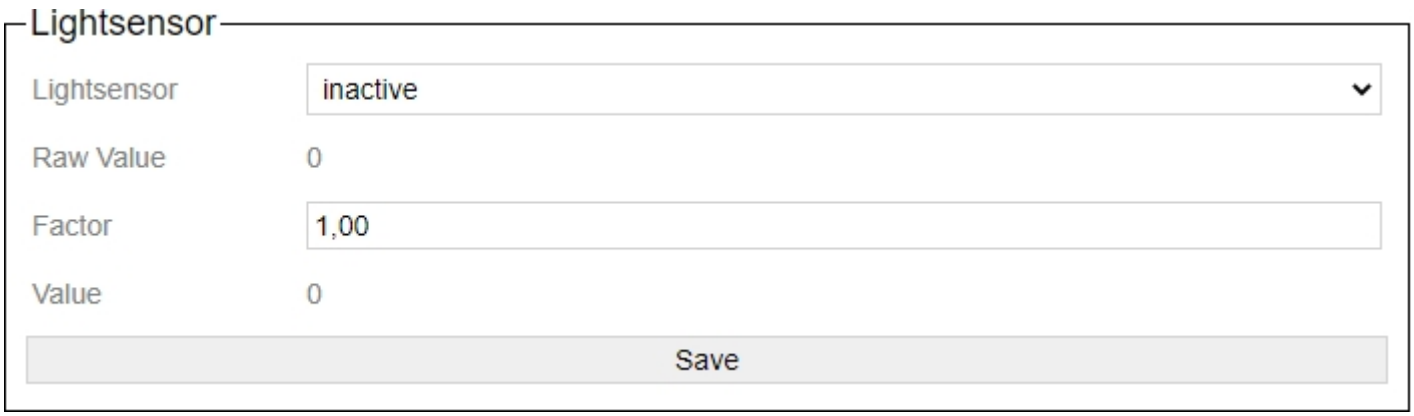


For the presence sensor, the current status can be transferred directly via the "Present Value" field.

0 = no presence detected
1 = Presence detected

The transferred value is displayed and processed accordingly in the BacNet system.

5.2.1.1.2.1. Light sensor



The transfer of light sensor data to the Casambi system can be activated or deactivated via the "Light sensor" drop-down list.

Parameter description

Raw Value
Displays the value currently received via BacNet/IP.

Factor
The factor can be used to scale the value received via BacNet/IP.

Value
Displays the value that is transmitted to the Casambi system. The

calculation is based on the following formula:

Value = Raw Value × Factor

Function

If the "Light Sensor" is set to active, any change in the value received via BacNet/IP is automatically forwarded to the Casambi system.

The factor allows for easy adjustment of different sensor calibrations or value ranges between BacNet and Casambi.

5.2.1.1.2.2. Presence



The "Presence Detection" drop-down list can be used to activate the forwarding of a value as a presence status to the Casambi system.

The "State" field displays the currently received status. The

assignment is as follows:

0 = inactive (no presence)

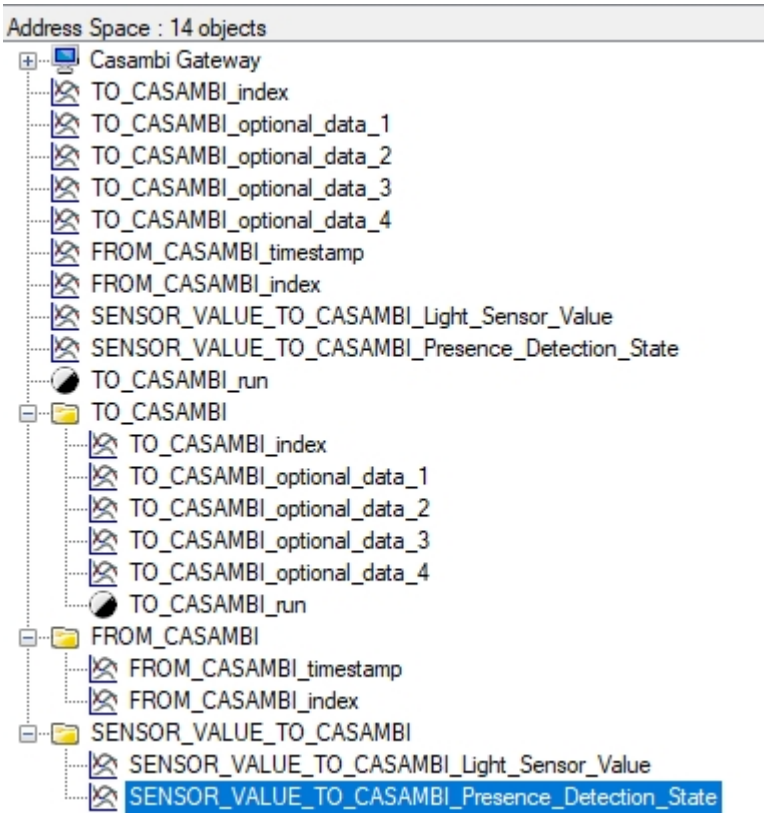
1 = active (presence detected)

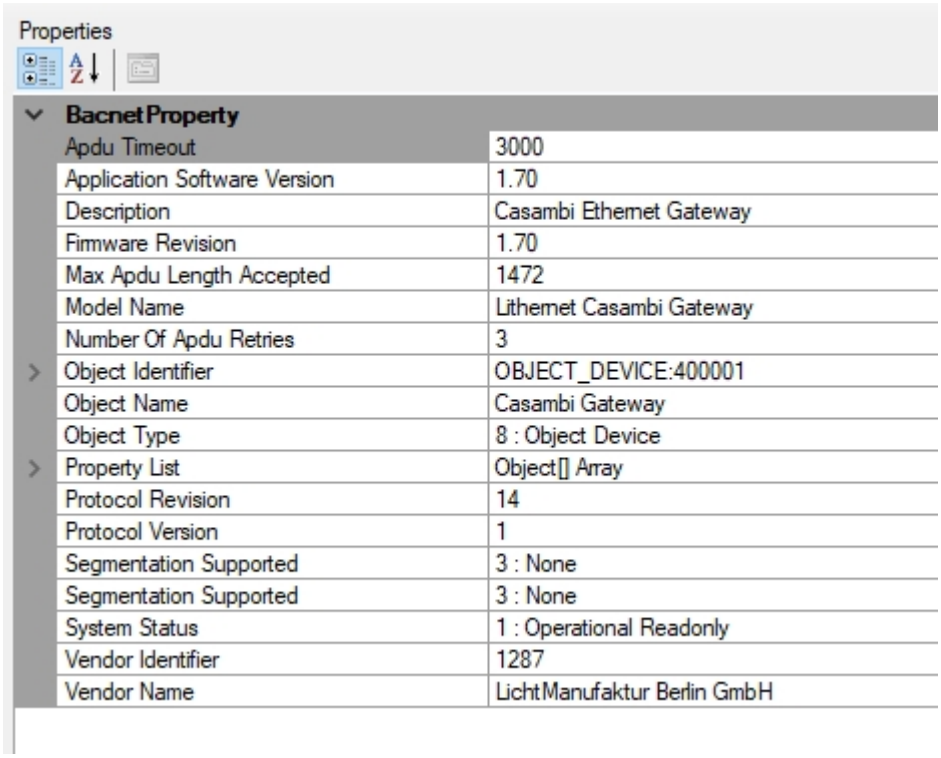
5.2.1.2. From Casambi

> **Warning!**
>
> This settings are not used in "BacNet" mode. The Values are stored in The BacNet Objects: "From Casambi" in "index" and "timestamp".

These settings are not used in "BacNet/IP" operating mode.

5.2.2. View in BacNet





The gateway can be automatically detected and integrated into the BacNet/IP network. The UDP port used and the "Local Device ID" can be freely configured.

Structured Views

The device provides three structured views, each of which maps different functional areas:

To Casambi
Used to transfer control commands from BacNet/IP to the Casambi system.

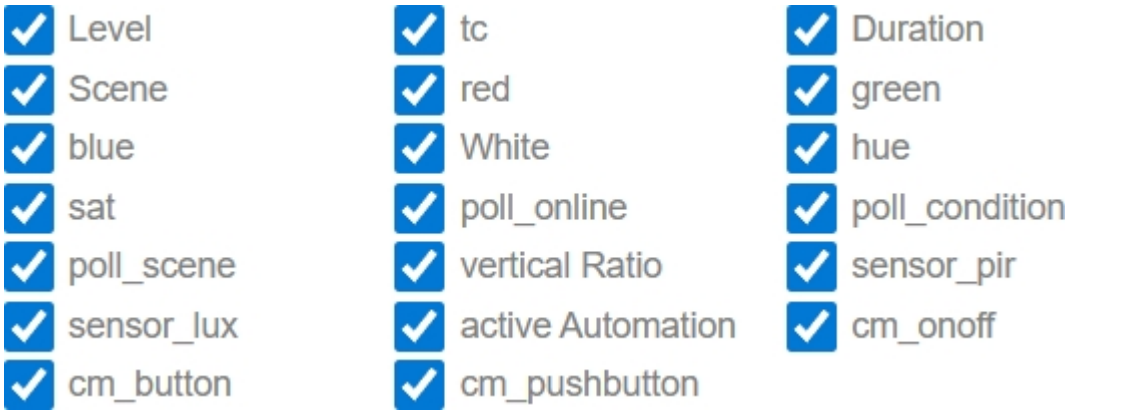
From Casambi
Used to send status values from the Casambi system back to BacNet/IP.

Sensor Value To Casambi
Used to transfer sensor data (e.g., light sensor and presence values) from BacNet to the Casambi system.

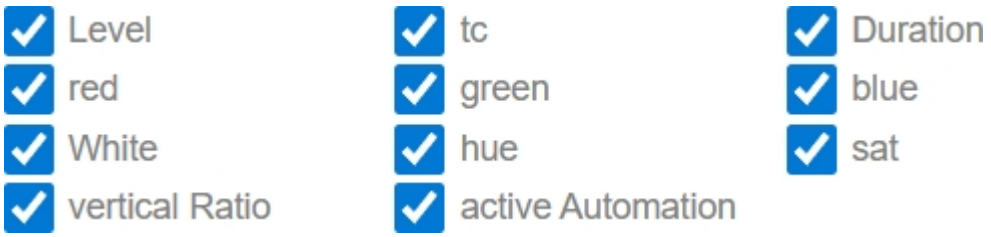
Broadcast



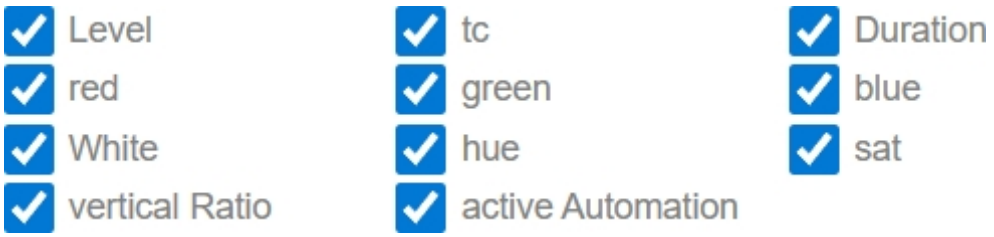
Device



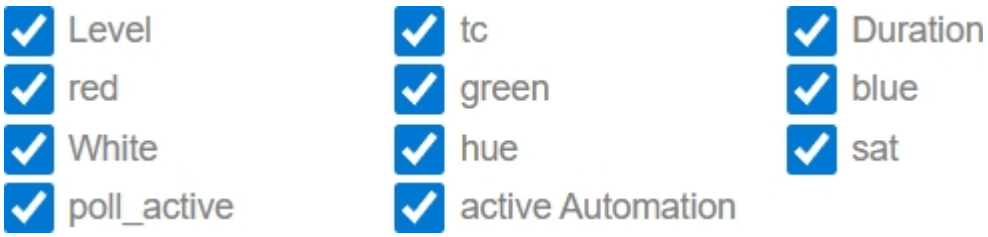
Ungrouped



Groups



Scenes

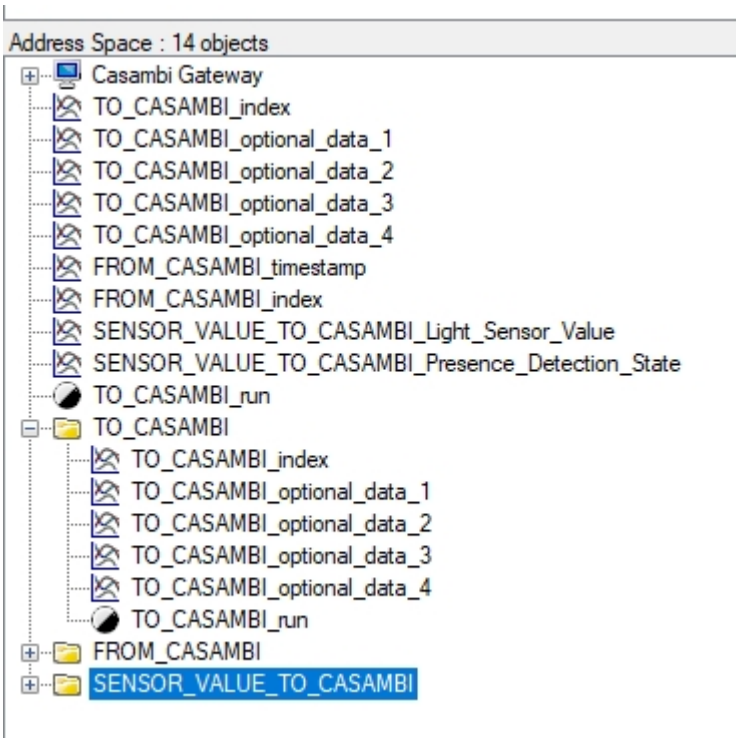


Structured Views are used for simplified and structured assignment of variables.

Since not all BacNet tools support Structured Views, all values are also available individually as objects.

5.2.2.1. To Casambi

These settings are the same as in version 1 and are still available for compatibility reasons. They also work with Evolution firmware versions lower than 33.22.



In this operating mode, command execution is parameter-based via the variables:

- index
- Optional Data 1
- Optional Data 2
- Optional Data 3
- Optional Data 4
- run

Command execution sequence

1. First, the values for "index" and, if applicable, "Optional Data 1–4" are set.
2. Then "run" is set to 1 / true.
3. The command is then transmitted to the Casambi system.
4. After successful execution, "run" is automatically reset to 0 / false.

The values of "index" and "Optional Data 1–4" are retained and are only reset to 0 after the device is restarted.

Parameter description

index
Defines the command to be executed.

Optional Data 1–4

Contain additional parameters depending on the command.

Command table

Command	index	Optional Data 1	Optional Data 2	Optional Data 3	Optional Data 4
Nothing	0	---	---	---	---
Set Level	1	Level	Duration_high_byte	Duration low_byte	---
Set Push Button Pressed	2	Button	---	---	---
Set Push Button Released	3	Button	---	---	---
Set Scene Level	4	Scene	Level	Duration_high_byte	Duration low_byte
Set Group Level	5	Group	Level	Duration high byte	Duration low_byte
Set Push Button Level	6	Button	Level	---	---

Duration

The duration is specified in 10 ms increments. Example:
A value of 100 corresponds to 1 second.

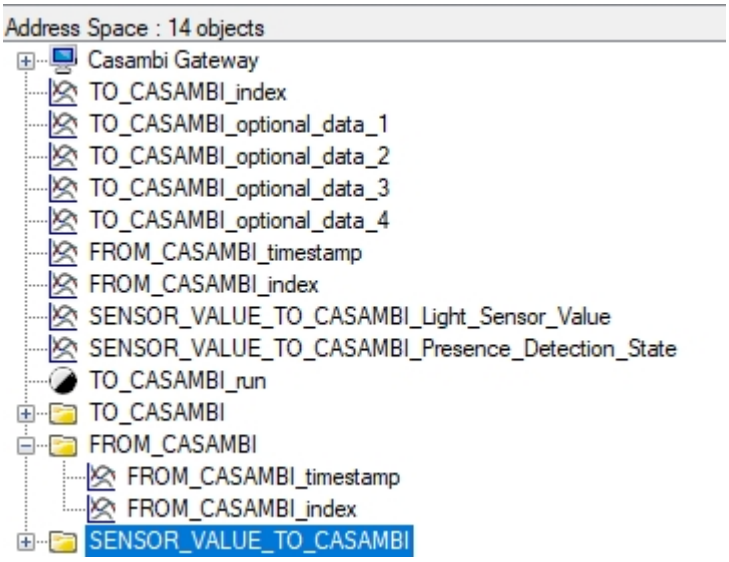
A value of 0 means that the standard fade time stored in the lighting module is used.



The bytes "Duration High" and "Duration Low" together form a 16-bit value.

5.2.2.2. From Casambi

These settings are the same as in version 1 and are still available for compatibility reasons. They also work with Evolution firmware versions lower than 33.22.



When the gateway is added to a scene in the Casambi system, binary values can be set using the gateway's 8 sliders.

The 8 sliders form an 8-bit value (0–255).

When the scene is called up, this value is returned via the "index" parameter.

Timestamp

A "timestamp" is also output.

The timestamp corresponds to the runtime of the gateway in seconds.

This value can be used to distinguish between a newly transmitted value and a value that has already been set.

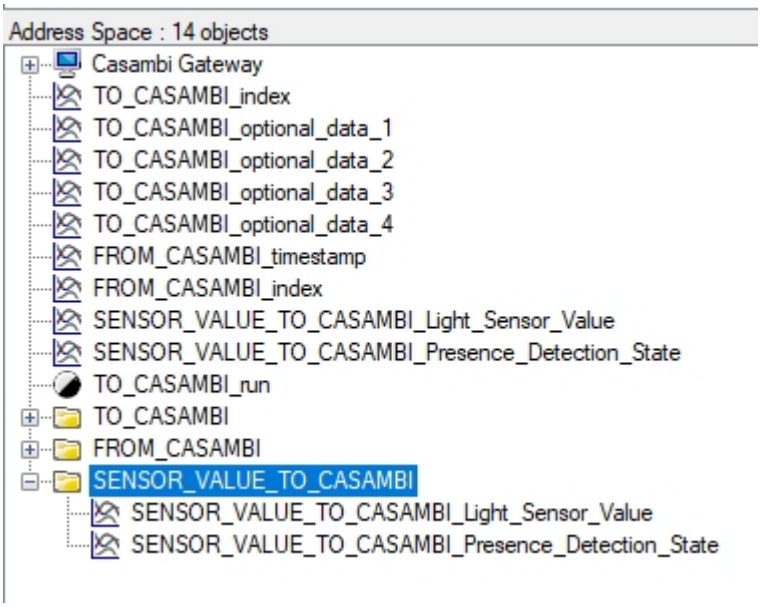
Overflow behavior

When the timestamp reaches the maximum value range, the counter starts again at 0.

The binary scene feedback enables flexible coding of states or function calls within external control systems.

5.2.2.3. Sensor Value To Casambi

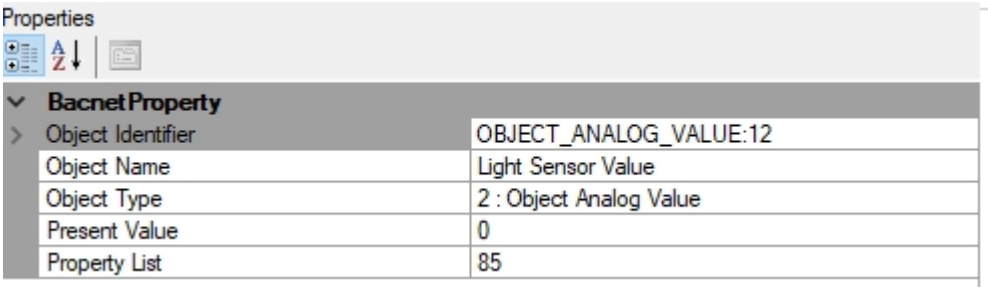
These settings are the same as in version 1 and are still available for compatibility reasons. They also work with Evolution firmware versions lower than 33.22.



Light sensor

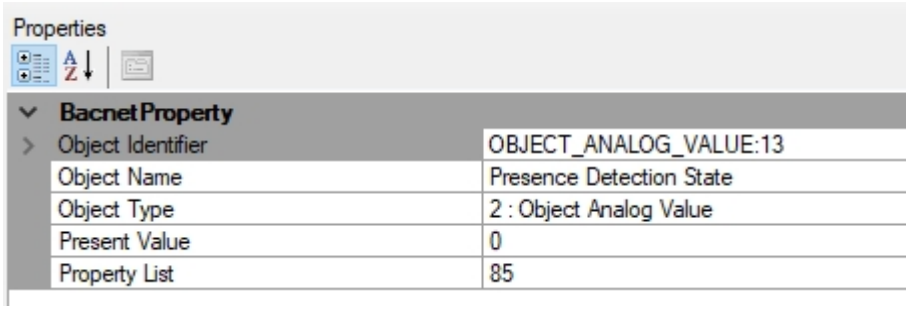
For the light sensor, the current measured value can be transferred directly via the "Present Value" field.

The entered value is displayed in the BacNet system and can be transferred to the Casambi system, if activated.



Motion detector / presence sensor

For the presence sensor, the status can also be set via the "Present Value" field.



0 = no presence detected
1 = Presence detected

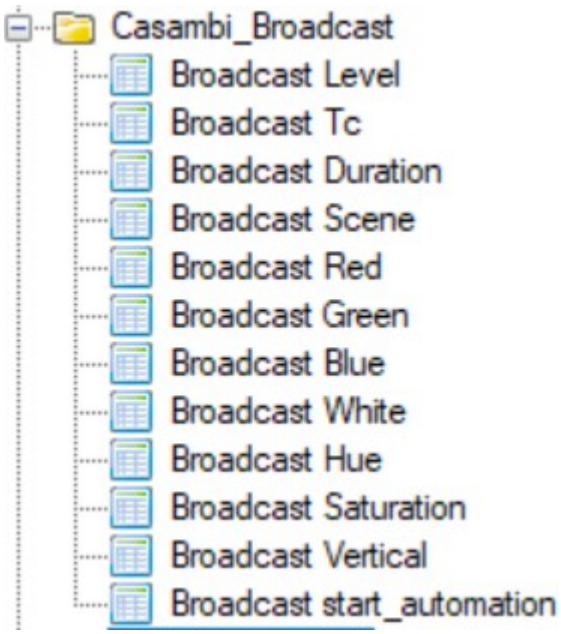
The set value is displayed in the BacNet system and can be transferred to the Casambi system.



To ensure that the sensor data is actually transmitted to the Casambi system, the respective function in the gateway (e.g., "Light Sensor" or "Presence Detection") must be set to active.

Without activation, no transmission to the Casambi network will take place.

5.2.2.4. Broadcast



Broadcast Duration

"Broadcast Duration" is used to set the fade time.

The value is interpreted internally in the Casambi system in 10 ms increments. 0

= default
1 = 0s
100 = 1s

Control values

The target values to be called up in the Casambi system are entered in the following fields:

- Level
- Tc (color temperature)
- Red
- Green
- Blue
- White
- Hue
- Saturation

Color control

RGBW control
Required parameters:
Red, Green, Blue, White, Level

Hue/Saturation control
Required parameters:

Hue, Sat, White, Level

Hue value range

0x0000 – 0xFFFF
Defines the color value across the entire color space.

Tc (color temperature)

Value range and meaning:

Tc	Comment
0x400 - 0x4000	Value in Kelvin (1000K - 16000K)
0x00-0xFF	Normalized value for min Tc and max Tc respectively.
0x00	Warmest possible value

Fade behavior

If values are set in the respective variables, the transfer takes place with the fade time defined under "Duration."

Scenes

A scene can be called up using the "Scene" parameter.

The scene is started at level 255, using the value stored in the scene. In addition, this field is used to

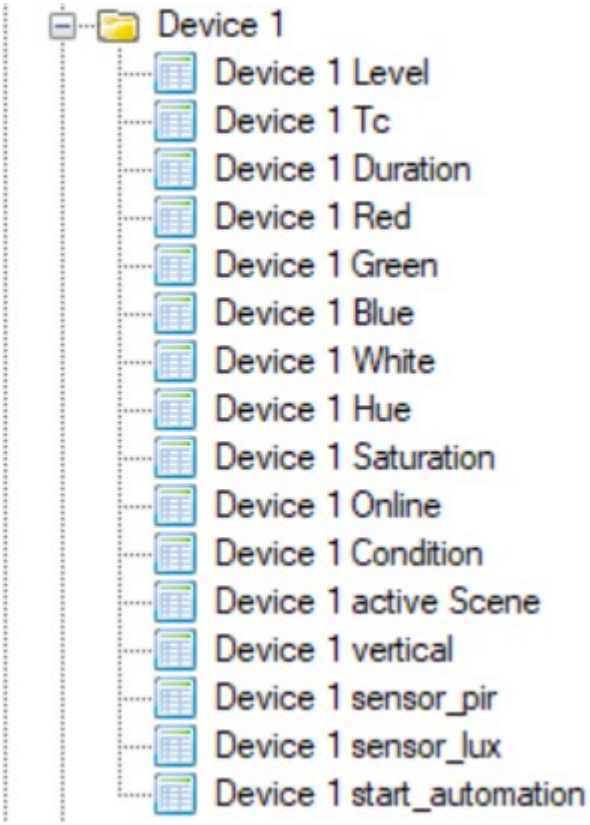
report back the currently active scene.

Automation

The "start_automation" parameter can be used to start automation across the entire network. If the value is set to ≥ 1,

automation is activated for all participants.

5.2.2.5. Device



Duration

"Duration" is used to set the fade time.

The value is interpreted internally in the Casambi system in 10 ms increments. 0

= default
1 = 0s
100 = 1s

Control parameters

The target values to be called up are entered in the following fields:

- Level
- Tc (color temperature)
- Red
- Green
- Blue
- White
- Hue
- Saturation

Color control

RGBW control

Required parameters:
Red, Green, Blue, White, Level

Hue/Saturation control
Required parameters:
Hue, Sat, White, Level

Hue value range

0x0000 – 0xFFFF
Defines the color value across the entire color space.

Tc (color temperature)

Value range and meaning:

Tc	Comment
0x400 - 0x4000	Value in Kelvin (1000K - 16000K)
0x00-0xFF	Normalized value for min Tc and max Tc respectively.
0x00	Warmest possible value

Fade behavior

If a value is set in one of the above fields, transmission will take place with the fade time defined under "Duration."

Status displays

Online
Indicates whether the luminaire is present and accessible in the Casambi system.

Condition
Indicates the current device status. 0x00,
0x80, 0xA0: ok
0x01: "overheated"
0x09: "overload" (current limit)
0x81: "thermal_overload" 0x82:
"lamp_failure"
0x83: "driver_failure" 0x85:
"incompatible_hw" 0x86:
"hw_not_found"
0x87: "configuration_failed"

Active Scene

Indicates which scene is currently active for the respective participant.

Sensor values

sensor_pir
Returns the current presence value of a Casambi sensor, provided that the participant has this function.

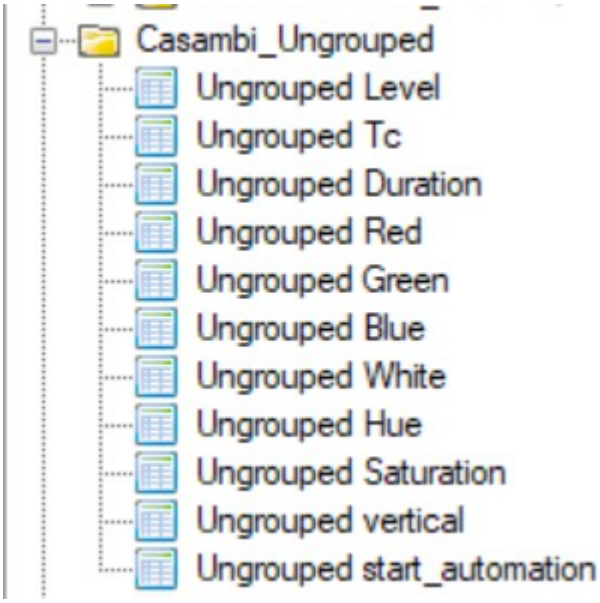
sensor_lux
Returns the current brightness value of a Casambi sensor.

Automation

With "start_automation," automation can be started for this specific participant. If the value is set to ≥ 1,

automation is activated.

5.2.2.6. ungrouped



Duration

"Duration" is used to set the fade time.

The value is interpreted in the Casambi system in 10 ms increments. 0 =

default
1 = 0s
100 = 1s

Control values

The target values to be called up in the Casambi system are entered in the following fields:

- Level
- Tc (color temperature)
- Red
- Green
- Blue
- White
- Hue
- Saturation

Color control

RGBW control
Required parameters:
Red, Green, Blue, White, Level

Hue/Saturation control
Required parameters: Hue,
Sat, White, Level

Hue value range

0x0000 – 0xFFFF
Defines the color value across the entire color space.

Tc (color temperature)

Value range and meaning:

Tc	Comment
0x400 - 0x4000	Value in Kelvin (1000K - 16000K)
0x00-0xFF	Normalized value for min Tc and max Tc respectively.
0x00	Warmest possible value

Fade behavior

If a value is set in one of the above fields, the transfer takes place with the fade time defined under "Duration."

Automation

With "start_automation", automation can be started for all ungrouped participants. If the value is set to ≥ 1,

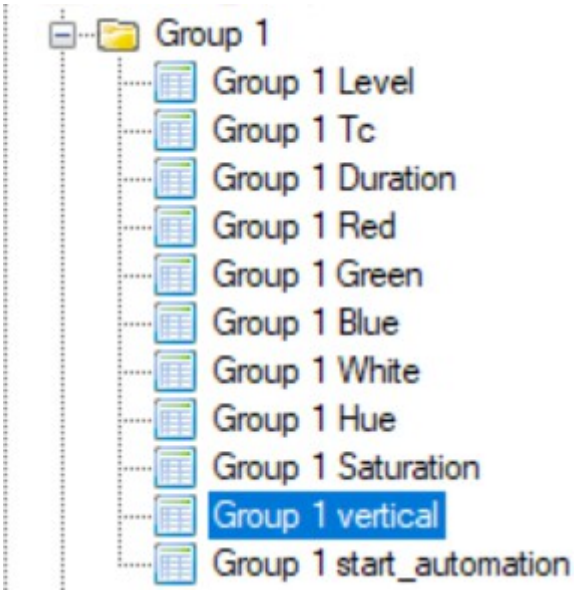
automation is activated.

5.2.2.7. Groups



These settings only work with Evolution firmware version 33.22 or higher. Red, Green, Blue, White, Sat, and Hue require Evolution firmware version 34.50 or higher. Vertical requires Evolution firmware version 37.00 or higher.

start_automation from Evolution firmware version 37.80 or higher.



Duration

"Duration" is used to set the fade time.

The value is interpreted in the Casambi system in 10 ms increments. 0 =

default
1 = 0s
100 = 1s

Control values

The target values to be called up in the Casambi system are entered in the following fields:

- Level
- Tc (color temperature)
- Red
- Green
- Blue
- White
- Hue
- Saturation

Color control

RGBW control
Required parameters:
Red, Green, Blue, White, Level

Hue/Saturation control
Required parameters:
Hue, Sat, White, Level

Hue value range

0x0000 – 0xFFFF
Defines the color value across the entire color space.

Tc (color temperature)

Value range and meaning:

Tc	Comment
0x400 - 0x4000	Value in Kelvin (1000K - 16000K)
0x00-0xFF	Normalized value for min Tc and max Tc respectively
0x00	Warmest possible value

Fade behavior

If a value is set in one of the above fields, transmission takes place with the fade time defined under "Duration."

Automation

With "start_automation," automation can be started for all ungrouped participants. If the value is set to ≥ 1,

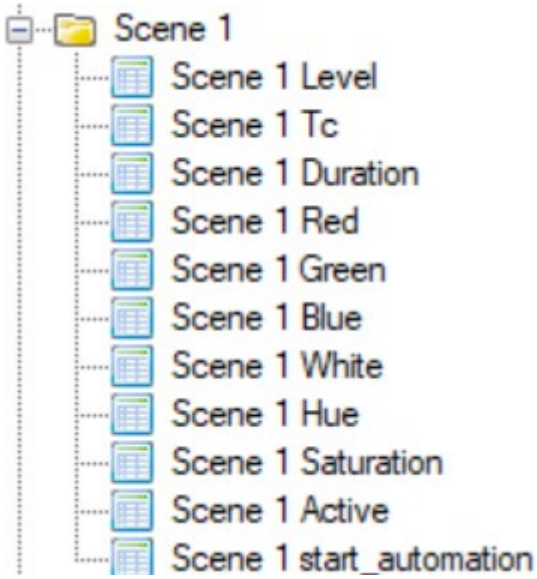
automation is activated.

5.2.2.8. Scenes

These settings only work with Evolution firmware greater than or equal to 33.22.

Red, Green, Blue, White, Sat, and Hue require Evolution firmware version 34.50 or higher. start_automation

requires Evolution firmware version 37.80 or higher.



Duration

"Duration" is used to set the fade time.

The value is interpreted in the Casambi system in 10 ms increments. 0 =

default
1 = 0s
100 = 1s

Control values

The target values to be called up in the Casambi system are entered in the following fields:

- Level
- Tc (color temperature)
- Red
- Green
- Blue
- White
- Hue
- Saturation

Color control

RGBW control

Required parameters:
Red, Green, Blue, White, Level

Hue/Saturation control
Required parameters:
Hue, Sat, White, Level

Hue value range

0x0000 – 0xFFFF
Defines the color value across the entire color space.

Tc (color temperature)

Value range and meaning:

Tc	Comment
0x400 - 0x4000	Value in Kelvin (1000K - 16000K)
0x00-0xFF	Normalized value for min Tc and max Tc respectively.
0x00	Warmest possible value

Fade behavior

If a value is set in one of the above fields, the transfer takes place with the fade time defined under "Duration."

Scene Active

The "Scene Active" field shows whether the respective scene is currently active. The

value indicates:

- Scene active
- Scene not active

This allows the higher-level system to track whether a scene is currently being called up in the Casambi network.

Automation

With "start_automation," automation can be started for all ungrouped participants. If the value is set to ≥ 1,

automation is activated.

5.2.3. Polling

In this operating mode, certain status values are queried cyclically and the corresponding variables are automatically updated.

Queried values:

- The level of the scenes and whether they are active. If not active, the level is 0.
- The level of a group
- The level of the broadcast entry
- Whether the device is accessible (online) and what its status is
- Red, green, blue, white, hue, sat of a device
- Red, green, blue, white, hue, sat of a group
- Red, green, blue, white, hue, sat of broadcast
- Red, green, blue, white, hue, sat of ungrouped lights
- Sensor_pir of a device
- Sensor_lux of a device

Polling method

The method used to poll the data can be adjusted in the system settings. The selection of the polling method

affects response time and system load.

5.3. Free commands TCP

In this operating mode, the gateway establishes a TCP connection to an external server. ASCII-based text commands are exchanged bidirectionally via this connection.

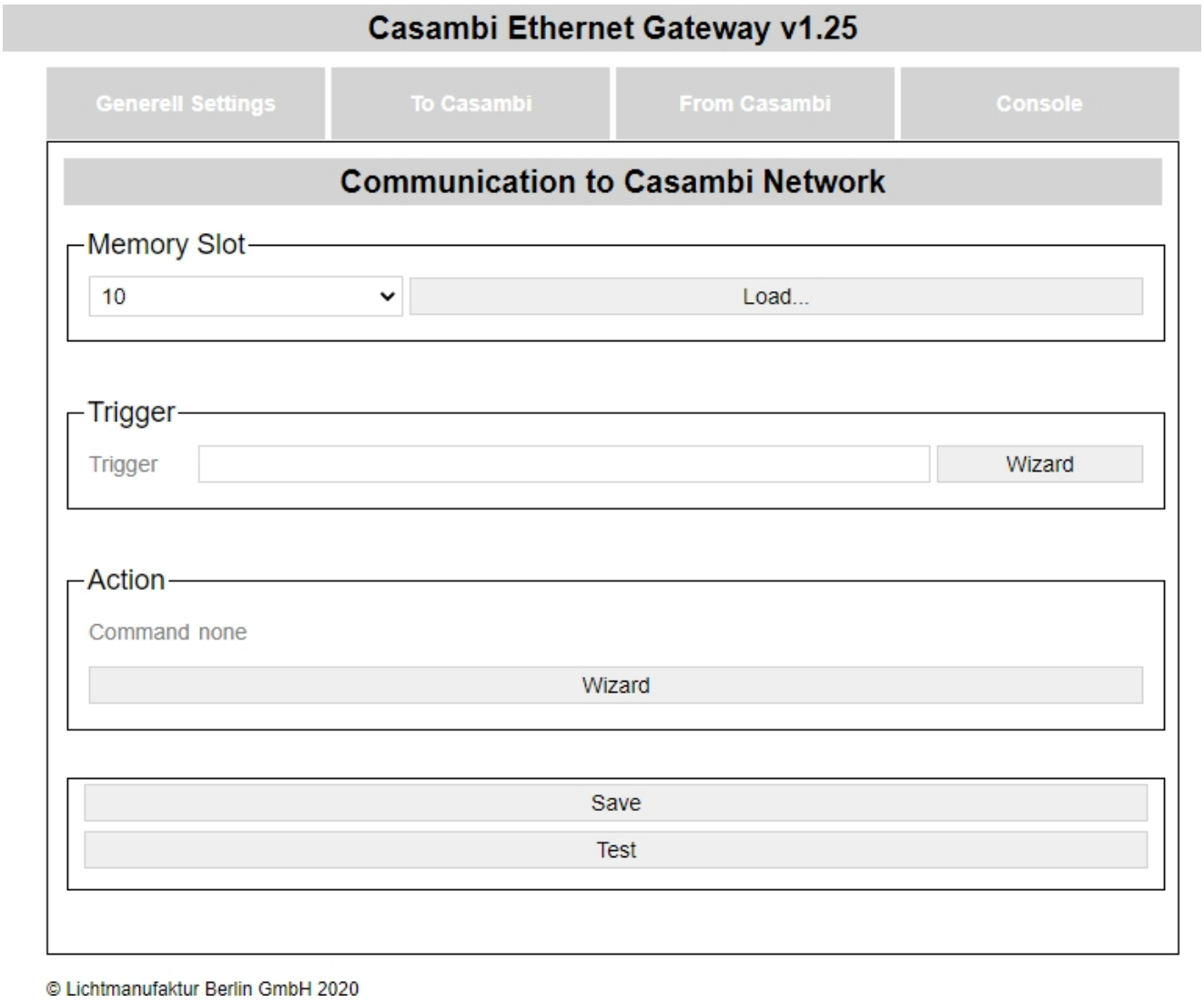
The gateway acts as a TCP client and connects to the configured server IP and the defined port.

5.3.1. To Casambi

This section specifies which actions are to be performed in the Casambi system when a corresponding command is received from the network at the gateway.

The assignment depends on the selected protocol and the respective trigger definition.

A corresponding Casambi action can be stored for each defined network trigger (e.g., scene, group, level, color value, or button function).



Save

The "Save" button saves the configured entry in the currently selected slot. The settings are permanently

stored in the gateway.

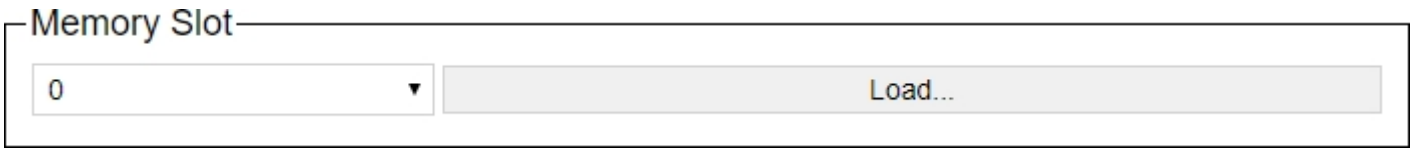
Test

The "Test" button immediately executes the configured action.

This function is used to check whether the correct action has been selected and configured correctly.

5.3.1.1. Select storage space

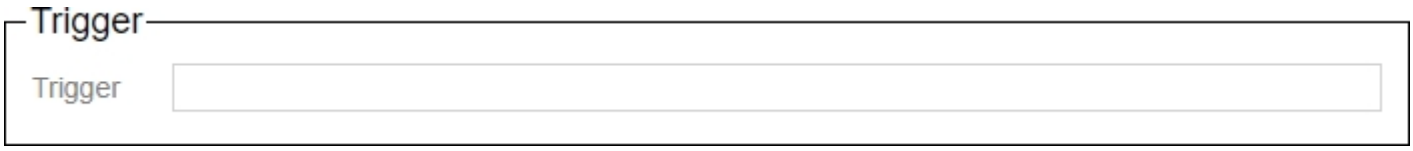
The first step is to select a storage location (slot) where the desired action is to be saved.



The corresponding storage location can be selected from the drop-down list.

The "Load..." button loads the currently stored content of this slot and displays it on the website.

5.3.1.2. Trigger



The command to which the gateway should respond is entered in this text field.

When a corresponding network command is received, the gateway checks the content and, if there is a match, executes the assigned Casambi action.

5.3.1.3. Action



The "Wizard" button opens the dialog box for configuring the desired action. A new page opens with

step-by-step instructions for creating the command.



Navigation in the wizard

"Next Step"
Goes to the next configuration step.

"Step Back"
Allows you to return to the previous step.

Command description

A detailed description of the commands available in the wizard can be found in the chapter: "Protocols / Casambi"



Applying the settings

Once the action-specific settings have been completed, the command generated is displayed.

"Test"
Executes the generated command directly to verify the function.

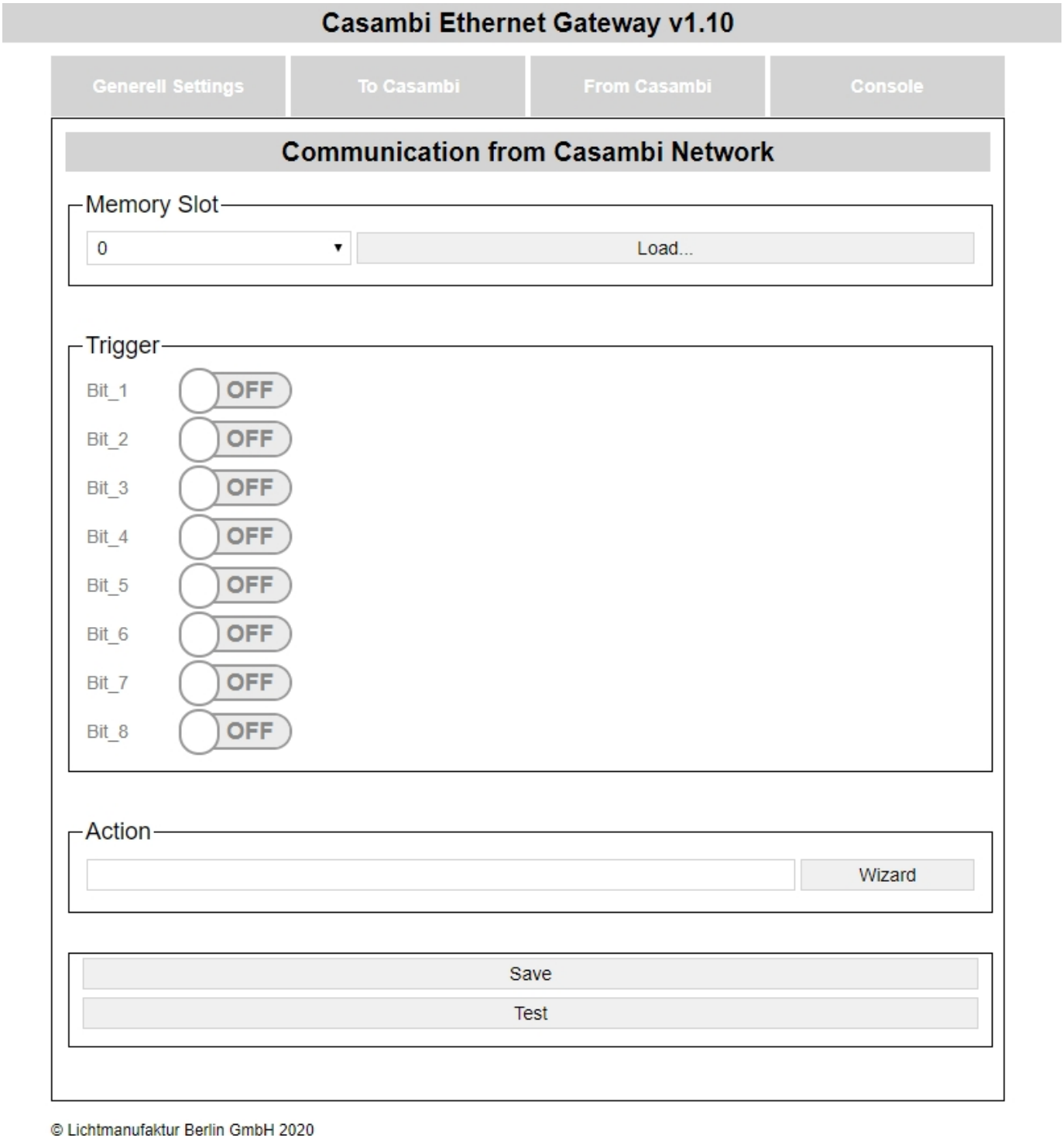
"Apply"

Applies the command and saves the configuration.

5.3.2. From Casambi

This section is used to specify which data the gateway should send to the network when corresponding events occur in the Casambi system (e.g., scene calls or status changes).

For each configured slot, you can define which Casambi action triggers a network transmission and which command is sent.



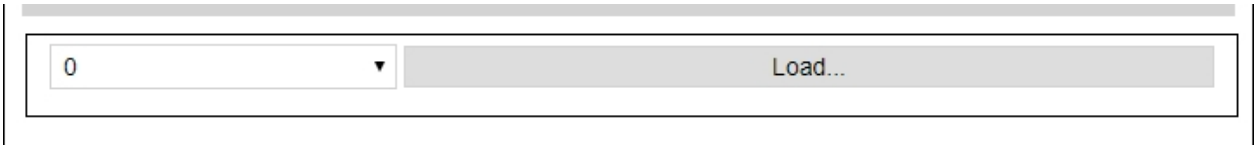
Save and test

Save
The "Save" button saves the configured entry in the selected slot.

Test
The "Test" button triggers the configured action to check whether the correct network transfer is taking place.

5.3.2.1. Memory space selection

The first step is to select a storage location (slot) where the desired action is to be saved.

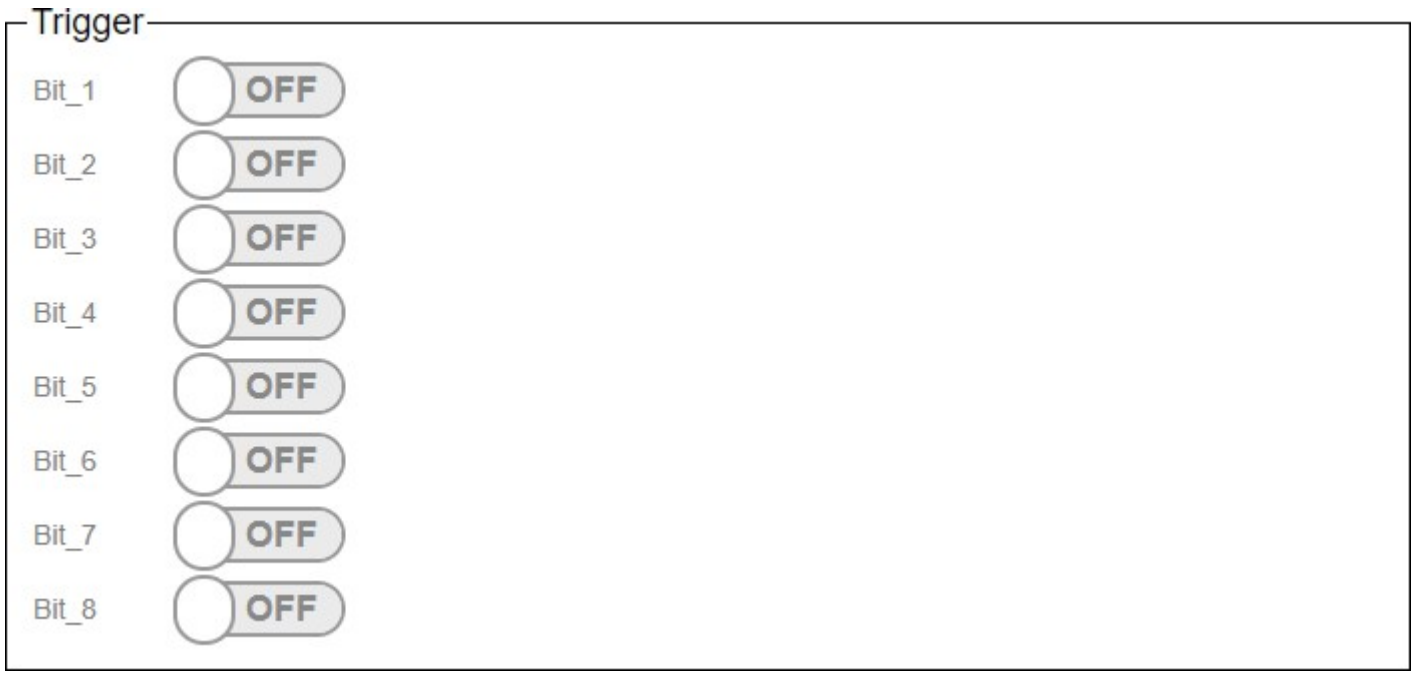


The corresponding storage space can be selected from the drop-down list.

The "Load..." button loads the currently stored content of the selected slot and displays it on the website.

5.3.2.2. Trigger

The "trigger" defines the conditions under which a configured action is triggered.



The trigger settings determine when the network command stored under "Action" should be sent when a scene is called up in the Casambi system.

Use in the Casambi system

In the Casambi system, the corresponding trigger bits can be activated within a scene. Depending on the set

bit, the assigned action is triggered in the gateway when the scene is called up.

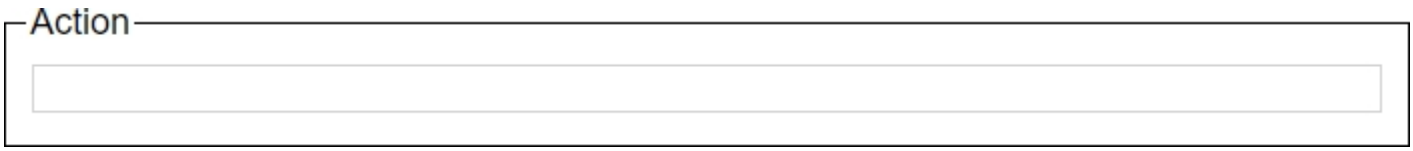


Saving and testing

Submit
Saves the entered trigger configuration.

Test
Executes the stored action to check whether the configured network action is correct.

5.3.2.3. Action



The command that the gateway should send to the network when the trigger is activated is entered in this text field.

5.4. Free commands UDP

In this operating mode, the gateway sends defined ASCII strings to the network via UDP broadcast.

In addition, the gateway can respond to incoming ASCII commands and trigger configured actions in the Casambi system if there is a match.

Communication is therefore bidirectional:

- Network → Gateway → Casambi
- Casambi → Gateway → Network



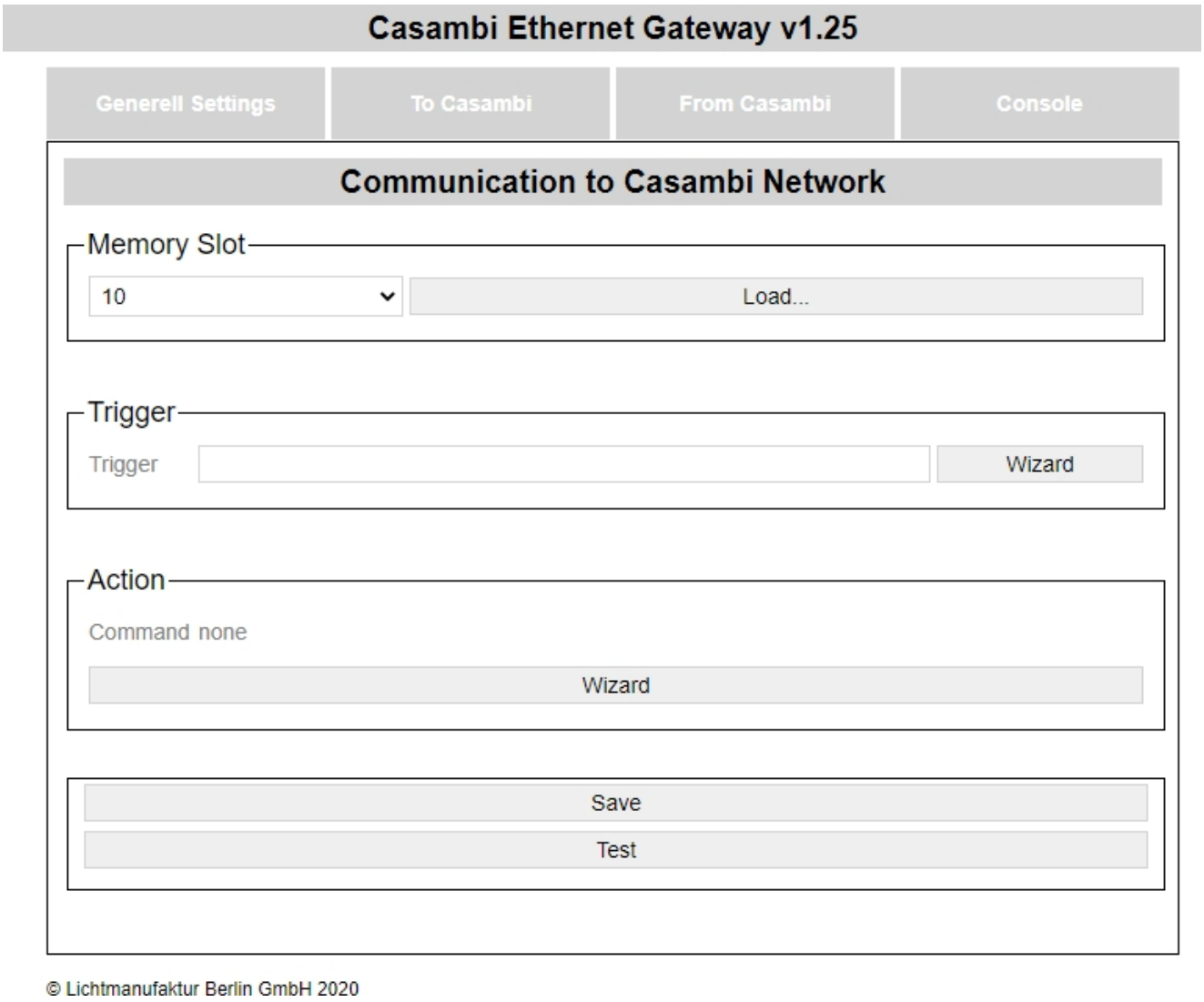
The structure of the ASCII commands and the separators used are defined in the protocol settings.

5.4.1. To Casambi

This section specifies which actions are to be performed in the Casambi system when a corresponding command is received from the network at the gateway.

The assignment depends on the selected protocol and the respective trigger definition.

A corresponding Casambi action can be stored for each defined network trigger (e.g., scene, group, level, color value, or button function).



Save

The "Save" button saves the configured entry in the currently selected slot. The settings are permanently

stored in the gateway.

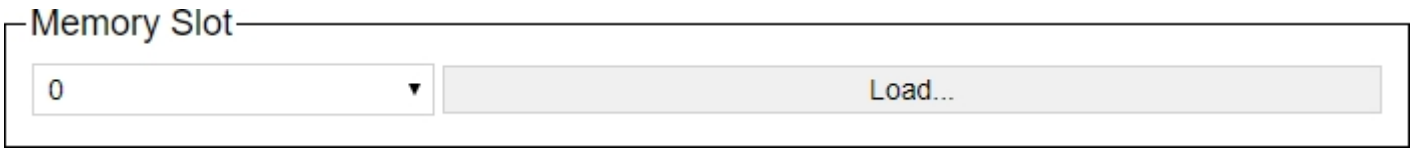
Test

The "Test" button immediately executes the configured action.

This function is used to check whether the correct action has been selected and configured correctly.

5.4.1.1. Select storage space

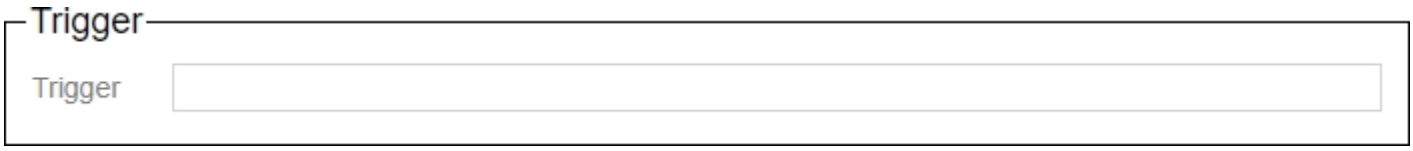
The first step is to select a storage location (slot) where the desired action is to be saved.



The corresponding storage location can be selected from the drop-down list.

The "Load..." button loads the currently stored content of this slot and displays it on the website.

5.4.1.2. Trigger



The command to which the gateway should respond is entered in this text field.

When a corresponding network command is received, the gateway checks the content and, if there is a match, executes the assigned Casambi action.

5.4.1.3. Action



The "Wizard" button opens the dialog for configuring the desired action. A new page opens with step-

by-step instructions for creating the command.



Navigation in the wizard

"Next Step"
Goes to the next configuration step.

"Step Back"
Allows you to return to the previous step.

Command description

A detailed description of the commands available in the wizard can be found in the chapter: "Logs / Casambi"



Applying the settings

Once the action-specific settings have been completed, the generated command is displayed.

"Test"
Executes the generated command directly to check the function.

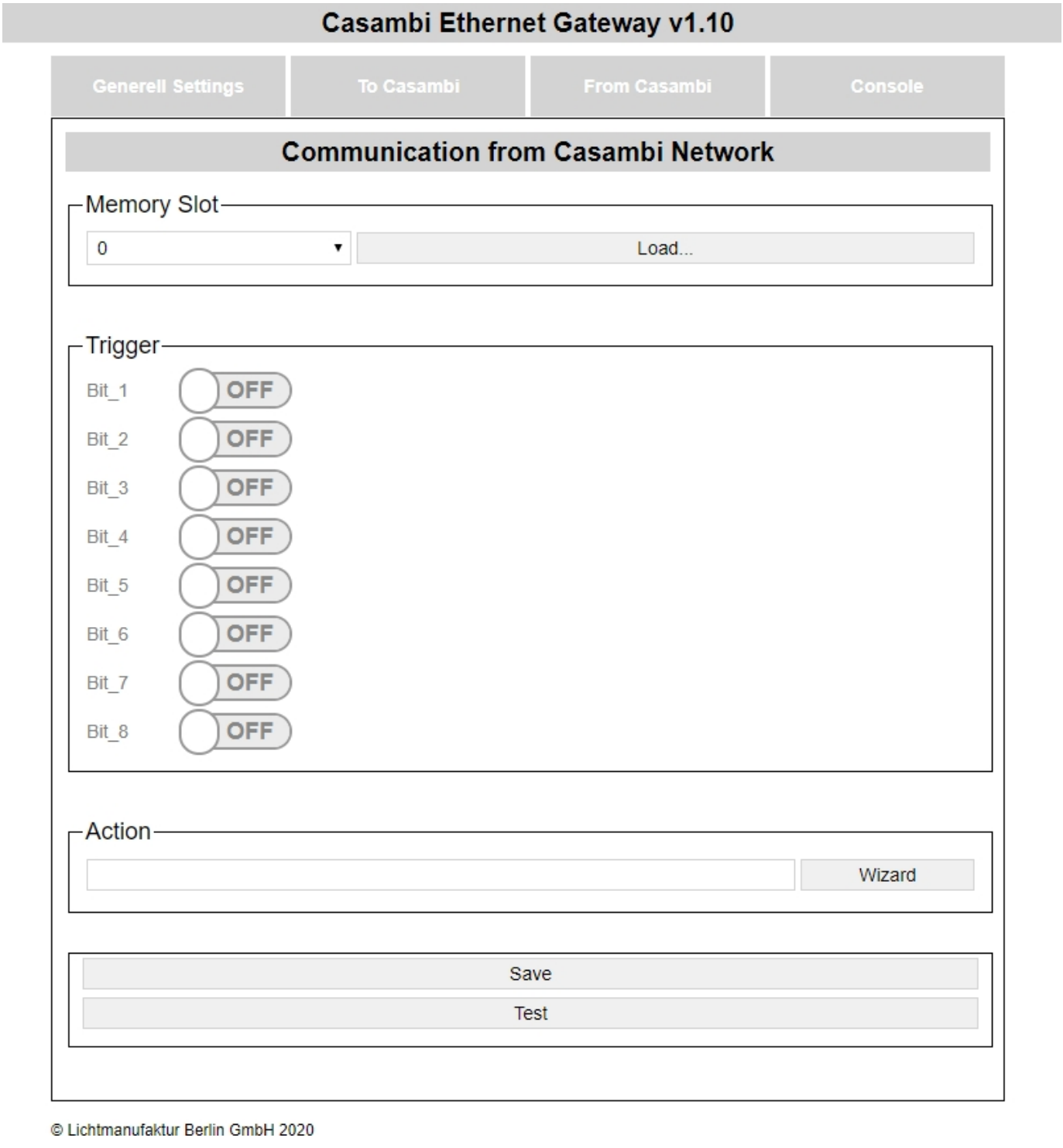
"Apply"

Applies the command and saves the configuration.

5.4.2. From Casambi

This section specifies which data the gateway should send to the network when corresponding events occur in the Casambi system (e.g., scene calls or status changes).

For each configured slot, you can define which Casambi action triggers a network transmission and which command is sent.



Save and test

Save

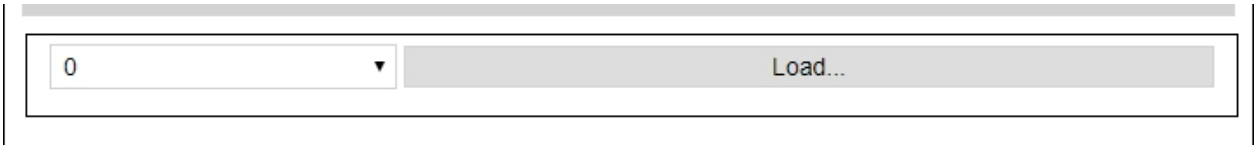
The "Save" button saves the configured entry in the selected slot.

Test

The "Test" button triggers the configured action to check whether the correct network transmission is taking place.

5.4.2.1. Memory space selection

The first step is to select a storage location (slot) where the desired action is to be saved.

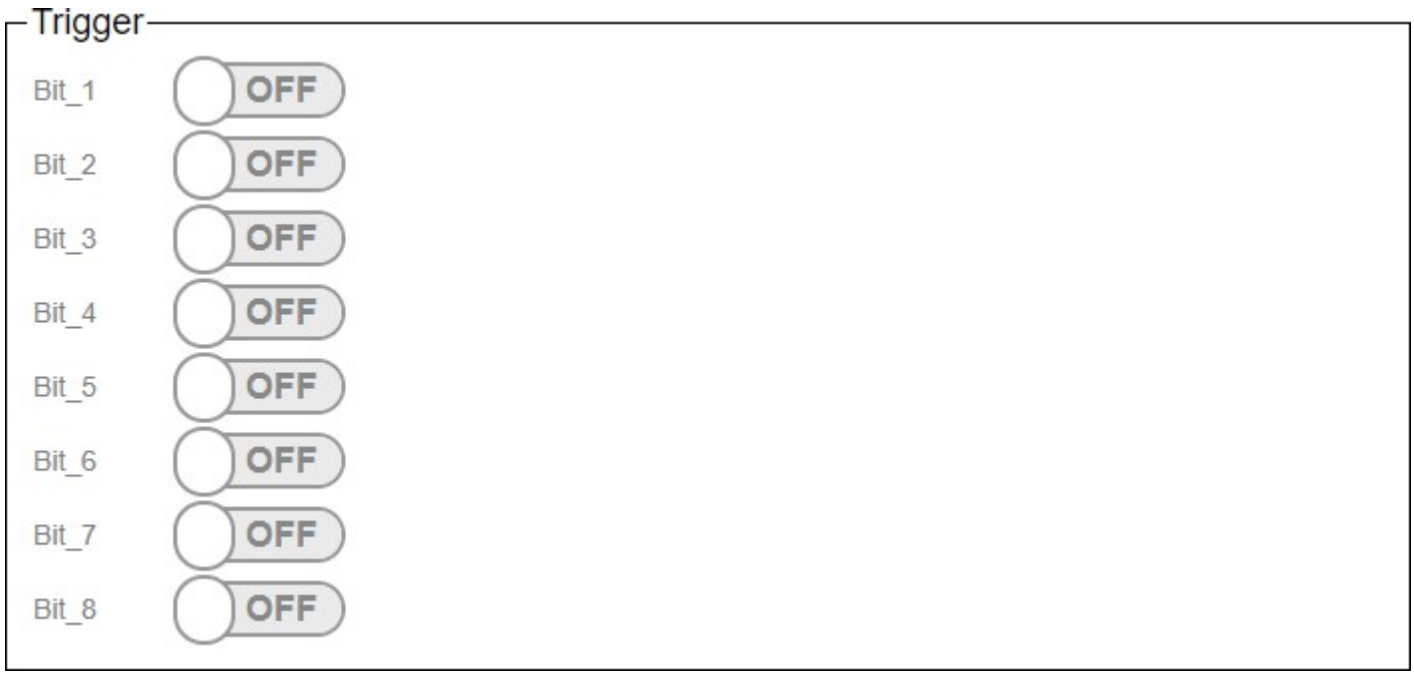


The corresponding storage space can be selected from the drop-down list.

The "Load..." button loads the currently stored content of the selected slot and displays it on the website.

5.4.2.2. Trigger

The "Trigger" defines the conditions under which a configured action is triggered.



The trigger settings determine when the network command stored under "Action" should be sent when a scene is called up in the Casambi system.

Use in the Casambi system

In the Casambi system, the corresponding trigger bits can be activated within a scene. Depending on the set

bit, the assigned action is triggered in the gateway when the scene is called up.

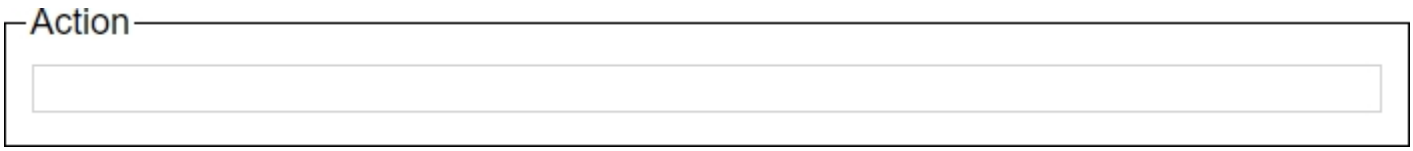


Saving and testing

Submit
Saves the entered trigger configuration.

Test
Performs the stored action to check whether the configured network action is correct.

5.4.2.3. Action



The command that the gateway should send to the network when the trigger is activated is entered in this text field.

5.5. HelvarNet (TCP)

In this operating mode, the gateway sends defined HelvarNet commands to an Imagine Router system from Helvar.

In addition, the gateway can receive incoming HelvarNet commands and respond to them.

Communication is bidirectional via a TCP connection:

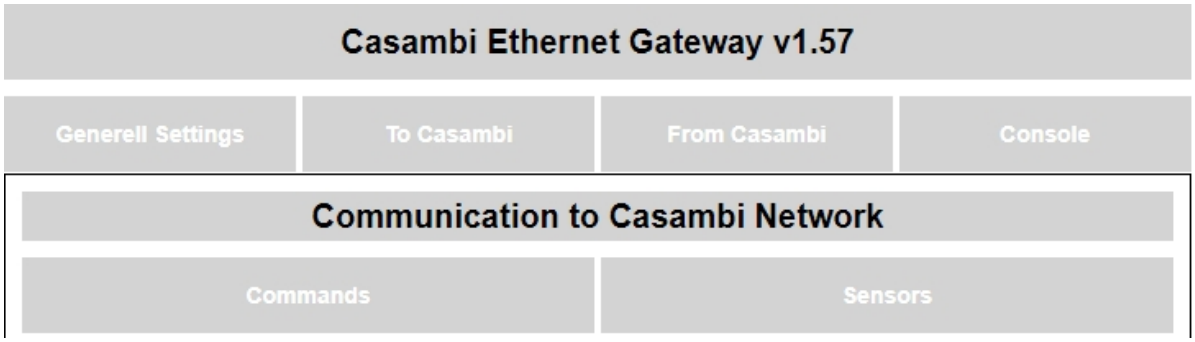
- Gateway → Helvar Imagine Router
- Helvar Imagine Router → Gateway

5.5.1. To Casambi

This section defines which actions are to be performed in the Casambi system when a corresponding command is received from the network at the gateway.

The configuration depends on the selected control system.

For most systems, the "Commands" page is displayed directly, where the corresponding assignments are made.



The "HelvarNet" control system also has a submenu. In addition to "Commands," you can

also select the "Sensors" page.

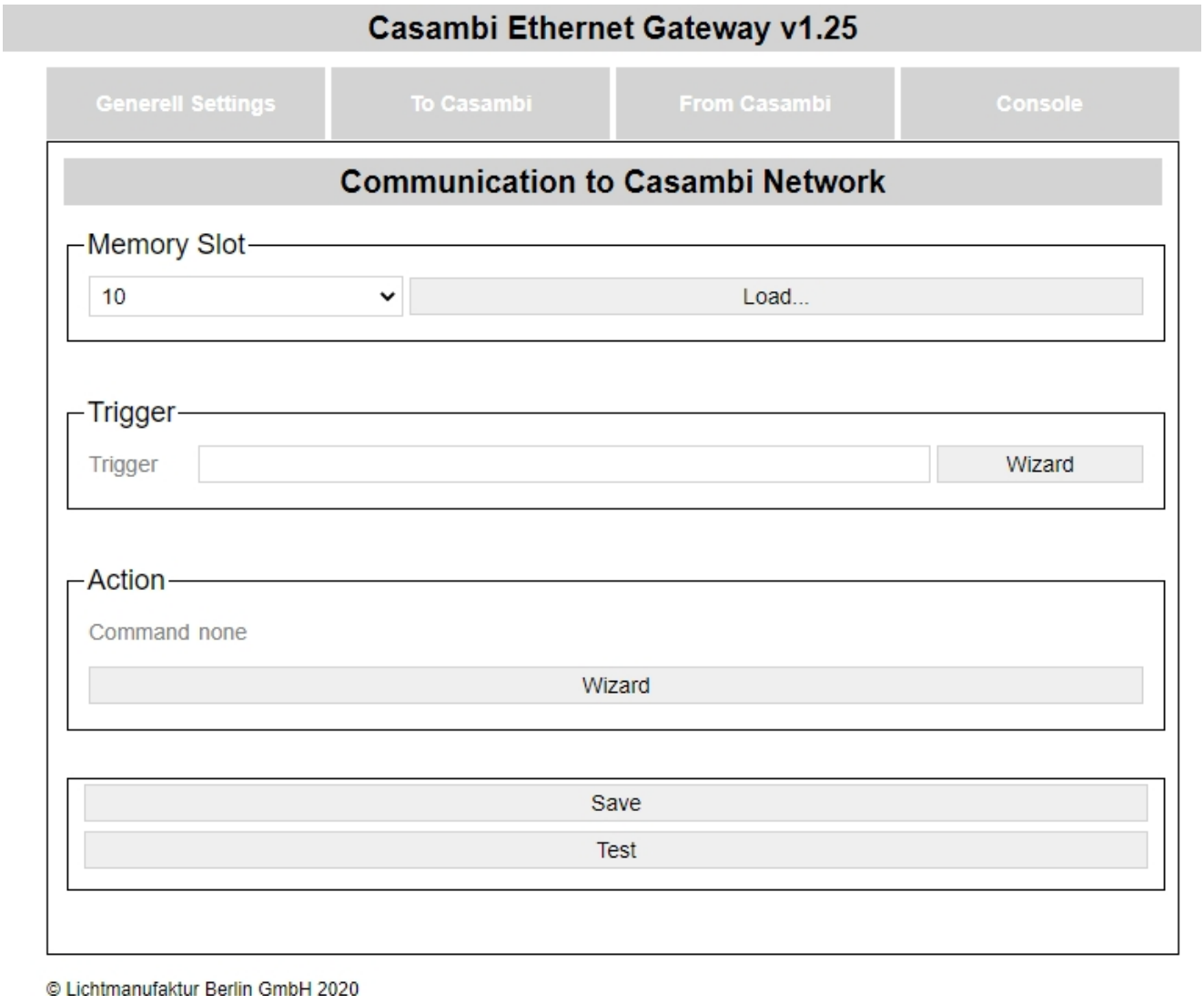
This page can be used to process or forward sensor data accordingly.

5.5.1.1. Commands

This area is used to specify which actions are to be performed in the Casambi system when a corresponding command is received from the network at the gateway.

The assignment depends on the selected protocol and the respective trigger definition.

A corresponding Casambi action can be stored for each defined network trigger (e.g., scene, group, level, color value, or button function).



Save

The "Save" button saves the configured entry in the currently selected slot. The settings are permanently

stored in the gateway.

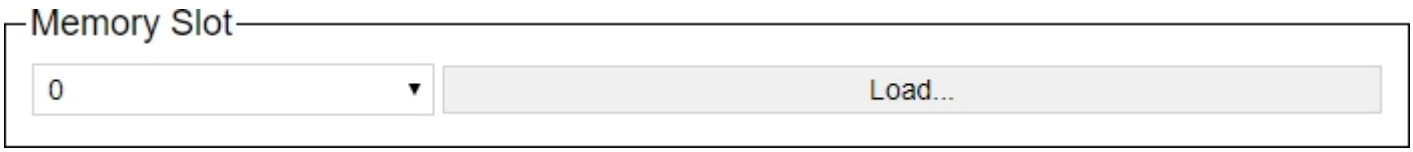
Test

The "Test" button immediately executes the configured action.

This function is used to check whether the correct action has been selected and configured correctly.

5.5.1.1.1. Select storage space

The first step is to select a storage location (slot) where the desired action is to be saved.



The corresponding storage location can be selected from the drop-down list.

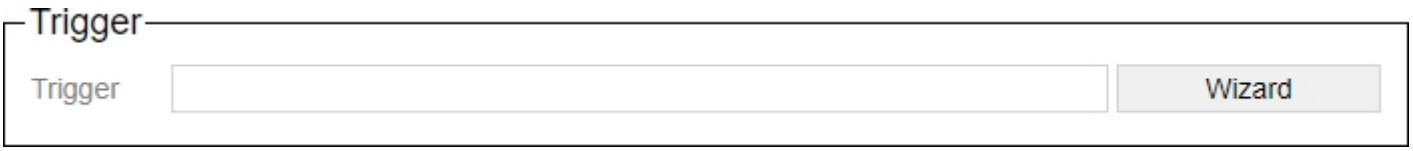
The "Load..." button loads the currently stored content of this slot and displays it on the website.

5.5.1.1.2. Trigger

The HelvarNet command to which the gateway should respond is entered in this text field.

As soon as a corresponding command is received from the Helvar Imagine Router, the gateway checks the content and, if it matches, executes the configured Casambi action.

A detailed description of the HelvarNet commands available in the wizard can be found in the chapter: "Wizard / HelvarNet"



5.5.1.1.3. Action



The "Wizard" button opens the dialog for configuring the desired action. A new page opens with step-

by-step instructions for creating the command.



Navigation in the wizard

"Next Step"
Goes to the next configuration step.

"Step Back"
Allows you to return to the previous step.

Command description

A detailed description of the commands available in the wizard can be found in the chapter: "Protocols / Casambi."



Applying the settings

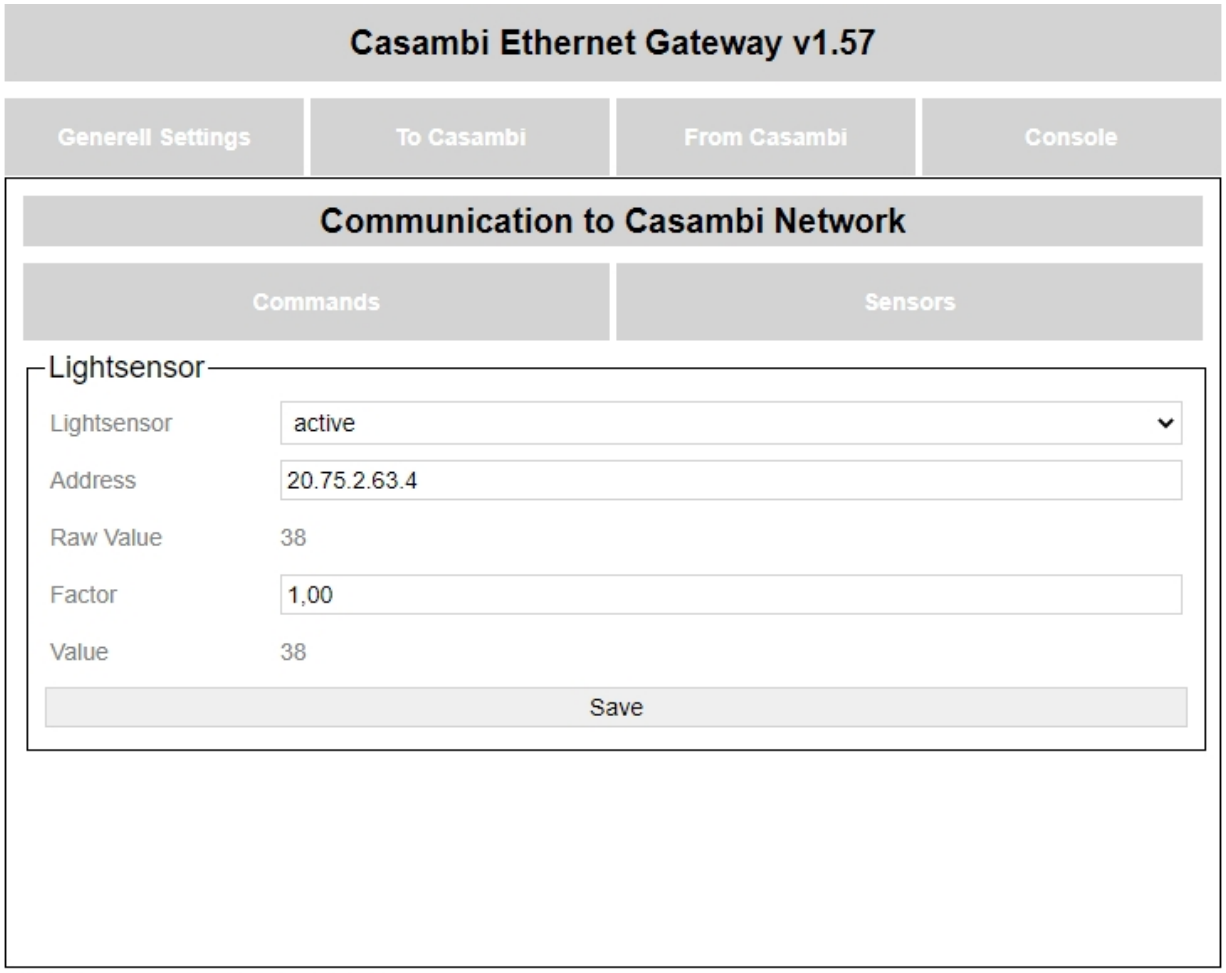
Once the action-specific settings have been completed, the command generated is displayed.

"Test"
Executes the generated command directly to check the function.

"Apply"

Applies the command and saves the configuration permanently.

5.5.1.2. Sensors



On this page, you can define a Helvar sensor whose measured value is queried cyclically. The sensor is read every 30 seconds.

When a new measured value is received, it is processed and then transferred to the Casambi system.

Activation

The function can be activated or deactivated using the "Light sensor" drop-down menu. The sensor is only queried if:

- When "HelvarNet" is selected as the control system
- The "Light Sensor" function has been set to "Active."

Addressing in HelvarNet

Enter the complete HelvarNet address in the "Address" field: [Cluster].[Router].[Subnet].[Device].[Subdevice]

Meaning of the parameters:

Cluster
Part of the router's IP address
(192.168.Cluster.Router)

Router
Part of the router's IP address
(192.168.Cluster.Router)

Subnet
Corresponds to the DALI line

Device
Device address within the subnet

Subdevice
For multisensors, the value 4 can be used here

Measurement value display

Raw Value
Displays the measured value received by the Helvar sensor. Value
range: 0 – 200

Factor
This factor can be used to scale the measured value received. Setting range:
from 0 in 0.01 increments

Value
Displays the calculated value that is transmitted to the Casambi system. Calculation:

Value = Raw Value × Factor

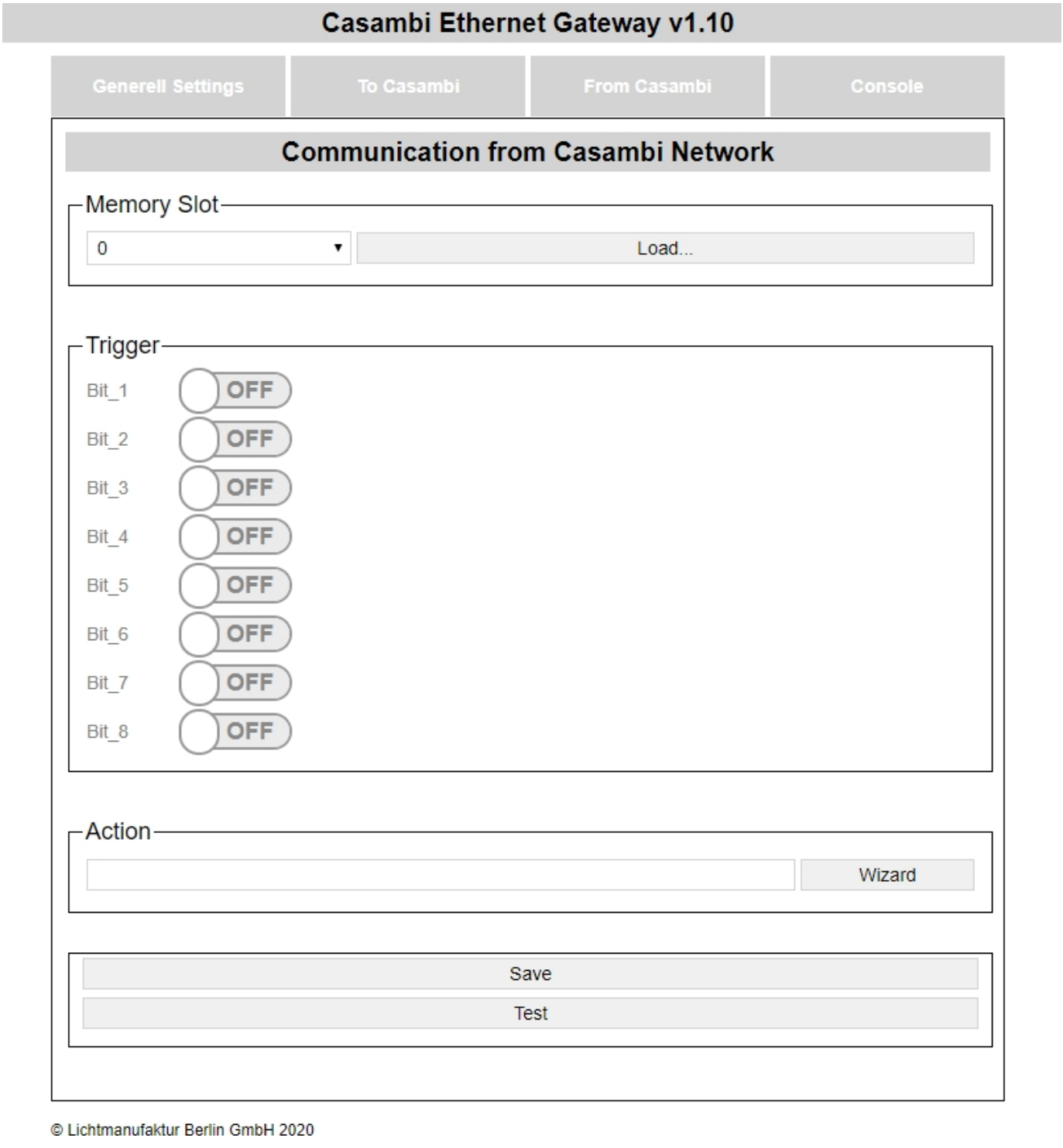


Only when this function is activated are the sensor data regularly queried and forwarded to the Casambi system.

5.5.2. From Casambi

This section specifies which data the gateway should send to the network when corresponding events occur in the Casambi system (e.g., scene calls or status changes).

For each configured slot, you can define which Casambi action triggers a network transmission and which command is sent.



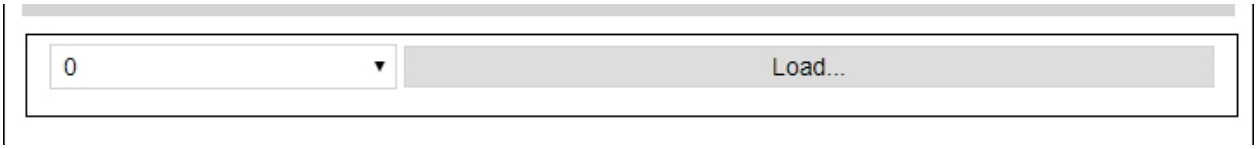
Save and test

Save
The "Save" button saves the configured entry in the selected slot.

Test
The "Test" button triggers the configured action to check whether the correct network transmission is taking place.

5.5.2.1. Memory space selection

The first step is to select a storage location (slot) where the desired action is to be saved.

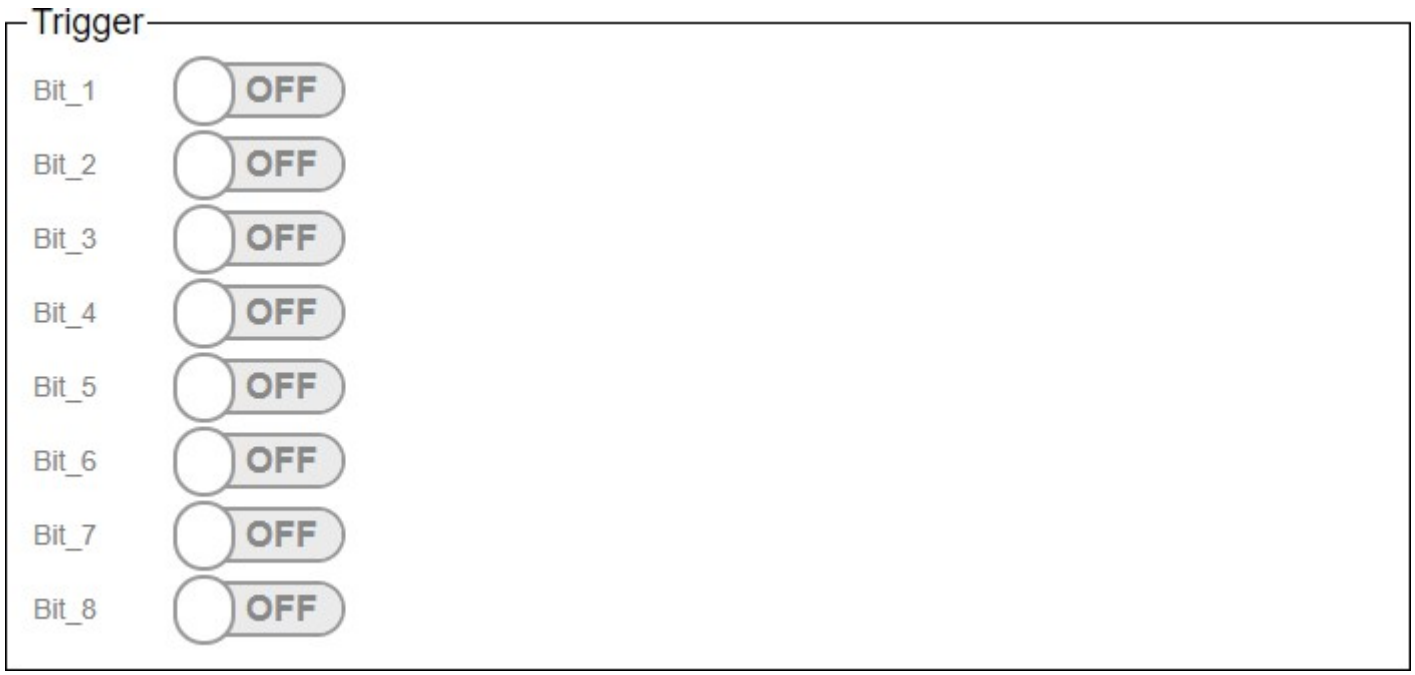


The corresponding storage space can be selected from the drop-down list.

The "Load..." button loads the currently stored content of the selected slot and displays it on the website.

5.5.2.2. Trigger

The "Trigger" defines the conditions under which a configured action is triggered.



The trigger settings determine when the network command stored under "Action" should be sent when a scene is called up in the Casambi system.

Use in the Casambi system

In the Casambi system, the corresponding trigger bits can be activated within a scene. Depending on the set

bit, the assigned action is triggered in the gateway when the scene is called up.

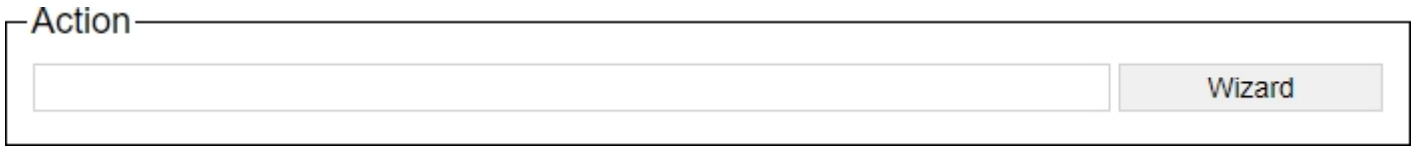


Saving and testing

Submit
Saves the entered trigger configuration.

Test
Performs the stored action to verify that the configured network action is correct.

5.5.2.3. Action



The command that the gateway should send to the network when the trigger is activated is entered in this text field.

5.5.3. HelvarNet Command Builder



The wizard assists in creating the HelvarNet commands to which the Casambi system should respond. Various

command types are available for selection in the "Command" field:

- Recall Scene (Group)
- Recall Scene (Device)
- Direct Level (Group)
- Direct Level (Device)
- Dimm (Group)
- Dimm (Device)

Depending on the command selected, the specific parameters are queried in the next step (e.g., group, device, level, fade time).

Navigation in the wizard

"Next Step"
Goes to the next configuration step.

"Step Back"
Allows you to return to the previous step.



Applying the settings

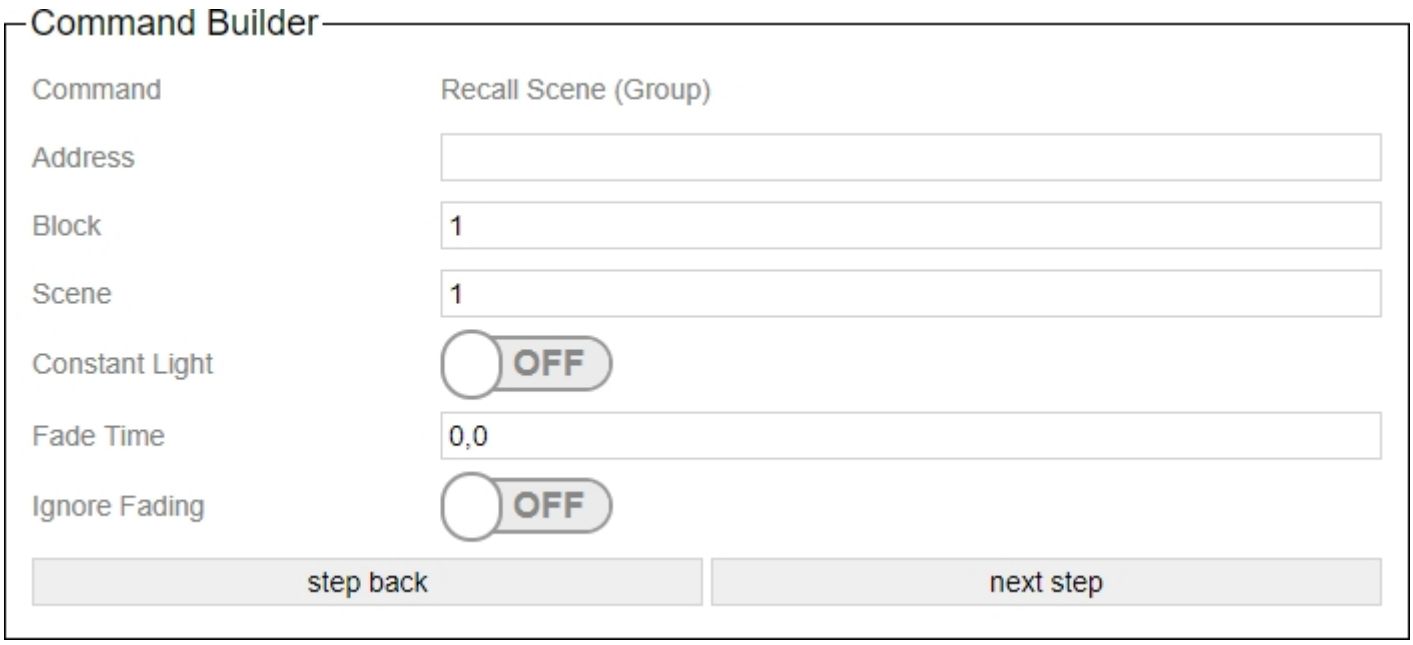
Once the command-specific settings have been completed, the generated command is displayed.

"Test"
Executes the generated command directly to check the function.

"Apply"
Applies the command and automatically saves it in the selected slot.

Addresses must be determined using the designer software!

5.5.3.1. Recall Scene (Group)



Address

The group number as defined in the Helvar Designer software is entered in the "Address" field.

Block and Scene

"Block" and "Scene" define the scene to be called up.

The combination of block number and scene number determines the target scene in the Helvar system.

Constant Light

If the "Constant Light" slide switch is set to "On," the scene is called up within the constant light control of the Helvar system.

FadeTime

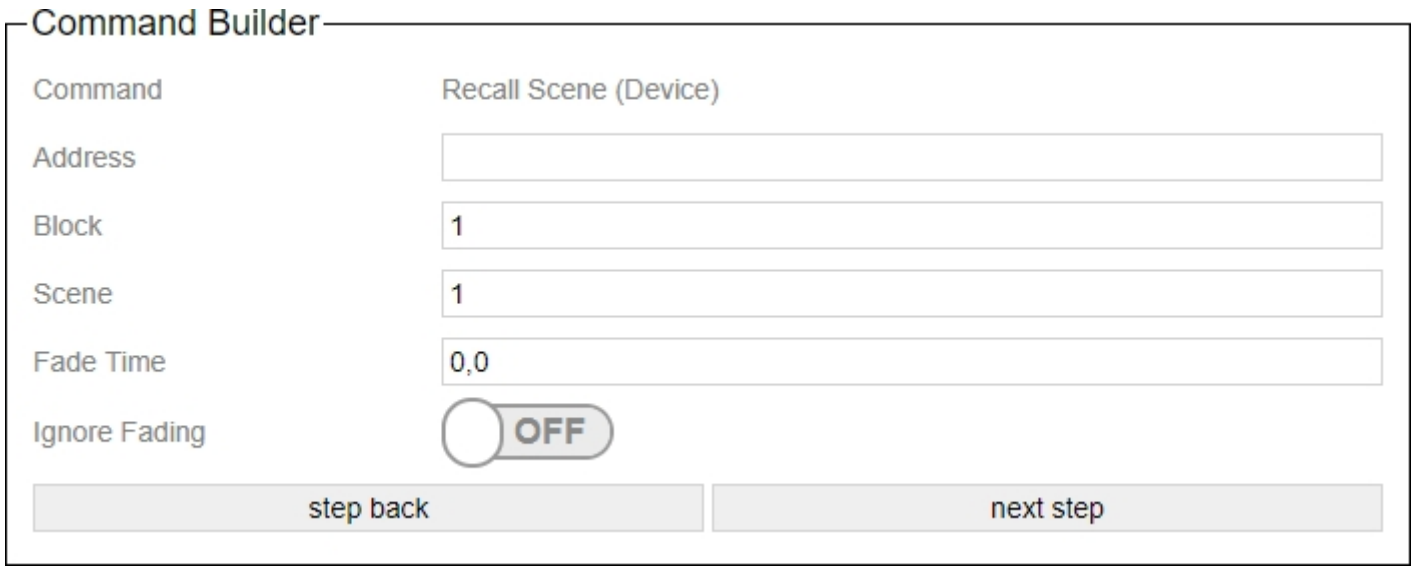
"FadeTime" defines the fade time to be used. The

specification is in seconds.

Ignore Fading

If "Ignore Fading" is activated, any fade time sent in the command is ignored. In this case, the standard fade time stored in the system is used.

5.5.3.2. Recall Scene (Device)



Address

The device number as defined in the Helvar Designer software is entered in the "Address" field.

Block and Scene

"Block" and "Scene" define the scene to be recalled.

The combination of block number and scene number determines the target scene for the respective device in the Helvar system.

FadeTime

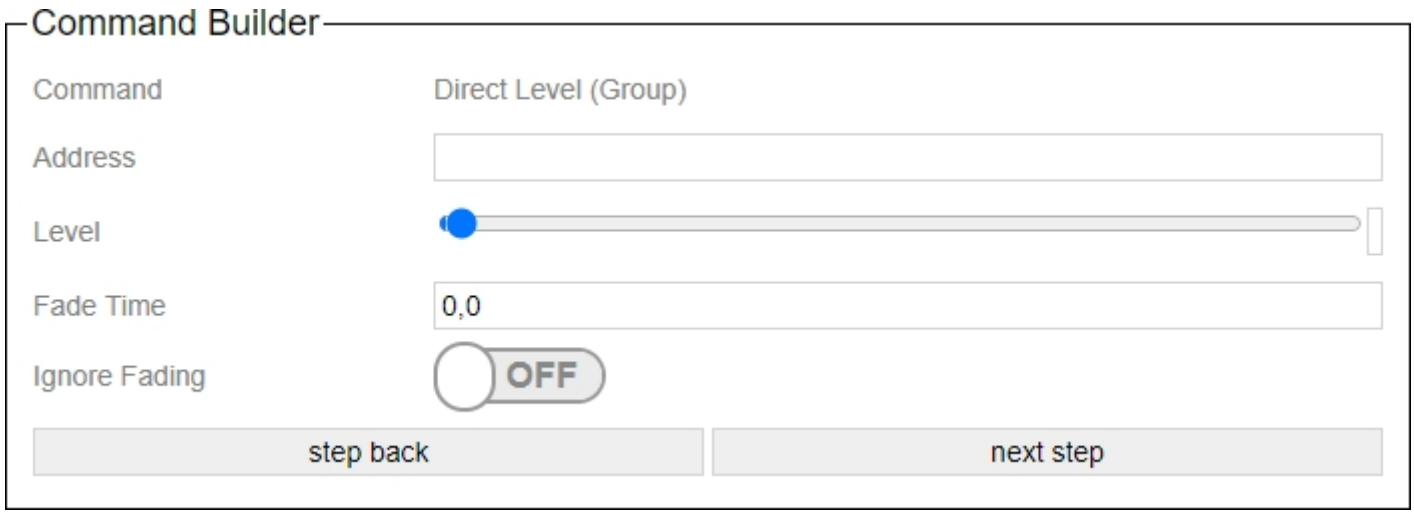
"FadeTime" defines the fade time to be used. The

specification is in seconds.

Ignore Fading

If "Ignore Fading" is activated, any fade time sent in the command is ignored. In this case, the standard fade time stored in the system is used.

5.5.3.3. Direct Level (Group)



Address

The group number as defined in the Helvar Designer software is entered in the "Address" field.

Level

"Level" defines the desired brightness. Value

range: 0 – 254

FadeTime

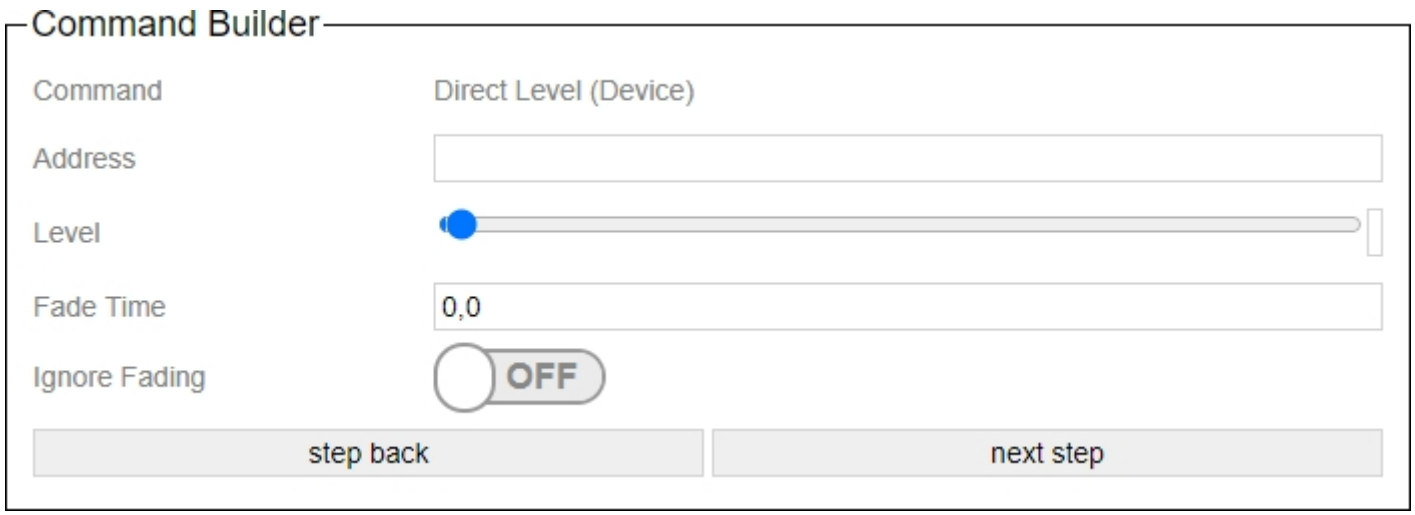
"FadeTime" defines the fade time to be used. The value

is specified in seconds.

Ignore Fading

If "Ignore Fading" is enabled, any fade time sent in the command will be ignored. In this case, the default fade time stored in the system will be used.

5.5.3.4. Direct Level (Device)



Address

The device number as defined in the Helvar Designer software is entered in the "Address" field.

Level

"Level" defines the desired brightness. Value

range: 0 – 254

FadeTime

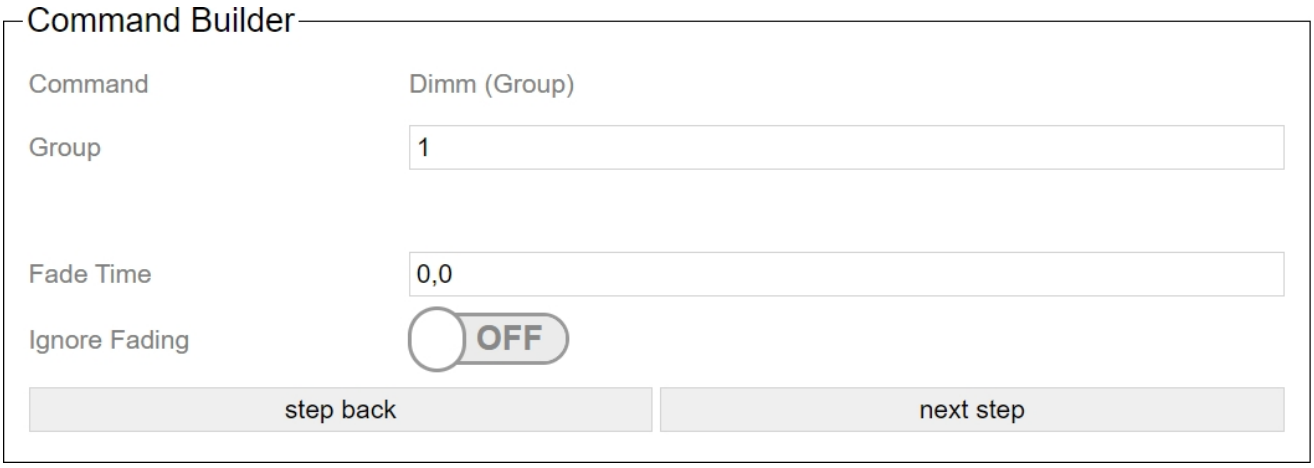
"FadeTime" defines the fade time to be used. The value

is specified in seconds.

Ignore Fading

If "Ignore Fading" is activated, any fade time sent in the command is ignored. In this case, the standard fade time stored in the system is used.

5.5.3.5. Dimm (Group)



Address

Enter the group number as defined in the Helvar Designer software in the "Address" field.

FadeTime

"FadeTime" defines the fade time to be used. The value

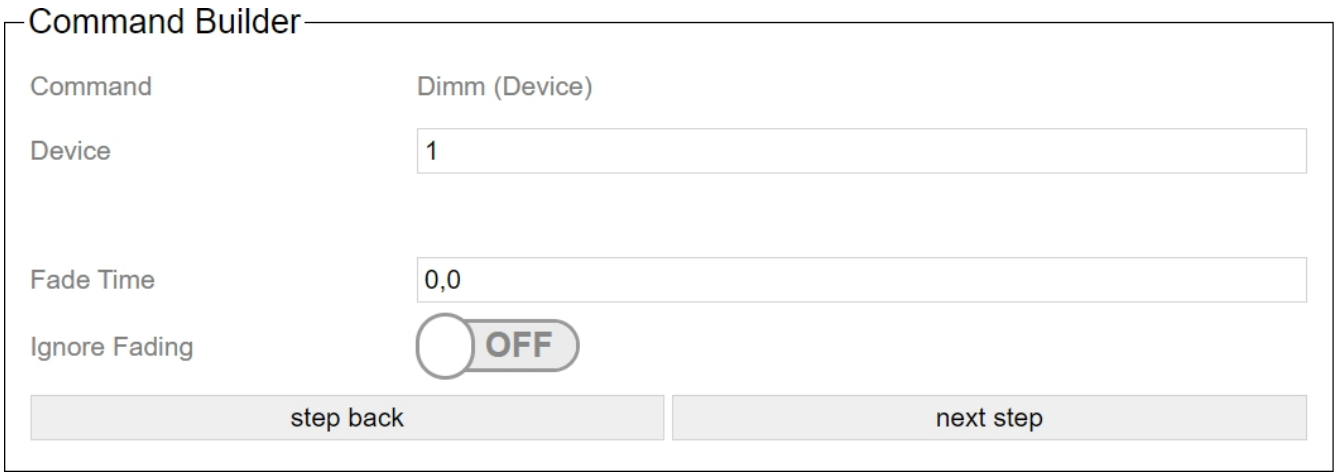
is specified in seconds.

Ignore Fading

If "Ignore Fading" is activated, any fade time sent in the command is ignored. In this case, the standard fade time stored in the system is used.

For dimming commands, it is recommended to set "Ignore Fading" to "On".

5.5.3.6. Dimming (Device)



Address

The device number as defined in the Helvar Designer software is entered in the "Address" field.

FadeTime

"FadeTime" defines the fade time to be used. The value

is specified in seconds.

Ignore Fading

If "Ignore Fading" is enabled, any fade time sent in the command will be ignored. In this case, the default fade time stored in the system will be used.

For dimming commands, it is recommended to set "Ignore Fading" to "On."

5.6. MQTT

In this operating mode, the gateway is accessible via MQTT.

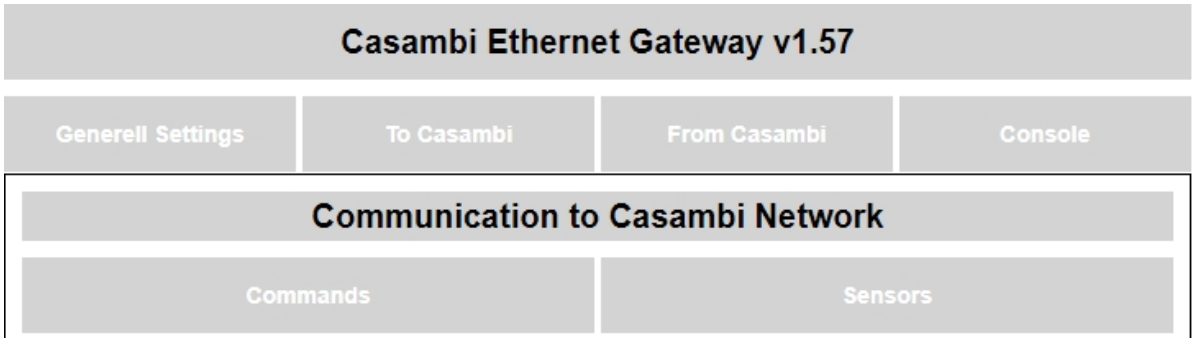
The gateway can connect to an MQTT broker and receive control commands via it.

5.6.1. View in the gateway

The gateway settings are configured via the internal web interface.

5.6.1.1. To Casambi

This section defines which actions are to be performed in the Casambi system when a corresponding command is received from the network at the gateway.

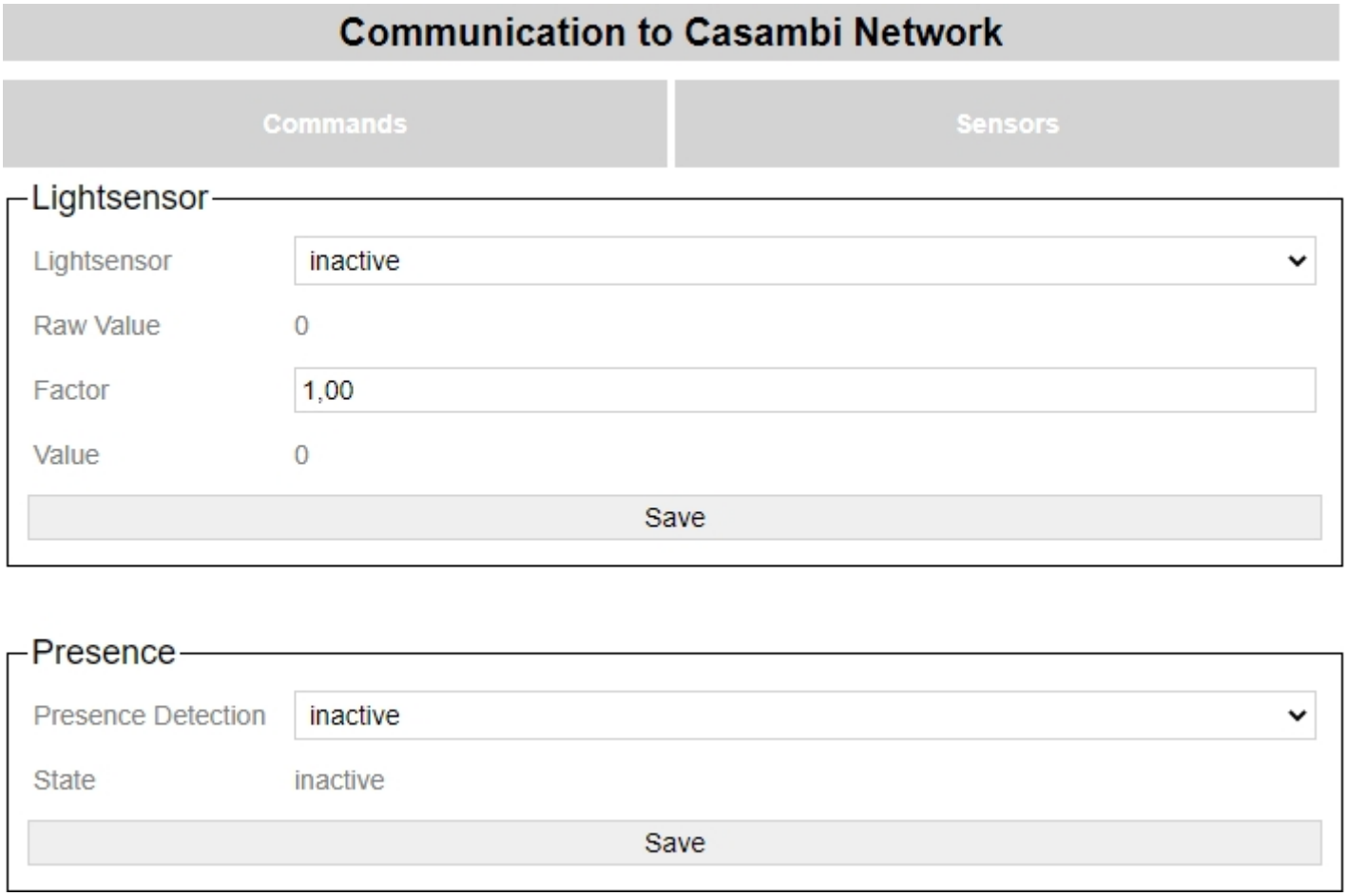


5.6.1.1.1. Commands

> **Warning!**
>
> This "Command"settings are not used in "MQTT" mode.

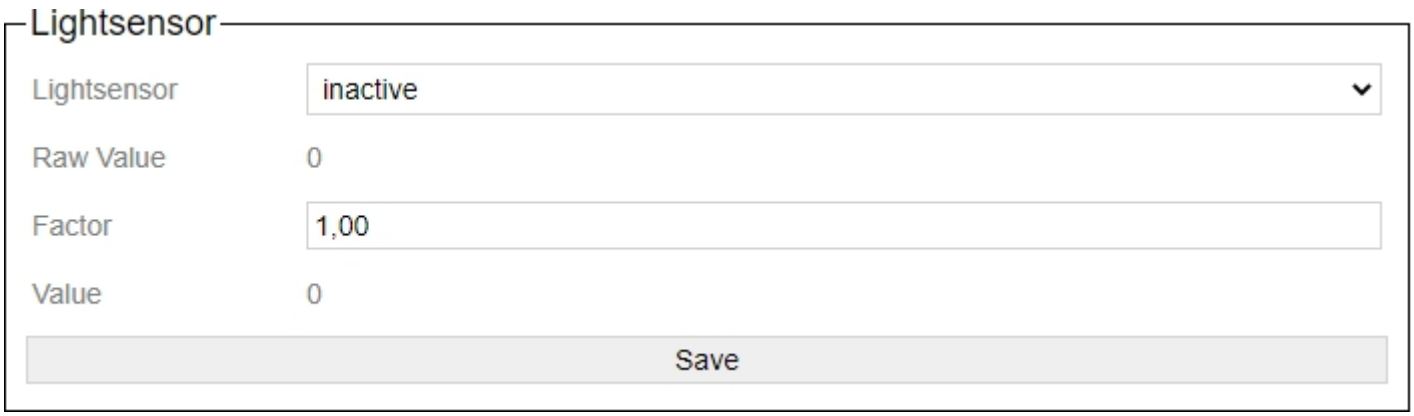
These settings are not used in "MQTT" operating mode.

5.6.1.1.2. Sensors MQTT



In this section, you can configure the parameters for transmitting sensor messages.

5.6.1.1.2.1. Light sensor



The "Light sensor" drop-down list can be used to enable or disable the transfer of light sensor data to the Casambi system.

Parameter description

Raw Value
Displays the currently received sensor value.

Factor
The factor can be used to scale the received value.

Value
Displays the calculated value that is transmitted to the Casambi system. Calculation:

Value = Raw Value × Factor

Function

If "Light sensor" is set to "active," any change in the received sensor value is automatically forwarded to the Casambi system.

5.6.1.1.2.2. Presence



The drop-down list "Presence Detection" can be used to activate or deactivate the transmission of a value as presence detection to the Casambi system.

Status

The "State" field displays the currently received status. The

assignment is as follows:

0 = inactive
1 = active

Function

If the function is activated, the received value is transmitted to the Casambi system as presence information.

5.6.1.2. From Casambi

> **Warning!**
>
> This settings are not used in "MQTT" mode.

These settings are not used in "MQTT" operating mode.

5.6.2. Use in MQTT

This chapter describes the commands and functions available in "MQTT" operating mode. Communication takes place via MQTT messages, the contents of which are transmitted as a JSON structure. **JSON structure**

All values are transmitted as JSON objects.

The placeholder "[id]" must be replaced by the "Net ID" configured in the gateway settings. Example:

If Net ID "5" is configured in the gateway, "[id]" in the topics or JSON structures must be replaced accordingly with "5" in the topics or JSON structures.



The exact topic structure and the available JSON fields are described in the following sections.

5.6.2.1. Receiving MQTT data

5.6.2.1.1. Gateway

Returning a scene call

To do this, the gateway is added to a scene in the Casambi software.

A unique number in binary format can be generated using the gateway's 8 sliders. The 8 sliders form an 8-bit value (0–255).

When the scene is called up, this value is returned by the gateway and can be evaluated in the connected system.

```
casambi/[id]/get/scene_call
{
  "scene":2
}
```

5.6.2.1.2. Broadcast

Return values that are retrieved internally for the entire network

Level
Displays the average brightness value of the assigned lights.

last_level
Specifies the last level value set with which an action was executed.

cct_level
Displays the current color temperature value (CCT).

vertical
Indicates the ratio between direct and indirect light.

last_change
Displays the time of the last change in seconds.

```
casambi/[id]/get/poll_broadcast
{
  "level": 0,
  "last_level": 255,
  "cct_level": 127,
  "vertical": 130,
  "last_change": 79712
}
```

5.6.2.1.3. Devices

Notification when a light has been removed

device

Specifies the address of the device that has been removed from the Casambi system.

The value corresponds to the internal Casambi ID of the affected device.

```
casambi/[id]/get/node_deleted
{
  "device":1
}
```

Return settings that were retrieved for a device

A detailed description of the parameters used can be found in the corresponding protocol chapter.

last_change
Time in seconds when the last change was made.
The time specification refers to the internal runtime of the gateway.

[device_address]
Address of the device in the Casambi system.
Value range: 1 – 250

```
casambi/[id]/get/poll_device/[device_address]/propertys
{
  "online": 1,
  "node_type": 0,
  "priority": 18,
  "scene_type": 0,
  "color_selector": 0,
  "color_balance": 0,
  "condition": 0,
  "ambient_temperature": 0,
  "battery_level": 0,
  "overheating": 0,
  "general_failure": 0,
  "last_change": 75136
}
```

Return values retrieved for a device

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

[device_address]
Specifies the address of the device in the Casambi system. Value range: 1 – 250

```
casambi/[id]/get/poll_device/[device_address]/values
{
  "scene": 27,
  "level": 255,
  "last_level": 0,
  "cct_level": 0,
  "red": 0,
  "green": 0,
  "blue": 0,
  "white": 0,
  "hue": 0,
  "saturation": 0,
  "x": 0,
  "y": 0,
  "level_xy": 0,
  "vertical": 127,
  "last_change": 76808
}
```

Return dimmers that have been changed for a device

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

[device_address]
Address of the device in the Casambi system.
Value range: 1 – 250

```
casambi/[id]/get/poll_devicet/[device_address]/element_dimmer
{
  "dimmer_1": 255,
  "dimmer_2": 0,
  "dimmer_3": 0,
  "dimmer_4": 0,
  "last_change": 76868
}
```

Return sliders that have been changed for a device

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

[device_address]

Address of the device in the Casambi system.
Value range: 1 – 250

```
casambi/[id]/get/poll_devicet/[device_address]/element_slider
{
  "slider_1": 0,
  "slider_2": 0,
  "slider_3": 0,
  "slider_4": 0,
  "slider_5": 0,
  "slider_6": 0,
  "slider_7": 0,
  "slider_8": 0,
  "last_change": 76928
}
```

Return on/off toggles that have been changed for a device

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

[device_address]
Address of the device in the Casambi system.
Value range: 1 – 250

```
casambi/[id]/get/poll_devicet/[device_address]/element_onoff
{
  "onoff_1": 0,
  "onoff_2": 1,
  "onoff_3": 1,
  "onoff_4": 0,
  "onoff_5": 0,
  "onoff_6": 0,
  "onoff_7": 0,
  "onoff_8": 0,
  "last_change": 76988
}
```

Return buttons that have been changed in a device

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

[device_address]
Address of the device in the Casambi system.
Value range: 1 – 250

```
casambi/[id]/get/poll_devicet/[device_address]/element_button
{
  "button_1": 0,
  "button_2": 0,
  "button_3": 0,
  "button_4": 0,
  "button_5": 0,
  "button_6": 0,
  "button_7": 0,
  "button_8": 0,
  "last_change": 77048
}
```

Return sensor values that have been changed for a device

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

[device_address]
Address of the device in the Casambi system.
Value range: 1 – 250

sens_pir
Indicates the status of the presence sensor.
sens_pir = 0 (no presence), 1 (presence)

```
casambi/[id]/get/poll_devicet/[device_address]/sensors
{
  "sens_pir": 0,
  "sens_lux": 1218,
  "last_change": 77124
}
```

5.6.2.1.4. ungrouped

Return values that were retrieved internally for ungrouped

A detailed description of the parameters used can be found in the corresponding protocol chapter.

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

```
casambi/[id]/get/poll_ungrouped
{
  "level": 0,
  "last_level": 255,
  "cct_level": 127,
  "vertical": 130,
  "last_change": 79872
}
```

5.6.2.1.5. Groups

Return values that were retrieved internally for a group

A detailed description of the parameters used can be found in the corresponding protocol chapter.

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

[group]
Specifies the group number in the Casambi system. Value range: 1–255

```
casambi/[id]/get/poll_group/[group]
{
  "level": 0,
  "last_level": 255,
  "cct_level": 127,
  "vertical": 127,
  "last_change": 79925
}
```

5.6.2.1.6. Scenes

Return values that were retrieved internally for a scene

A detailed description of the parameters used can be found in the corresponding protocol chapter.

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

[scene]
Specifies the scene number in the Casambi system. Value range: 1 – 255

```
casambi/[id]/get/poll_scene/[scene]
{
  "active": 0,
  "level": 255,
  "last_change": 79925
}
```

5.6.2.1.7. Button

Button presses return the message sent by the system

last_change
Specifies the time in seconds when the last change was made. The time refers to the internal runtime of the gateway.

[device_address]
Address of the device in the Casambi system.
Value range: 1 – 250

button_type
Specifies the type of button.
button_type = 0 (push_button), 1 (battery powered device), 2 (rotary button)

button_state
Indicates the current status or event of the button. button_state = 2 (short_press), 9 (long_press start), 12 (long_press stop)

```
casambi/[id]/get/poll_button/[device_address]
{
  "button_type": 0,
  "button_state_1": 0,
  "button_state_2": 0,
  "button_state_3": 0,
  "button_state_4": 0,
  "button_state_5": 0,
  "button_state_6": 0,
  "button_state_7": 0,
  "button_state_8": 0,
  "last_change": 77048
}
```

5.6.2.1.8. Dali (D4i)

DALI node list

Provides a bitmap of all DALI units (nodes) detected on the DALI bus.

[id]
Must be replaced by the configured Net ID of the gateway.

unit_id_bitmap
Comma-separated bit patterns (little-endian per byte) that indicate which unit IDs are present on the DALI bus.

Each bit represents a possible unit ID.
If a bit is set, the corresponding DALI unit has been detected.

```
casambi/[id]/get/dali/nodes
{
  "unit_id_bitmap": "b0,b1,b2,..."
}
```

Details of a DALI node

Provides status information and the address map of a specific DALI node. [device]
corresponds to the unit ID of the queried device.

[id]
must be replaced by the configured Net ID of the gateway.

device
Unit ID of the queried DALI node.

operation_status
Operating or response status of the detailed query.

address_map
Comma-separated values of the DALI address assignment of the node.
These indicate which DALI addresses are assigned to the respective device.

```
casambi/[id]/get/dali/[device]/details
{
  "device": 1,
  "operation_status": 0,
  "address_map": "a0,a1,a2,..."
}
```

Reading a DALI memory bank

Response to a memory read request from a DALI device at a specific DALI address.

[id]
must be replaced by the configured Net ID of the gateway.

request_data
Request or transaction identifier from the protocol.

unit_id
Casambi unit that executed the DALI query.

dali_address
Destination address on the DALI bus.

memory_bank
Number of the memory bank read.

offset
Start offset within the memory bank.

size
Number of bytes read.
The value 255 indicates an error.

age
Age or timestamp value of the data (only for successful queries).

data
Comma-separated byte values of the data read (only for successful queries).

error_code
Numeric error code (only available in case of error).

error_message
Readable description of the error corresponding to the error_code (only present in case of error).

```
casambi/[bridge_id]/get/dali/[device]/[dali_address]/membank/[memory_bank]
{
  "request_data": 0,
  "unit_id": 1,
  "dali_address": 12,
  "memory_bank": 0,
  "offset": 0,
  "size": 8,
  "age": 123,
  "data": "d0,d1,d2,d3,d4,d5,d6,d7"
}

Payload (error case when size == 255)

{
```

```
  "request_data": 0,
  "unit_id": 1,
  "dali_address": 12,
  "memory_bank": 0,
  "offset": 0,
  "size": 255,
  "error_code": 1234,
  "error_message": "..."
}
```

Response to DALI query/command

General response structure for DALI queries or DALI commands. The response contains result bytes and status information.

[id]
must be replaced by the configured Net ID of the gateway.

request_data
Request or transaction ID of the original request.

unit_id
Casambi unit that processed the DALI query.

rfu
Reserved field (protocol-internal, currently without significance for the application).

length
Number of result bytes returned.

error_status_code_status
Status information or length of status data.

error_status_code_error
Error code of the executed operation.

error_message
Readable description of the error (if available).

result
Comma-separated result bytes of the DALI query.

status_bits
Comma-separated status bit patterns (little-endian per status byte).

```
casambi/[bridge_id]/get/dali/[device]/response
{
  "request_data": 0,
  "unit_id": 1,
```

```
  "rfu": 0,
  "length": 3,
  "error_status_code_status": 2,
  "error_status_code_error": 0,
  "error_message": "...",
  "result": "r0,r1,r2",
  "status_bits": "s0,s1"
}
```

5.6.2.2. Send MQTT data

Setting the light sensor value that the gateway can deliver

```
casambi/[id]/set/light_sensor
{
  "lux_level":10
}
```

Setting the PIR status that the gateway can deliver

1 = Sensor presence detected
0 = Sensor no presence

```
casambi/[id]/set/pir_sensor
{
  "pir_sensor":1
}
```

Setting the push button status that the gateway can deliver

Button can be 0-3 or 0-7 depending on the version. 0-7 requires _EVO firmware.

```
casambi/[id]/set/push_button_pressed
{
  "button":1
}
```

```
casambi/[id]/set/push_button_released
{
  "button":1
}
```

Set broadcast level

```
casambi/[id]/set/level
{
  "level":171, "duration":1
}
```

Call scene with level

```
casambi/[id]/set/scene_level
{
  "level":165,
  "scene":2, "duration":2
}
```

Call up group with level

```
casambi/[id]/set/group_level
{
  "group":2,
  "duration":2, "level":254
}
```

Call push button target with level

```
casambi/[id]/set/push_button_level
{
  "level":185, "button":1
}
```

Set target to level

A description of the parameters can be found here.

```
casambi/[id]/set/target_level
{
  "level":171,
  "duration":1,
  "targetid":1,
  "targettype":1
}
```

Set target to Tc

A description of the parameters can be found here.

```
casambi/[id]/set/target_tc
{
  "tc":171,
  "duration":1,
  "targetid":1,
  "targettype":1
}
```

Set target to RGBW

A description of the parameters can be found here.

```
casambi/[id]/set/target_rgbw
{
  "red":171,
  "green":1,
  "blue":1,
  "white":255,
```

```
  "targetid":1,
  "targettype":1,
  "level":255
}
```

Set target to Hue/Sat

A description of the parameters can be found here.

```
casambi/[id]/set/target_huesat
{
  "hue":65000,
  "saturation":254,
  "white":255,
  "targetid":1,
  "targettype":1,
  "level":255
}
```

Set target to vertical

A description of the parameters can be found here.

```
casambi/[id]/set/target_vertical
{
  "vertical":127,
  "duration":1,
  "targetid":1,
  "targettype":1
}
```

Target start_automation

A description of the parameters can be found here.

```
casambi/[id]/set/execute_automation
{
  "targetid":1,
  "targettype":1
}
```

Set Target Dimmer

A description of the parameters can be found here.

```
casambi/[id]/set/target_dimmers
{
  "dimmer_index":0,
  "dimmer_value":1,
  "duration":1,
  "targetid":1,
  "targettype":1
```

```
}
```

Set Target Elements
A description of the parameters can be found here.

```
casambi/[id]/set/target_elements
{
  "element_index":0,
  "element_value":1,
  "duration":1,
  "targetid":1,
  "targettype":1
}
```

Retrieve DALI node list
Requests the gateway to determine and provide a list of all recognized DALI nodes (units) on the DALI bus.

```
casambi/[id]/set/dali/read_dali_nodes
{
}
```

Retrieve DALI node details
Requests detailed information about a specific DALI node (unit).

unit_id
Unit ID of the DALI node for which the detailed information is to be requested.

caching_option
Specifies whether existing cache data should be used or whether a new query should be performed. The exact meaning of the values depends on the internal implementation.

```
casambi/[id]/set/dali/read_dali_node_details
{
  "unit_id": 1,
  "caching_option": 0
}
```

Read DALI memory
Requests the gateway to read data from a specific DALI memory bank of a device.

request_data
Request or transaction identifier for unique assignment of the response.

unit_id
Casambi unit that is to execute the DALI query.

dali_address

Destination address of the device on the DALI bus.

memory_bank
Number of the memory bank to be read out.

offset
Start offset within the memory bank.

size
Number of bytes to be read.

max_age
Maximum age of the data in seconds.
If the stored value is younger than this value, a cached response can be used.

```
casambi/[id]/set/dali/read_dali_memory
{
  "request_data": 1,
  "unit_id": 1,
  "dali_address": 12,
  "memory_bank": 0,
  "offset": 0,
  "size": 8,
  "max_age": 300
}
```

Execute DALI query/command
Sends a DALI query or DALI command to one or more DALI devices via a specific Casambi unit.

request_id
Unique identifier of the request for assigning the response.

unit_id
Casambi unit via which the DALI command is executed.

rfu
Reserved field (protocol-internal, currently without functional significance).

sequence
Comma-separated byte sequence of the DALI telegrams to be sent.
The individual values correspond to the raw data of the DALI command.

```
casambi/[id]/set/dali/query_dali_devices
{
  "request_id": 1,
  "unit_id": 1,
  "rfu": 0,
  "sequence": "2,160,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0"
```

```
}
```

5.6.3. Polling

In this operating mode, certain values are queried cyclically and the corresponding variables are updated automatically.

Cyclically polled values:

- The level of the scenes and whether they are active. If not active, the level is 0.
- The level of a group
- The level of the broadcast entry
- Whether the device is accessible (online) and what its status is
- Red, green, blue, white, hue, sat of a device
- Red, green, blue, white, hue, sat of a group
- Red, green, blue, white, hue, sat of broadcast
- Red, green, blue, white, hue, sat of ungrouped lights
- Sensor values PIR
- Sensor values LUX
- Custom element (dimmer, slider)

5.7. Netcomposer

In this operating mode, the gateway sends defined Netcomposer commands to a Netcomposer system from Eutrac.

In addition, the gateway can receive incoming Netcomposer commands and respond to them. Communication

is bidirectional:

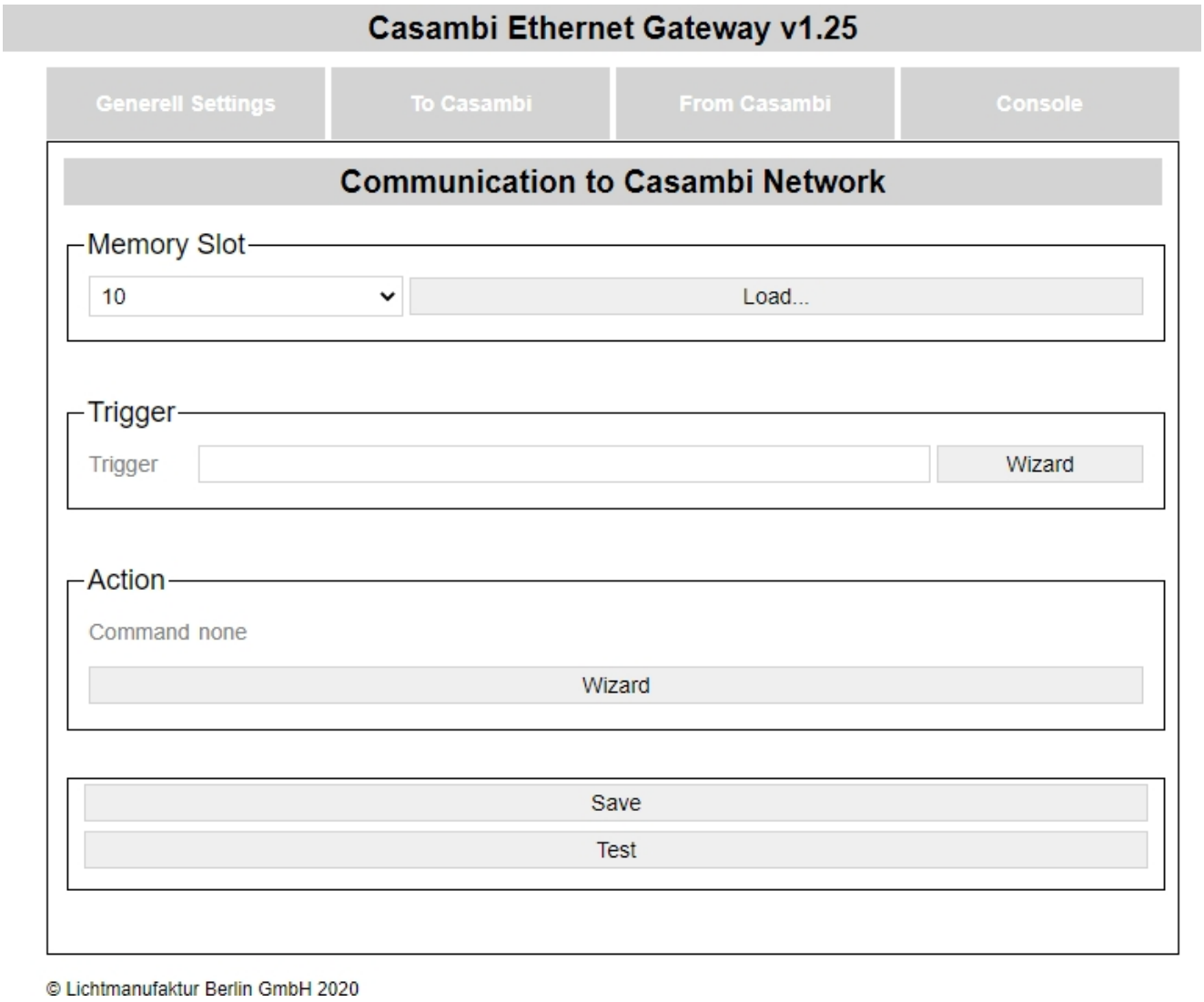
- Gateway → Eutrac Netcomposer
- Eutrac Netcomposer → Gateway

5.7.1. To Casambi

This section defines which actions are to be performed in the Casambi system when a corresponding command is received from the network at the gateway.

The assignment depends on the selected protocol and the respective trigger definition.

A corresponding Casambi action can be stored for each defined network trigger (e.g., scene, group, level, color value, or button function).



Save

The "Save" button saves the configured entry in the currently selected slot. The settings are permanently

stored in the gateway.

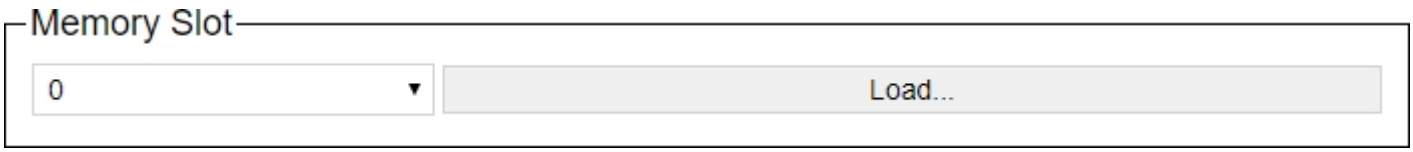
Test

The "Test" button immediately executes the configured action.

This function is used to check whether the correct action has been selected and configured correctly.

5.7.1.1. Select storage space

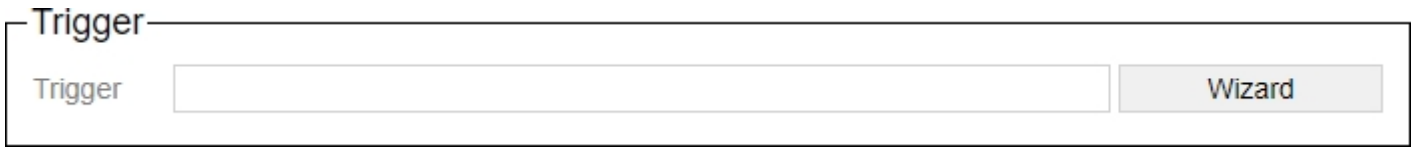
The first step is to select a memory location (slot) where the desired action is to be stored.



The corresponding storage location can be selected from the drop-down list.

The "Load..." button loads the currently stored content of this slot and displays it on the website.

5.7.1.2. Trigger



The command to which the gateway should respond is entered in this text field.

When a corresponding network command is received, the gateway checks the content and, if there is a match, executes the assigned Casambi action.

5.7.1.3. Action



The "Wizard" button opens the dialog for configuring the desired action. A new page opens with step-

by-step instructions for creating the command.



Navigation in the wizard

"Next Step"
Moves to the next configuration step.

"Step Back"
Allows you to return to the previous step.

Command description

A detailed description of the commands available in the wizard can be found in the chapter: "Logs / Casambi"



Applying the settings

Once the action-specific settings have been completed, the command generated is displayed.

"Test"
Executes the generated command directly to check the function.

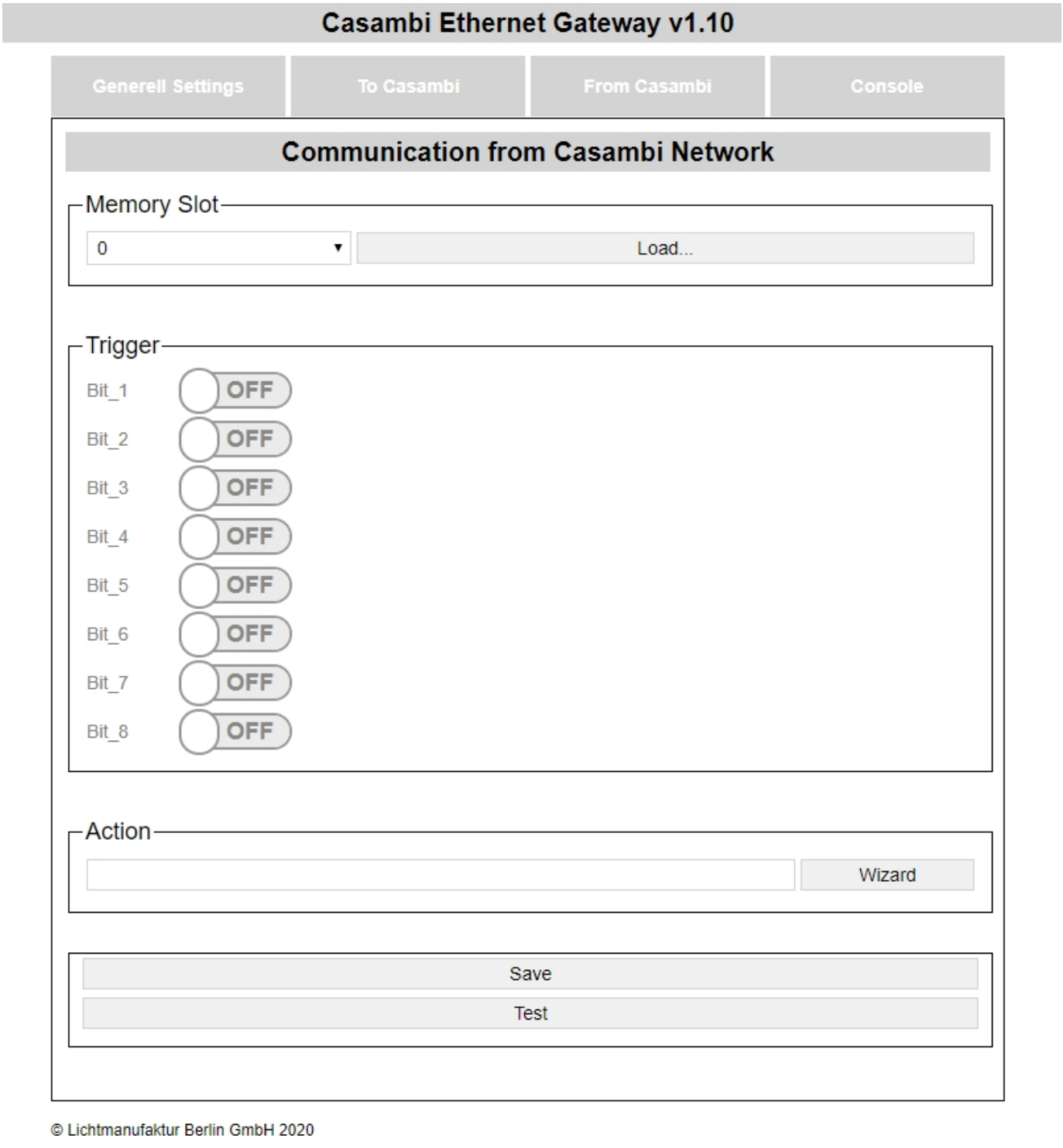
"Apply"

Applies the command and saves the configuration permanently.

5.7.2. From Casambi

This section specifies which data the gateway should send to the network when corresponding events occur in the Casambi system (e.g., scene calls or status changes).

For each configured slot, you can define which Casambi action triggers a network transmission and which command is sent.



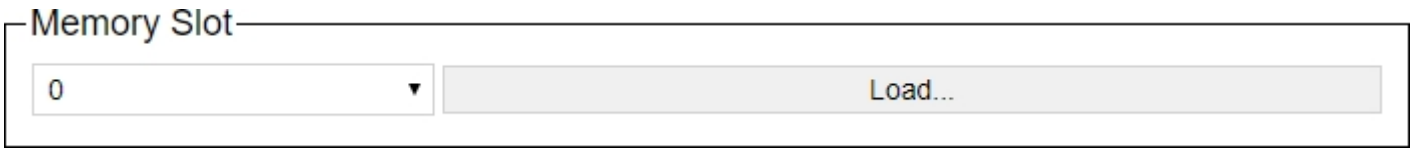
Save and test

Save
The "Save" button saves the configured entry in the selected slot.

Test
The "Test" button triggers the configured action to check whether the correct network transmission is taking place.

5.7.2.1. Memory space selection

The first step is to select a storage location (slot) where the desired action is to be saved.

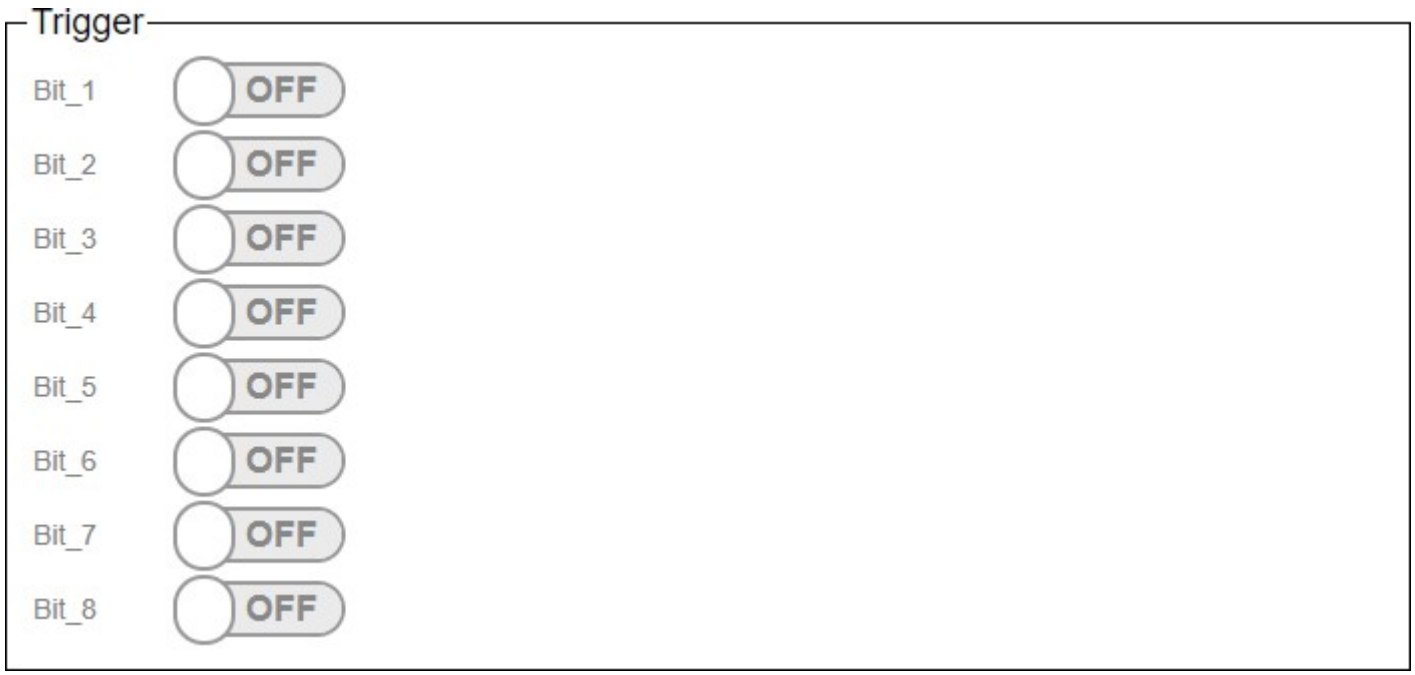


The corresponding storage space can be selected from the drop-down list.

The "Load..." button loads the currently stored content of this slot and displays it on the website.

5.7.2.2. Trigger

The "Trigger" defines the conditions under which a configured action is triggered.



The trigger settings determine when the network command stored under "Action" should be sent when a scene is called up in the Casambi system.

Use in the Casambi system

In the Casambi system, the corresponding trigger bits can be activated within a scene. Depending on the set

bit, the assigned action is triggered in the gateway when the scene is called up.

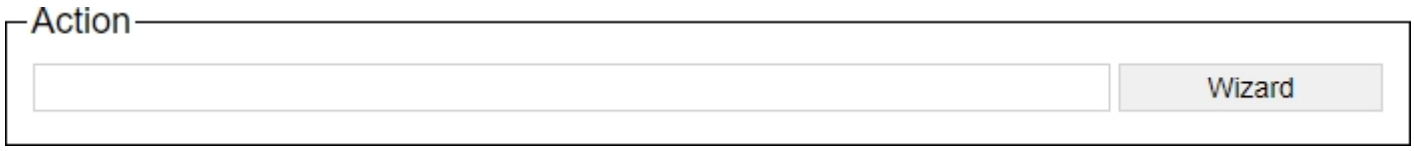


Saving and testing

Submit
Saves the entered trigger configuration.

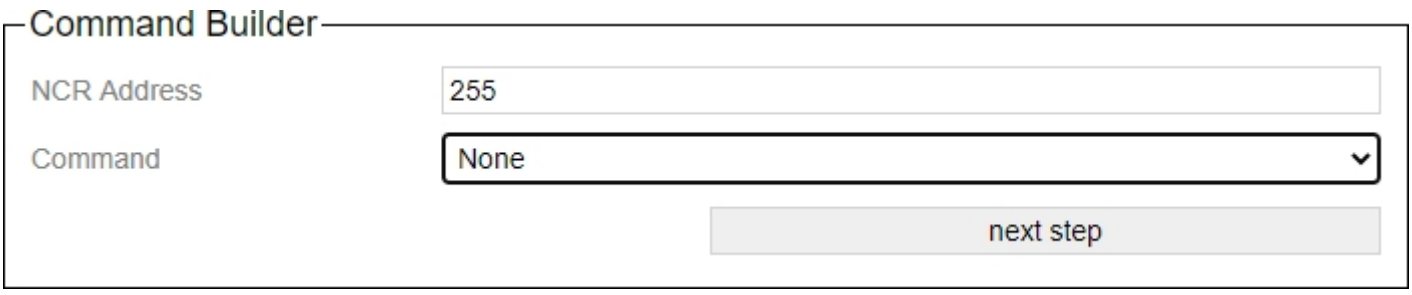
Test
Performs the stored action to check whether the configured network action is correct.

5.7.2.3. Action



The command that the gateway should send to the network when the trigger is activated is entered in this text field.

5.7.3. Netcomposer Command Builder



The wizard assists in creating the Netcomposer commands to which the Casambi system should respond.

NCR Address

The Netcomposer address to which the gateway should respond is specified in the "NCR Address" field. A value of

255 means: response to all NCR addresses.

Command

The following command types are available in the "Command" field:

- Device Level
- Scene
- Group with Scene
- Group with Level
- Sequence

Depending on the command selected, the specific parameters are queried in the next step (e.g., device, group, scene, or level).

Navigation in the wizard

"Next Step"
Goes to the next configuration step.

"Step Back"
Allows you to return to the previous step.



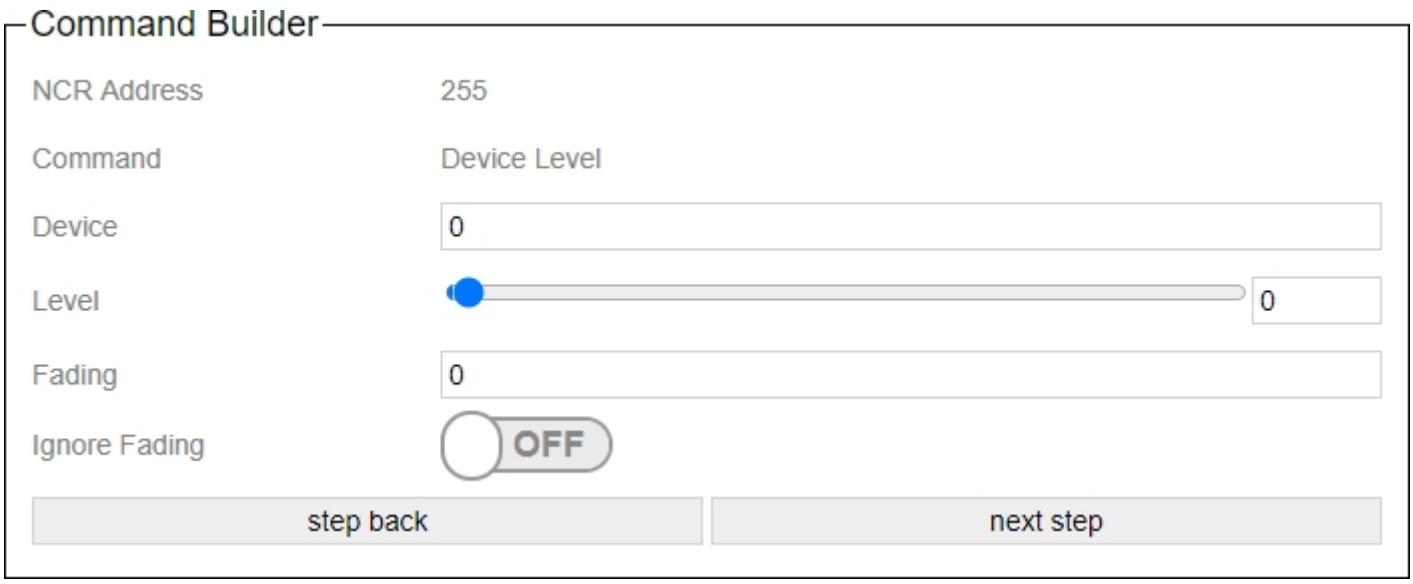
Applying the settings

Once the command-specific settings have been completed, the generated command is displayed.

"Test"
Executes the generated command directly to check the function.

"Apply"
Takes command and automatically saves it in the selected slot.

5.7.3.1. Device Level



Device

The device address of the target device is specified in the "Device" field.

Level

The desired brightness is defined in the "Level" field.

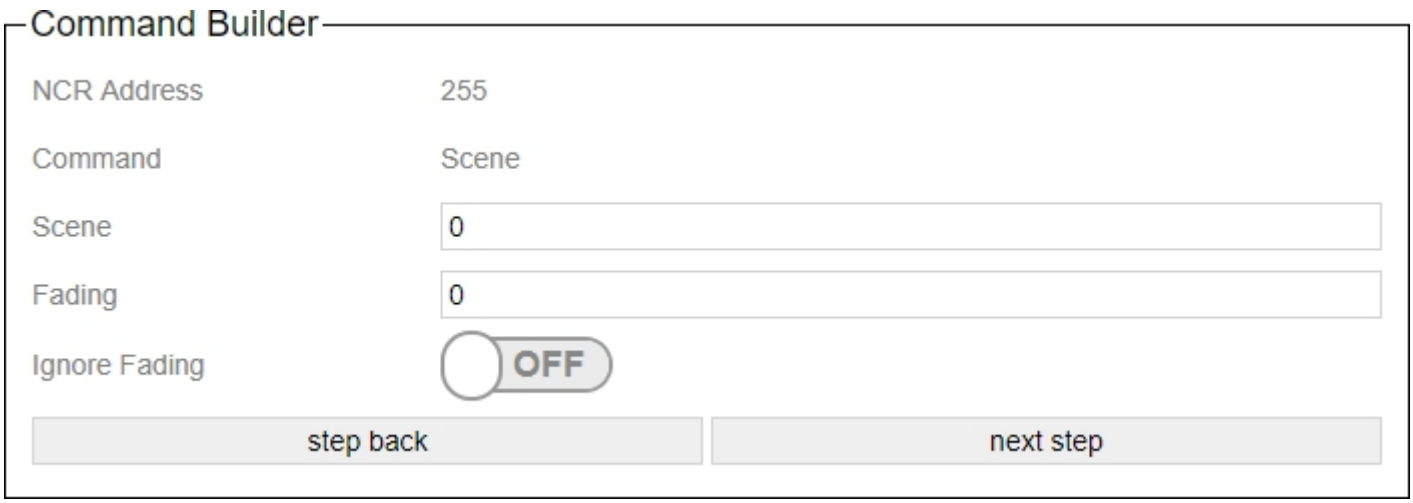
Fading

"Fading" defines the fade time to be used.

Ignore Fading

If "Ignore Fading" is activated, the fade time sent in the command is ignored. In this case, the standard fade time stored in the target system is used.

5.7.3.2. Scene



Scene

The desired scene to be called up in the Netcomposer system is specified in the "Scene" field.

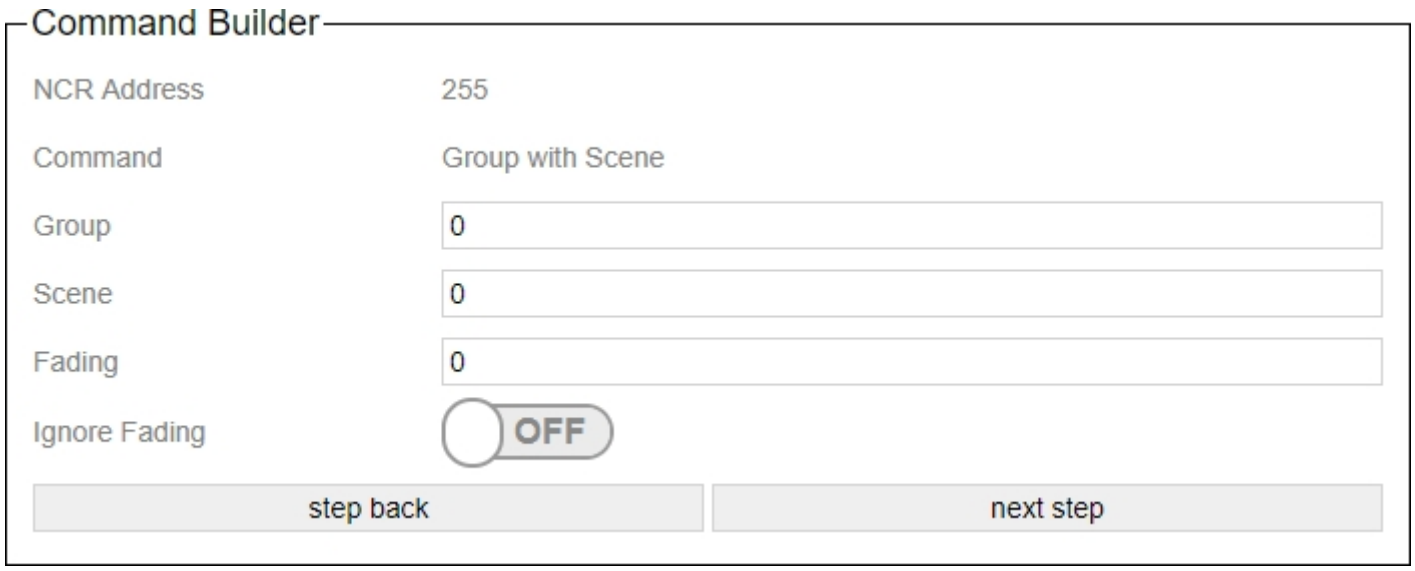
Fading

"Fading" defines the fade time to be used.

Ignore Fading

If "Ignore Fading" is activated, the fade time sent in the command is ignored. In this case, the standard fade time stored in the target system is used.

5.7.3.3. Group with Scene



Group

The group number of the target system is specified in the "Group" field.

Scene

The desired scene to be called within the group is defined in the "Scene" field.

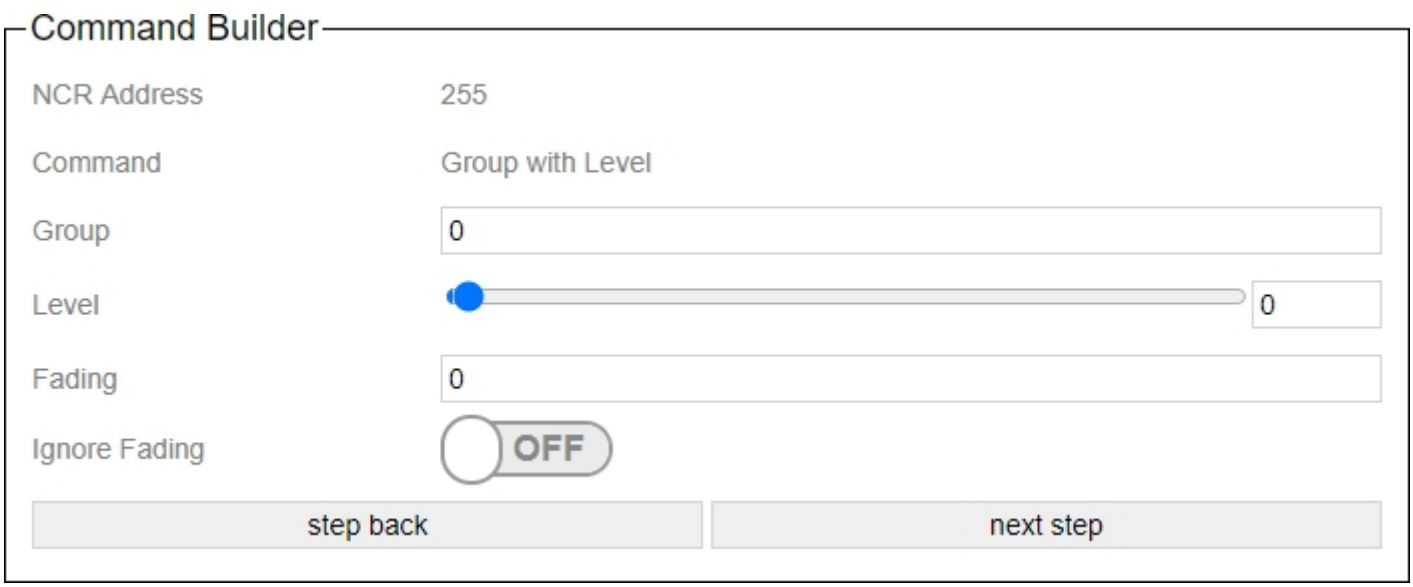
Fading

"Fading" defines the fade time to be used.

Ignore Fading

If "Ignore Fading" is enabled, the fade time sent in the command is ignored. In this case, the default fade time stored in the target system is used.

5.7.3.4. Group with Level



Device

The device address of the target device is specified in the "Device" field.

Level

The desired brightness is defined in the "Level" field.

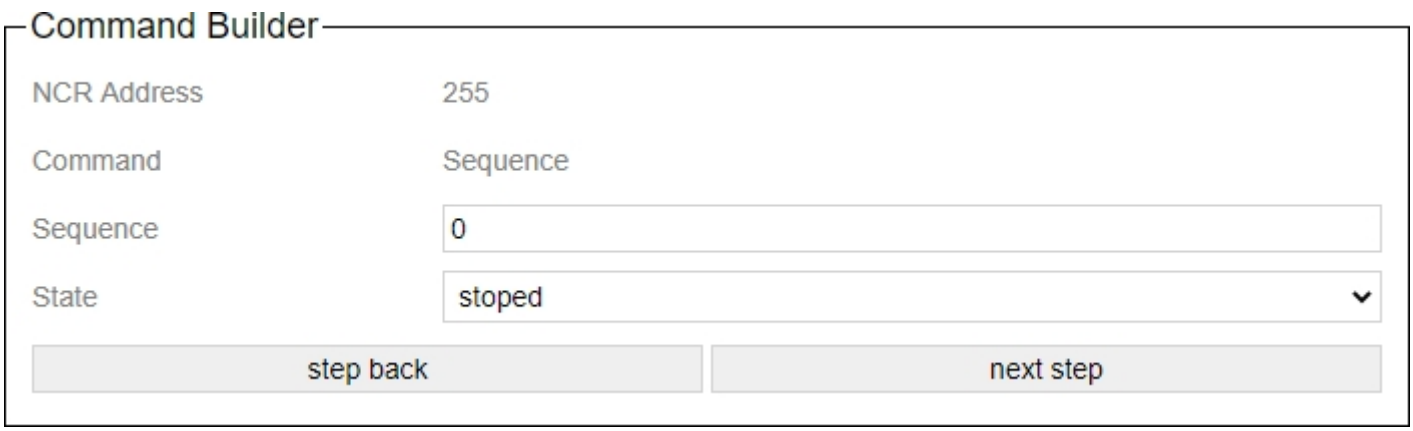
Fading

"Fading" defines the fade time to be used.

Ignore Fading

If "Ignore Fading" is enabled, the fade time sent in the command is ignored. In this case, the default fade time stored in the target system is used.

5.7.3.5. Sequence



Sequence

The "Sequence" field specifies the sequence number to be addressed in the Netcomposer system.

State

"State" defines the state of the sequence.

Possible states:

- Start
- Stop

Depending on the selected state, the sequence is started or stopped.

5.8. KNX/IP

In this operating mode, the gateway converts incoming KNX/IP commands into corresponding Casambi commands.

This allows KNX telegrams to be used directly to control scenes, groups, devices, or other functions in the Casambi system.

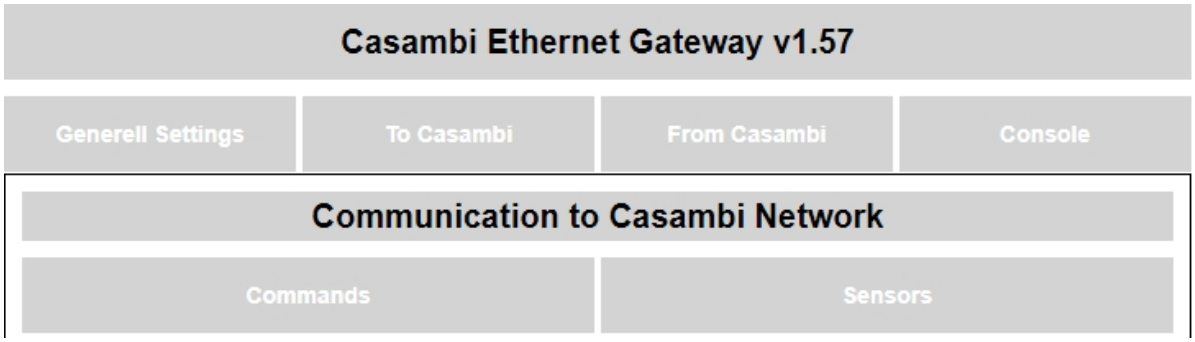
In addition, sensor data from the KNX system can be transferred to the Casambi world. The following are supported:

- 1 light sensor (lux value) per gateway
- 1 presence detector per gateway

5.8.1. To Casambi

In this area, you can specify which actions are to be performed in the Casambi system when a corresponding command is received from the network at the gateway.

Depending on the selected control system, the "Commands" page is displayed directly, where the corresponding assignments can be configured.

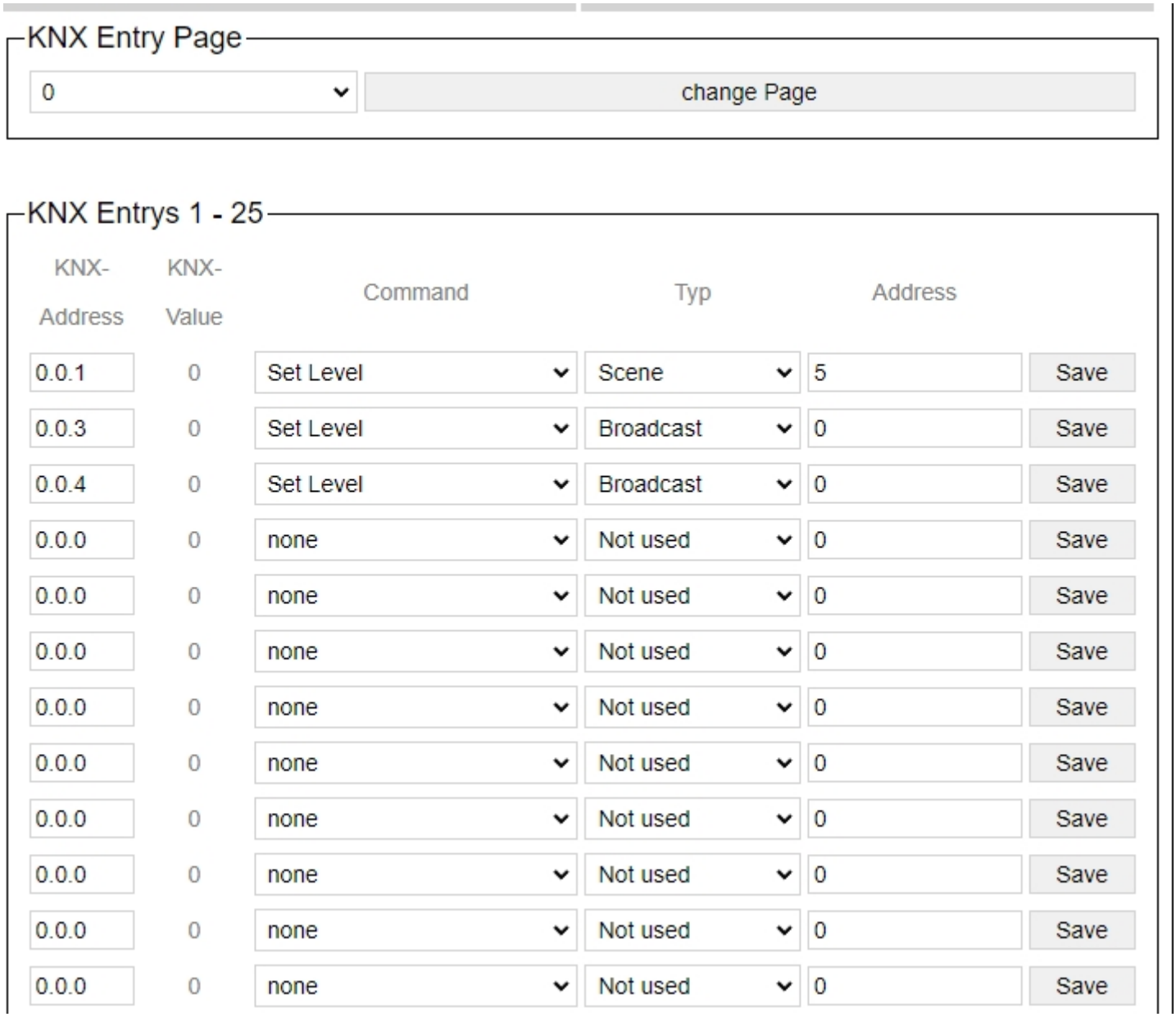


5.8.1.1. Commands

The view of the KNX data points can be selected at the top of the page. Twenty-five entries are

displayed per page.

You can switch between the individual data point areas using the page selection.

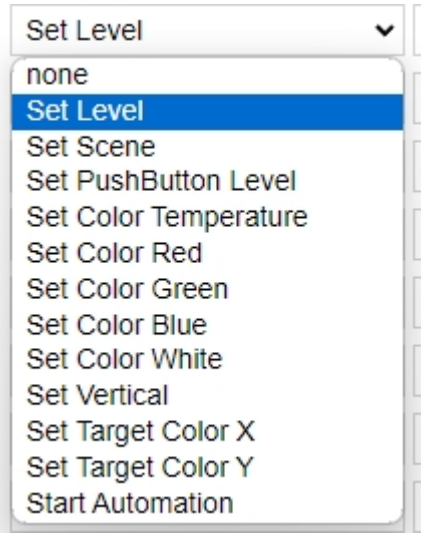


Below the page selection, the individual KNX group addresses are displayed with their assigned functions.

KNX Address
Displays the group address on the KNX page.

KNX value
Displays the last value transmitted to this group address.

Command
Defines the action to be performed in the Casambi system when a corresponding KNX telegram is received.



In KNX/IP operating mode, the transmitted KNX value is evaluated and converted into a corresponding Casambi action.

Supported KNX data point types:

- 1-bit group addresses (on/off)
- 4-bit group addresses (dimming – step up/step down)
- 1-byte group addresses (e.g., level in percent or absolute value)
- 2-byte group addresses (e.g., color temperature or X/Y color values)
- Lux values as group address (e.g., from brightness sensors)

Evaluation of values

Interpretation depends on the data point type:

1-bit value
Switches the luminaire between 100% and 0%.

4-bit value
Interpreted as a dimming command (step up/step down).

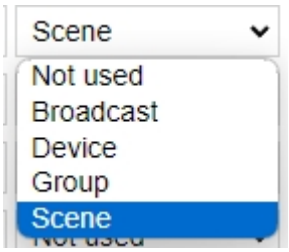
1-byte value
Is evaluated as a level value.

Color temperature
Can be transmitted either as a 1-byte value or as a 2-byte value.

Start of automation
Occurs via a 1-bit group address with the value "On".

Type

The "Type" field defines in which context the command is to be executed on the Casambi side.



Casambi destination address

Address

The Casambi ID for the selected type is entered in the "Address" field.

The meaning of the address depends on the selected "type" (e.g., device, group, scene, broadcast).

Special features:

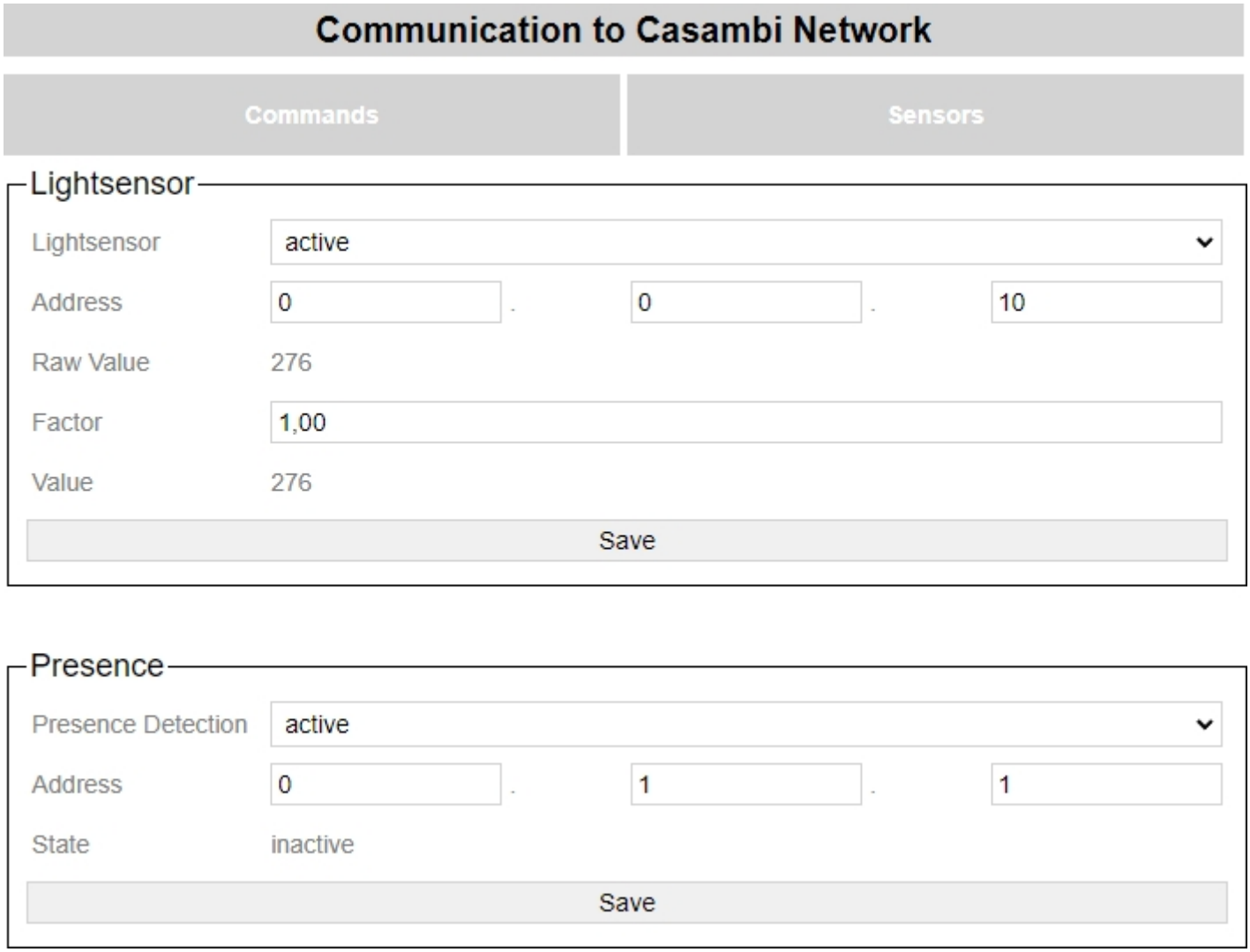
Broadcast
The address is not relevant here. The default
value is 0.

Ungrouped lights
The "Group" type with ID 0 is used for all ungrouped lights.

Save

The configured entry is saved with the "Save" button.

5.8.1.2. Sensors



Light sensor

In the upper "Light sensor" area, the values received on the configured KNX group address are transferred to the light sensor parameters of the gateway on the Casambi side.

Active
Enables or disables the transmission of light sensor data.

Raw Value
Displays the value currently received by the KNX system.

Factor
The factor can be used to scale the received value. Scaling takes place on the input side.

Value
Displays the calculated value after applying the factor.

Calculation:
Value = Raw Value × Factor

Save
Saves the configuration.

Presence sensor

The settings for the presence sensor are located in the lower section.

Active / Inactive
Activates or deactivates presence transmission.

Address
The KNX group address via which the presence value (1-bit, true/false) is transmitted is entered here.

State
Displays the currently received KNX value.

Save
Saves the configuration.

5.8.2. From Casambi

Communication from Casambi Network

Warning!

This settings are not used in "KNX/IP" mode.

Data transfer from the Casambi system to KNX (Casambi → KNX) has not yet been implemented.

This feature is planned for future software versions and will be added at a later date.

5.9. HomeAssistant

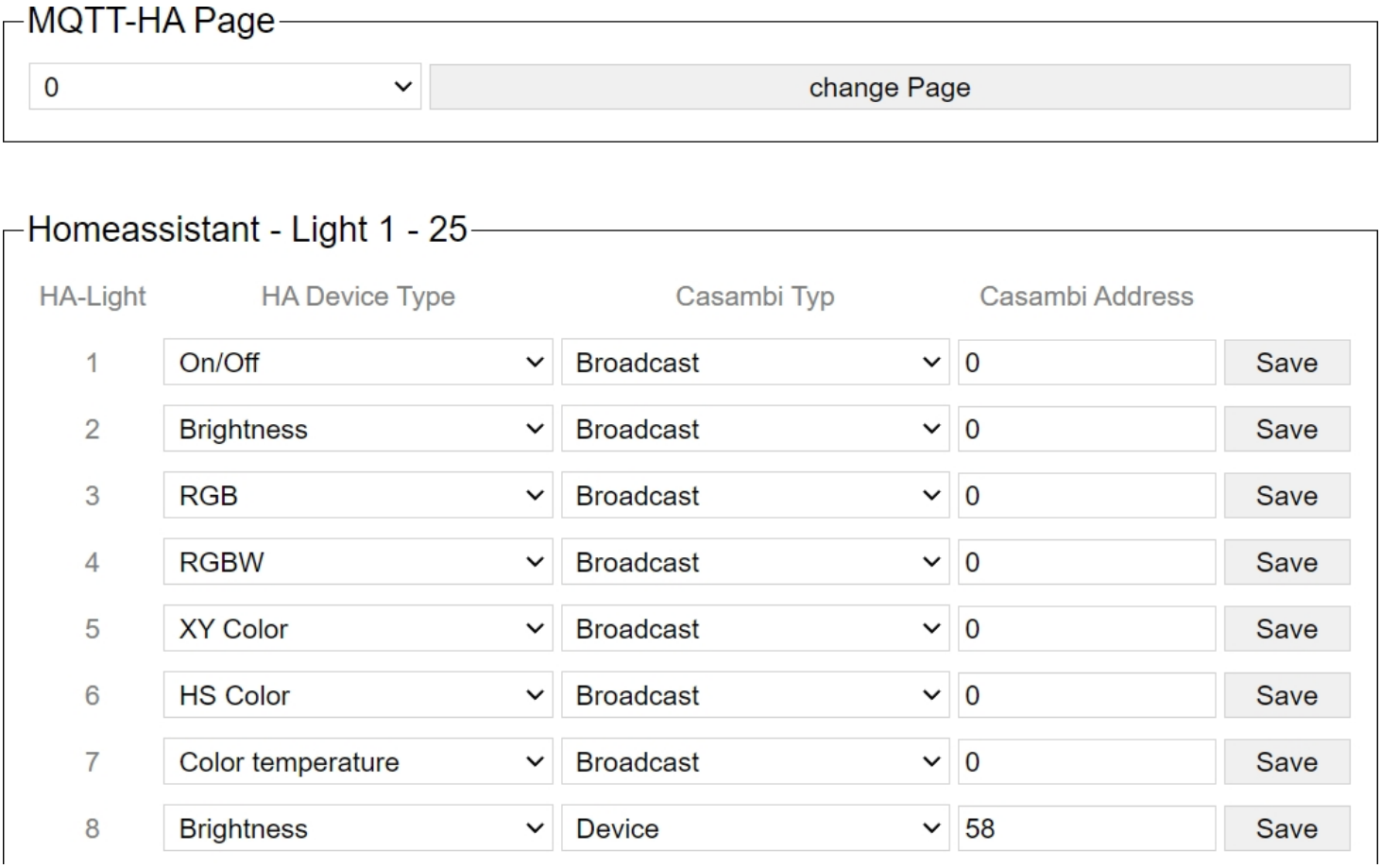
In this operating mode, the gateway converts Casambi elements into Home Assistant devices. Casambi devices are currently integrated into Home Assistant as "Light" devices.

This allows brightness, status, and—if supported—color values to be controlled via Home Assistant.



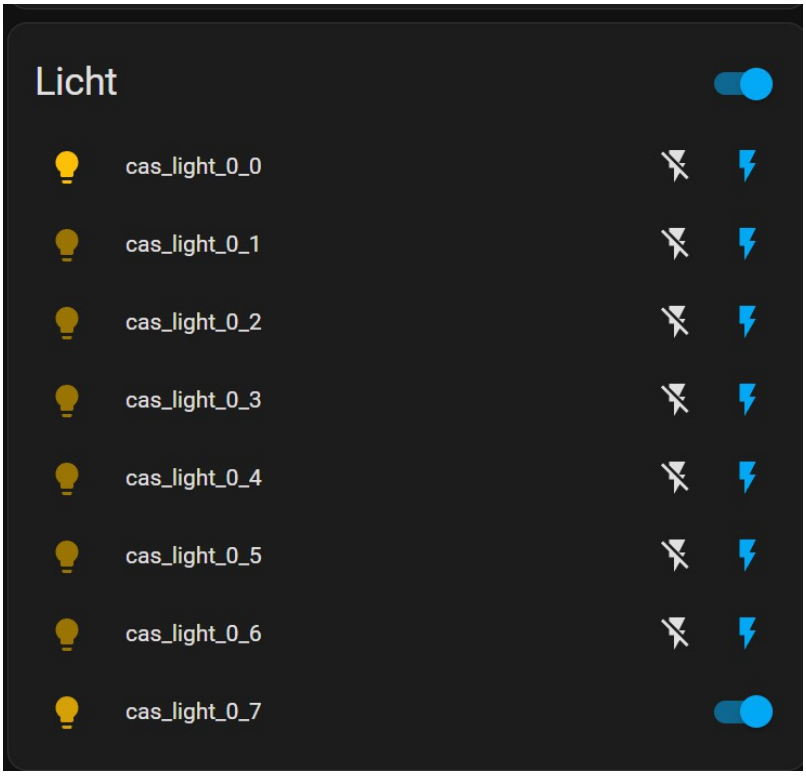
The transmission of sensor values (e.g., presence or lux) is not yet supported. This feature is planned for future software versions.

5.9.1. To Casambi



In "HomeAssistant" operating mode, up to 63 Casambi lights can be transferred to Home Assistant. These are created in Home Assistant as "Light" type devices.

The lights can be found in Home Assistant according to the configured name or internal ID of the gateway.



Naming the Home Assistant lights

The lights created in Home Assistant follow a fixed naming scheme: cas_light_[NetID]_[number]

Structure:

cas_light_
Fixed prefix

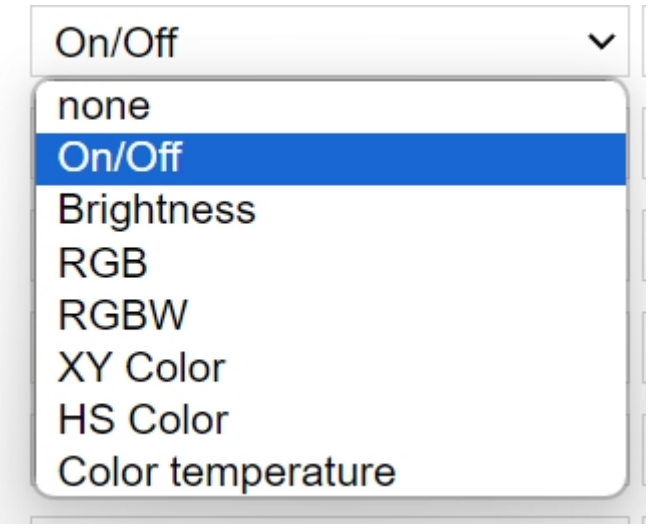
[NetID]
The Net ID configured in the gateway

[Number]
The number of the light according to the configuration in the "HA-Light" section

HA Device Type

The HA device type defines which functions the respective light supports in Home Assistant.

Depending on the selected type, different control options are available (e.g., brightness only or additional color or color temperature control).



The selected type determines which functions are available in the Home Assistant interface and how the device is displayed there.

Assignment of Casambi elements

On the Casambi page, a corresponding Casambi element can be stored behind each selected HA device type.

Depending on the configuration, the following Casambi elements can be assigned:



Broadcast

For the "Broadcast" type, the address is not relevant. The default value is 0.

Device

With the "Device" type, a single Casambi device is controlled.

In addition, status changes from the Casambi system are reported back to Home Assistant. Example:
If the status of a light changes due to a scene call or a button press, this change is also updated in Home Assistant.

Group

The "Group" type controls a Casambi group. Group 0 controls all

ungrouped lights.

Scene

With the "Scene" type, Casambi scenes are called up.

Autodiscovery

The lights are automatically detected by Home Assistant via MQTT autodiscovery, provided that:

- an MQTT server is installed and configured
- the Autodiscovery function has not been disabled in Home Assistant

5.9.2. From Casambi

Communication from Casambi Network

Warning!

This settings are not used in "MQTT" mode.

A complete transfer of states from the Casambi system to Home Assistant (Casambi → Home Assistant) has not yet been fully implemented. This feature is

planned for future software versions.

5.10. UDP Casambi Command

In this operating mode, an external control system—such as a visualization or a central control unit—can connect to the gateway.

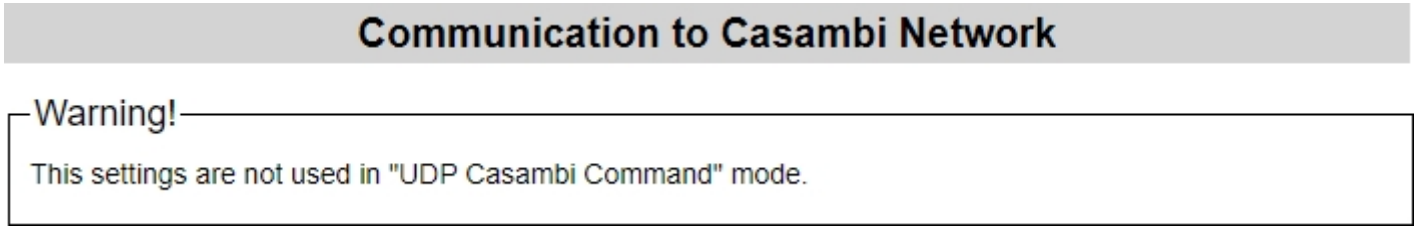
This connection can be used to:

- Actions can be triggered in the Casambi system
- Receive and evaluate scene calls
- Process status changes of devices, groups, or scenes

5.10.1. View in the gateway

The gateway settings are configured via the internal web interface.

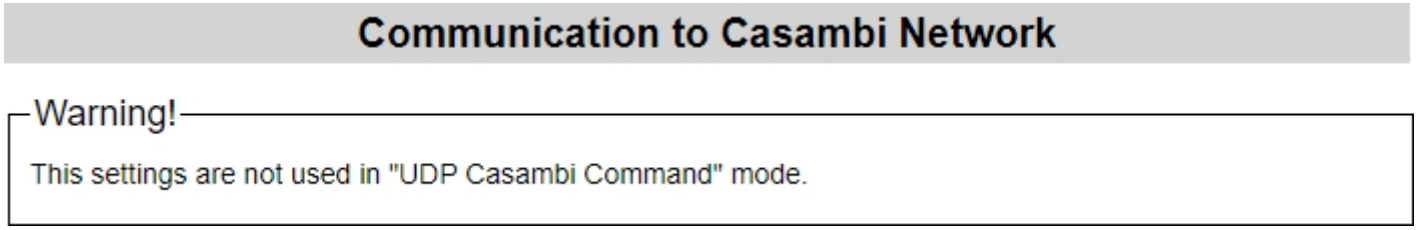
5.10.1.1. To Casambi



This page is not used in this operating mode.

The settings shown here have no function in this mode and are not evaluated.

5.10.1.2. From Casambi



This page is not used in this operating mode.

The settings shown here have no function in this mode and are not evaluated.

5.10.2. Control in the network

The structure of the telegrams is fixed. Transmission
takes place byte by byte.

Basic structure

Byte 1
Net ID – The Net ID configured in the "General Settings" dialog.

Byte 2
Command Direction – Specifies the direction of the command:

0x70 → Command from the Casambi system
0x72 → Command to the Casambi system

This is followed by the Casambi data area.

Each telegram always ends with the following bytes: 0x0D (Carriage

Return, "\r")
0x0A (Line Feed, "\n")

Data transmission 1 – "Hex with dot"

Example
Command 1.40 is to be sent to a Casambi bridge with the Net ID 1. Representation:

1.72.1.28\r\n General

structure:

0x_Net_ID.0x_Command_Direction.0x_Casambi_Data[1...X]\r\n

Data transmission 2 – "Dec with hash"

Example:
Command 1.40 is to be sent to a Casambi bridge with Net ID 1. Representation:

1#114#1#40\r\n

General structure:

Net_ID#Command_Direction#Casambi_Data[1...X]\r\n

Structure of the Casambi data area

A data packet has the following structure:

```
struct Packet
{
   uint8_t length;         // Length (opcode + arguments)
   uint8_t opcode;
   uint8_t arguments[length-1];
}
```

Notes on length

- The lengths specified in the manual correspond to the maximum packet length.
- The actual length may be smaller, e.g. if optional parameters (e.g. fade time) are not used.
- With "dec with hash," multi-byte values (e.g., color temperature or lux values) can be combined.
- Packets with length = 0 are ignored by the Casambi system.
- The maximum packet length is currently 17 bytes.
- Casambi reserves the right to extend this length in the future.

Opcode behavior

- Unknown opcodes should be ignored by the receiver.

ACK function (Send Ack)

If "Send Ack" is enabled, the gateway sends a confirmation back as soon as the command has been transmitted. The

received command is sent back with the addition "ACK".

Hex with dot:

0x_Net_ID.0x70.0x_Casambi_Data[1...X].ACK\r\n Dec

with hash: Net_ID#112#Casambi_Data[1...X]#ACK\r\n

Broadcast to all gateways

To send a command to all gateways in the network, the Net ID 255 (0xFF) can be used.

5.10.2.1. Commands from the Casambi system

When a packet is received from the Casambi system, the "Command_Direction" field has the value: 0x70 (hexadecimal

representation)
112 (decimal representation)

In the following, only the part "Casambi_Data[1...X]" from the general data frame according to chapter 5.1 is considered.

The rest of the telegram frame (Net ID, Command Direction, ending with \r\n) is already known and will not be explained further here.

5.10.2.1.1. 0x0D - Scene called

In order for a scene value to be transmitted, the gateway for the corresponding scene must be added in the Casambi software.

An 8-bit value can be generated using the **Bit_1 to Bit_8** slide switches. This allows **up to 255 different scene values** to be coded.

Each time the scene is called up, the corresponding value is sent to the network as a telegram.

Telegram parameters

Length: 9
Opcode: 0x0D (decimal **13**) **Data**

transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Bit_1.0x_Bit_2.0x_Bit_3.0x_Bit_4.0x_Bit_5.0x_Bit_6.0x_Bit_7.0x_Bit_8

> Example: 0.70.9.d.ff.0.0.0.0.0.0.0d/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Bit_1#Bit_2#Bit_3#Bit_4#Bit_5Bit_6#Bit_7#Bit_8

> Example: 000#112#009#013#255#000#000#000#000#000#000#000d/r/n

5.10.2.1.2. 0x1A - SetParameterValue

This data set is transmitted from the Casambi system in response to the **GetParameterValue** command.

Telegram parameters

Length: 0x03
Opcode: 0x1B (decimal **27**)

Parameter_Number
Number of the parameter queried.

Parameter_Value
Value of the corresponding parameter returned by the Casambi system.

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Parameter_Number.0x_Parameter_Value

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Parameter_Number#Parameter_Value

5.10.2.1.3. 0x1B - ParametersComplete

This message signals that the transmission of all parameter values has been completed. It is sent as a completion message after a GetParameterValue query from the Casambi system.

Telegram parameters

Length: 0x01
Opcode: 0x1B (decimal **27**) **Data**

content

No further data fields are transferred.

The message serves solely as a marker that all requested parameters have been successfully transferred.

5.10.2.1.4. 0x28 - Time received from the Casambi network

This message is sent by the Casambi system in response to a request to transmit the current system time.

Telegram parameters

Length: 8
Opcode: 0x28 (decimal **40**) **Data**

structure

The transmitted data contains the date and time of the Casambi system.

Field	Description
year_high	High byte of the year
year_low	Low byte of the year
month	Month
day	Day
hour	hour
minute	minute
second	second

The year is calculated from the combination of **year_high** and **year_low**. **Data**

transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_year_high.0x_year_low.0x_month.0x_day.0x_hour.0x_minute.0x_second

> Example: 0.70.8.28.7.e4.3.5.e.13.1d/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: year_high#year_low#month#day#hour#minute#second´

> Example: 000#112#008#040#007#228#003#005#014#019#029/r/n

5.10.2.1.5. 0x39 - Node Status

This message transmits details about the current status of a node (device) in the Casambi network. The responses can be transmitted **as a burst (several messages in succession)**.

Telegram parameters

Length: 6
Opcode: 0x39 (decimal **57**) **Data structure**

Field	Description
Unit_ID	ID of the Casambi node
Scene	Currently active scene ID
Priority_Node_Type	Contains priority and node type
Condition	Status of the device
Online	Monitored online status

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Unit_ID.0x_Scene.0x_Priority_Node_Type.0x_Condition.0x_Online

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Unit_ID#Scene#Priority_Node_Type#Condition#Online

0x_Scene
the currently active scene ID

0x_Priority_Node_Type => Priority
(0..15, the 6 least significant bits)

1 = Emergency
2 = BMS override
3 = Manual control
4..14 = Automation priorities
4 [Classic FW]= any automation 8
= Presence
11= Date timer
12= Clock timer (daily/weekly) 15 =
Startup

0x_Priority_Node_Type => Node Type
(0..3, the 2 most significant bits)

0 and 1 = Active nodes (lights, sensors, push buttons) 2 =
Switch (passive)

3 = Sensor (passive)

0x_Condition
0x00, 0x80, 0xA0: ok
0x01: "overheated"
0x09: "overload" (current limit)
0x81: "thermal_overload" 0x82:
"lamp_failure"
0x83: "driver_failure" 0x85:
"incompatible_hw" 0x86:
"hw_not_found"
0x87: "configuration_failed"

0x_Online
Monitored online status

5.10.2.1.6. 0x3A - Notify Node removed

This message indicates that a device (node) has been removed from the Casambi network.

The same message may also occur if the status of a node that **no longer exists** in the network has been queried.

Telegram parameters

Length: 0x02
Opcode: 0x3A (decimal **58**) **Data**

structure

Field	Description
Unit_ID	ID of the remote Casambi node

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Unit_ID

> Example: 2.3a.1/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Unit_ID

> Example: 002#058#001/r/n



After receiving this message, the corresponding node should be removed from the local device management or marked as **not present**.

5.10.2.1.7. 0x45 - Scene Status

This message transmits details about the current status of a scene in the Casambi system.

Telegram parameters

Length: 4
Opcode: 0x45 (decimal **69**) **Data**

structure

Field	Description
Scene	Scene ID
Active	Status of the scene
Level	Last known level of the scene

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Scene.0x_Active.0x_Level

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Scene#Active#Level

0x_Scene
the currently active scene ID

0x_Active
(bit 0, all other bits are ignored)

0 = Scene inactive
1 = Scene active

0x_Level
The last known level of the scene.

5.10.2.1.8. 0x46 - Target Status

This message transmits details about the current status of a target in the Casambi system. A target can be, for example, a device, a group, or a broadcast target.

Telegram parameters

Length: 0x07
Opcode: 0x46 (decimal **70**) **Data**

structure

Field	Description
Target_ID	ID of the target
Level	Average level of the luminaires
Load_Level	Last "on" level CCT_Level
	Last color temperature value
Target_Type	Type of target
VerticalRatio	Ratio of direct/indirect component

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Target_ID.0x_level.0x_last_level.0x_cct_level.0x_Target_Type.0x_VerticalRatio

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Target_ID#level#last_level#cct_level#Target_Type#VerticalRatio

0x_Level
Average brightness value of the luminaires within the target (e.g., group).

0x_last_Level
The last known brightness value at which the target was switched on.

0x_cct_Level
The last **color temperature value (Tc)** set for the lights.

0x_VerticalRatio
Ratio of **direct to indirect light component** of the luminaire or target.

5.10.2.1.9. 0x49 - Target Color



This feature is **only** supported **from Casambi Evolution firmware version 36.70 or newer**.

This feature is not available on older firmware versions.

This message transmits details about the current color of a target in the Casambi system. A target can be, for example, a device, a group, or a broadcast destination.

Telegram parameters

Length**:** 0x15 or the length requested in the original query
Opcode: 0x49 (decimal **73**) **Data**

structure

Field	Description
Target_Type	Type of target
Target_ID	ID of the target
Level	Current brightness level
R	Red component
G	Green component
B	Blue component
W	White component
Hue_h	High byte of the hue value
Hue_l	Low byte of the hue value
Sat	Saturation
X_h	High byte of the X color coordinate
X_l	Low byte of the X color coordinate
Y_h	High byte of the Y color coordinate
Y_l	Low byte of the Y color coordinate
Level_xy	Level value for XY color space

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Target_Type.0x_Target_ID.0x_level.0x_R.0x_G.0x_B.0x_W.0x_Hue_h.0x_Hue_l.
0x_Sat.0x_X_h.0x_X_l.0x_Y_h.0x_Y_l.0x_level_xy

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Target_Type#Target_ID#level#R#G#B#W#Hue#Sat#X#Y#level_xy

5.10.2.1.10. 0x4B - NotifyControlValues Responses



This feature is **only** supported **from Casambi Evolution firmware version 37.90 or newer**.

This feature is not available on older firmware versions.

This message transmits a list of control values for a target. The values are transmitted as **type-value pairs**.

Telegram parameters

Length: variable
Opcode: 0x4B (decimal **75**)

General structure

Response messages contain:

- the **target ID** of the device
- a list of **control values** (type, value)

The value can vary depending on the type:

- **1 byte**, e.g., for presence
- **2 bytes (uint16, little-endian),** e.g., for lux values of a daylight sensor
- Other types according to the table of **control type IDs**

Value size

The size of a value is **type-dependent** if it is not explicitly specified in the header.

For values with variable length, the so-called **"long form"** can be used. This is signaled by the **0x80 bit in the TYPE ID**.

Example:

- LEN = 0→ Value 0
- LEN = 1→ Value range [0..255]

Client requirements

A client must:

- be able to process at least **64 bytes per message**
- **ignore unknown or unsupported content**

If there are many updates, they can be split across **multiple messages**. In this case, multiple messages can be sent for **the same target ID**.

Data transmission 1 "hex with dot":

Casambi_Data[1...X]:
0x_Target_ID.0x_type_A.0x_Value_A[1..4]

...
.0x_type_B.0x_Value_B[1..4]
...
.0x_type_C.0x_element_C.0x_length_C.0x_Value_C[1..4]

Data transmission 2 "dec with hash":

Casambi_Data[1...X]:
Target_ID#TYPE_A#Value_A[1..4]
...
#Type_B#Value_B[1..4]
...
#Type_C#Element_C#Length_C#Value_C[1..4]

Types:

Type	Size in Bytes / Layout	Description
1 / 129	1	Dimmer channel; Individual channels are reported in short form (TYPE=0x01:VALUE), and indexed controls are reported in long form with explicit length, see also type "Slider" (15) TYPE=0x81 : {0..7} : LEN={0..2} : VALUE - Length 0/1/2 must be supported
2	1	Color Temperature
3	3[2:1]	Hue/saturation as 16-bit (hue) and 8-bit (saturation) levels
4	4[2:2]	XY color: Pair of (X:Y) 16-bit values representing the range [0.; 1.0]
5	1	Color Source Selector - for textures with a mixture of TW and color fields, the TW vs. Color option is set TW=0, RGB=1, XY=2. In some texture modes, the fields are not mutually exclusive (no effect)
6	1	Device temperature [C°], low-resolution value [1..255] of the measured value (0 ~ undefined)
7	1	Battery level [1..100%]; 0 ~ undefined
8	1	Overheating indicator [bool]
9	1	General error indicator
10	1	"Vertical" control; depending on the type of lighting, this can be either a mixer of dimmers, or TW and colors, or directly/indirectly illuminated parts of the device.
11	1	Control of the "white" channel: typically an additional output for RGB colors or an additional/secondary/exclusive dimming level in other modes.
12	-	Not used / reserved
13	-	Not used / reserved

14 / 142	1-4	Sensor field: general sensor field (requires INDEX specification for interpretation)
15 / 143	2	Slider (user-defined element); indexed dimmers are reported in long form (3/4/5 bytes) TYPE=0x8F: INDEX={0..7} : LEN={0..2} : VALUE[length] Note that 0 and 1 length is possible in long form: for 00 (empty) or 1-byte values (00..FF)
16 / 144	1	On/Off toggle switch (user-defined element)
17 / 145	1	Button (custom element)
18 / 146	1	PushButton (custom element)
19	1	White / Color Match
20	2	Light sensor value in lux units (or whatever the sensor can report)
21	1	Status of the presence sensor: the values 0 / 1 / 2 correspond to the states Inactive / Active / Hold (delay) time



The **Control Type IDs** contained define what type of value is transmitted (e.g., sensor value, presence status, or other control parameters).
Unsupported types should be ignored by the application.

5.10.2.1.11. 0x4B - NotifyButtonEvent Responses



This function is **only** supported **from Casambi Evolution firmware version 39.50 or newer**.

This function is not available in older firmware versions.

This message transmits an event from a button in the Casambi system. The message

contains:

- the **unit ID** of the device
- the **button type** (source of the event)
- the **button number**
- the **button event**

The button number can be **0–7** and corresponds to the possible buttons on a device.

Telegram parameters

Length: 5
Opcode: 0x51 (decimal **81**) **Data**

structure

Field	Description
Unit_ID	ID of the Casambi device
Source	Type or source of the button
Button	Number of the button (0–7)
Event	Event type

Data transmission 1 "hex with dot":

Casambi_Data[1...X]:
0x_Unit_ID.0x_Source.0x_Button.0x_Event

Data transmission 2 "dec with hash":

Casambi_Data[1...X]:
Target_ID#TYPE_A#Value_A[1..4]

Events:

Type	Description
2	Short Press
9	Long press start
12	Long Press End

There are other event types in the Casambi system that are not currently exported. Therefore, additional events may be added in future versions.

5.10.2.2. Commands to the Casambi system

When a packet **is sent to the Casambi system**, the **Command_Direction** field has the value: 0x72 (hexadecimal

representation)
114 (decimal representation)

In the following, only the **Casambi_Data[1...X]** part of the general data frame according to section 5.10.2 will be considered.

The rest of the telegram frame (Net ID, Command Direction, and termination with \r\n) is already known and will not be explained further here.

5.10.2.2.1. 0x10 - Push Button Pressed

This command sets the status of a button in the Casambi system to **"pressed."** The button can have a number from **0 to 3**.

Telegram parameters

Length: 2
Opcode: 0x10 (decimal **16**) **Data structure**

Field	Description
Button_Number	Button number (0–3)

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Button_Number

> Example: 0.72.2.10.0/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Button_Number

> Example: 0#114#2#16#0/r/n

5.10.2.2.2. 0x11 - Push Button Released

This command sets the status of a button in the Casambi system to **"released."** The button can have a number

from **0 to 3**.

Telegram parameters

Length: 2
Opcode: 0x11 (decimal **17**) **Data**

structure

Field	Description
Button_Number	Button number (0–3)

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Button_Number

> Example: 0.72.2.11.0/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Button_Number

> Example: 0#114#2#17#0/r/n

5.10.2.2.3. 0x1D - GetParameterValue

This command can be used to query the **scene and group parameters** currently **stored** in the **Casambi app at the gateway**.

The command is called **without any additional parameters**.

Telegram parameters

Length: 0x01
Opcode: 0x1D (decimal **29**) **Function**

After the command is called, the Casambi system sends:

1. several **parameter responses** with the individual parameter values
2. followed by a **parameter** complete packet, which signals that all parameters have been transferred The structure

of these response packets is described in the relevant chapters.

5.10.2.2.4. 0x1E - Set level of a scene

This command can be used to set **all Casambi lights in a scene** to a specific level.

Telegram parameters

Length: 5
Opcode: 0x1E (decimal **30**)

Fade time

The fade time is specified internally in **10 ms increments**.

Calculation
Fade time = value × 10 ms

Data transfer 1 "hex with dot":

The fade time is **optional**.
If it is not transmitted, the packet length must be reduced to **3** accordingly.

Casambi_Data[1...X]: 0x_Scene.0x_Level.0x_Duration_low.0x_Duration_high

> Example: 0.72.5.1e.1.ff.10.0/r/n

Data transmission 2 "dec with hash":

In this variant, the fade time can be transmitted as **a single value**. This reduces the packet length to **4**.

The fade time is also **optional** here and can be omitted completely. Alternatively, it can

also be transmitted as **a high and low byte**.
In this case, the packet length is **5**.

Casambi_Data[1...X]: Scene#Level#Duration

> Example: 0#114#4#30#1#255#1000/r/n

Parameter description

Parameter	Description
Scene	ID of the scene
Level	Target brightness (0–255)
Duration	Fade time

5.10.2.2.5. 0x1F - Set level of a group

This command can be used to set **all Casambi lights in a group** to a specific level.

Telegram parameters

Length: 5
Opcode: 0x1F (decimal **31**)

Fade time

The fade time is specified internally in **10 ms increments**.

Calculation:
Fade time = value × 10 ms

Data transmission 1 "hex with dot":

The fade time is **optional**.
If it is not transmitted, the packet length must be reduced to **3** accordingly.

Casambi_Data[1...X]: 0x_Group.0x_Level.0x_Duration_low.0x_Duration_high

> Example: 0.72.5.1f.1.ff.10.0/r/n

Data transmission 2 "dec with hash":

In this variant, the fade time can be transmitted as **a single value**. This reduces the packet length to **4**.

The fade time is also **optional** here and can be omitted entirely. Alternatively, it can also

be transmitted as **a high and low byte**.
In this case, the packet length is **5**.

Casambi_Data[1...X]: Group#Level#Duration

> Example: 0#114#5#31#1#255#1000/r/n

Parameter description

Parameter	Description
Group	ID of the group
Level	Target brightness (0–255)
Duration	Fade time

5.10.2.2.6. 0x20 - Set level of a target

This command can be used to set **Casambi lights of a defined target** to a specific level.
The target can be, for example, broadcast, device, group, or scene.

Telegram parameters

Length: 6
Opcode: 0x20 (decimal **32**)

Fade time

The fade time is specified internally in **10 ms increments**.

Calculation:
Fade time = value × 10 ms

Data transmission 1 "hex with dot":

The fade time is **optional**.
If it is not transmitted, the packet length must be reduced to **4** accordingly.

Casambi_Data[1...X]: 0x_Level.0x_Duration_low.0x_Duration_high.0x_Target_Type.0x_Target_ID

> Example: 0.72.6.20.ff.10.0.0.0/r/n

Data transmission 2 "dec with hash":

In this variant, the fade time can be transmitted as **a single value**. This reduces the packet length to **5**.

The fade time is also **optional** here and can be omitted entirely. Alternatively, it can also

be transmitted as **a high and low byte**.
In this case, the packet length is **6**.

Casambi_Data[1...X]: Level#Duration#Target_Type#Target_ID

> Example: 0#114#6#32#255#1000#0#0/r/n

Parameter description

Parameter	Description
Level	Target brightness (0–255)
Duration	Fade time
Target_Type	Target type
Target_ID	ID of the target

Target_Type and Target_ID:

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
3	1-255	Scenes (only currently active lights)
4	1-255	Scenes (all lights)
5	0	All lights with the same manufacturer ID

5.10.2.2.7. 0x21 - Set the level of a button's target

This command sets the **target of a button** to a fixed brightness value. The button can have a

number from **0 to 3**.

Telegram parameters

Length: 3
Opcode: 0x21 (decimal **33**) **Data**

structure

Field	Description
Button_Number	Button number (0–3) Level
	Target brightness (0–255)

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Button_Number.0x_Level

> Example: 0.72.3.21.0.ff/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Button_Number#Level

> Example: 0#114#3#33#0#255/r/n

5.10.2.2.8. 0x28 - Request time from the Casambi network

This command prompts the Casambi network to transmit its **current system time**.

Telegram parameters

Length: 1
Opcode: 0x28 (decimal **40**)

Data transmission 1 "hex with dot":

> Example: 0.72.1.28/r/n

Data transmission 2 "dec with hash":

> Example: 0#114#1#50/r/n

Response

The response is sent with the following opcode:

0x28– Receive time from the Casambi network

The structure of the time response is described in the corresponding chapter.

5.10.2.2.9. 0x28 - Set time in the Casambi network

This command can be used to set the **system time of the Casambi network** to the specified values.

Telegram parameters

Length: 8
Opcode: 0x28 (decimal **40**) **Data**

structure

Field	Description
year_high	High byte of the year
year_low	Low byte of the year
month	Month
day	Day
hour	Hour
minute	minute
second	second

The year is calculated from the combination of **year_high** and **year_low**. **Data**

transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_year_high.0x_year_low.0x_month.0x_day.0x_hour.0x_minute.0x_second

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: year_high#year_low#month#day#hour#minute#second



The set time is used by the Casambi system as **internal network time**, for example for time-based automations.

5.10.2.2.10. 0x2B - Set presence sensor

This command can be used to set the **presence status of the sensor** in the Casambi system.

Telegram parameters

Length: 2
Opcode: 0x2B (decimal **43**) **Data**

structure

Field	Description
sensor_state	Status of the presence sensor

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_sensor_state

> Example: 0.72.2.2B.0/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: sensor_state

> Example: 0#114#2#43#0/r/n

5.10.2.2.11. 0x2C - Set light sensor

This command can be used to set the **value of a light sensor (lux value)** in the Casambi system. The value is transmitted as **a 16-bit value**.

Telegram parameters

Length: 3
Opcode: 0x2C (decimal **44**)

Data structure

Field	Description
Sensor_Value_low	Low byte of the sensor value
Sensor_Value_high	High byte of the sensor value

The actual sensor value is calculated from the combination of **the low and high bytes**. **Data transmission 1 "hex with dot":**

Casambi_Data[1...X]: 0x_Sensor_Value_low.0x_Sensor_Value_high

> Example: 0.72.3.2C.ff.0/r/n

Data transmission 2 "dec with hash":

Casambi_Data: Sensor_Value

> Example: 0#114#3#44#2000/r/n

5.10.2.2.12. 0x2F - Set color via RGBW

This command can be used to set the **RGBW color of a target** in the Casambi system. A target can be,

for example, a single device, a group, or the entire network.

Telegram parameters

Length: 7
Opcode: 0x2F (decimal **47**)

Value ranges

Parameter	Value range	Note
R	0–254	Red component
G	0–254	Green component
B	0–254	Blue component
W	0–254	White component
Level	0–254	Brightness value

Special values:

- **W = 255** → Ignore white component
- **Level = 255** → Ignore level

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_R.0x_G.0x_B.0x_W.0x_Target_Type.0x_Target_ID.0x_Level

> Example: 0.72.7.2f.ff.0.0.ff.1.1.ff/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: R#G#B#W#Target_Type#Target_ID#Level

> Example: 0#114#7#47#255#0#0#255#1#1#255/r/n

Parameter description

Parameter	Description
R	red component
G	Green component
B	Blue component
W	White proportion
Target_Type	Type of target
Target_ID	ID of the target
Level	Brightness value

Target_Type and Target_ID:

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
3	1-255	Scenes (only currently active lights)
4	1-255	Scenes (all lights)
5	0	All lights with the same manufacturer ID

5.10.2.2.13. 0x31 - SetTargetVerticalRatio

This command can be used to set the **vertical ratio** of a target. The value describes the ratio of **direct to indirect light**.

A target can be, for example, a single device, a group, or the entire network.

Telegram parameters

Length: 6
Opcode: 0x31 (decimal **49**)

Fade time

The fade time is specified internally in **10 ms increments**.

Calculation:
Fade time = value × 10 ms

Data transmission 1 "hex with dot":

The fade time is **optional**.
If it is not transmitted, the packet length must be reduced to **4** accordingly. Casambi_Data[1...X]:

0x_Ratio.0x_Duration_low.0x_Duration_high.0x_TargetType.0x_TargetID **Data transmission 2 "dec with hash":**

In this variant, the fade time can be transmitted as **a single value**. This reduces the packet length to **5**.

The fade time is also **optional** here and can be omitted entirely. Alternatively, it can also

be transmitted as **high and low bytes**.
In this case, the packet length is **6**.

Casambi_Data[1...X]: Ratio#Duration#TargetType#TargetID

Parameter description

Parameter	Description
Ratio	Ratio of direct to indirect light
Duration	Fade time
TargetType	Type of target
TargetID	ID of the target

Target_Type and Target_ID:

Target_Type	Target_ID	Comment

0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
3	1-255	Scenes (only currently active lights)
4	1-255	Scenes (all lights)
5	0	All lights with the same manufacturer ID

5.10.2.2.14. 0x38 - Set color via X / Y

This command can be used to set the **color of a target in the XY color space**.

A target can be, for example, a single device, a group, or the entire network.

Telegram parameters

Length: 8
Opcode: 0x38 (decimal **56**)

Value ranges

Parameter	Value range	Description
X	0 – 65,535 X-	X-coordinate in XY color space
Y	0 – 65,535 Y	coordinate in XY color space Level
0 – 254	Brightness value	

Special value:

- **Level = 255** → Ignore level

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_X_h.0x_X_l.0x_Y_h.0x_Y_l.0x_Target_Type.0x_Target_ID.0x_Level

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: X#Y#Target_Type#Target_ID#Level

Parameter description

Parameters	Description
X_h	High byte of the X coordinate
X_l	Low byte of the X coordinate
Y_h	High byte of the Y coordinate
Y_l	Low byte of the Y coordinate
Target_Type	Type of target
Target_ID	ID of the target
Level	Brightness value

Target_Type and Target_ID:

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses

3	1-255	Scenes (only currently active lights)
4	1-255	Scenes (all lights)
5	0	All lights with the same manufacturer ID

5.10.2.2.15. 0x39 - Node status

This command can be used to query the **status of a node (device)** in the Casambi network.

> This function is **only** available **with Evolution firmware**.

Request values

The **Request** parameter determines the type of query:

Value	Meaning
0x00	Deactivate automatic notification of status changes 0x01 – 0xFB Query a unit based on its **unit ID**
0xFE	**Enable** automatic notification for status changes **of all nodes**
0xFF	**Enable** automatic notification for status changes of **own node**

Important notes

- Queries should **not** be sent **too quickly in succession**.
- **Only a single unit** should be queried **per request**.
- Queries that are too fast or parallel can **overload** the **Casambi system**.

If **no device with the queried unit ID exists**, the system responds with **opcode 0x3A**.
This allows you to check **which devices are present in the network** without prior knowledge of the device IDs.

Telegram parameters

Length: 2
Opcode: 0x39 (decimal **57**) **Data**

transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Request

> Example: 0.72.2.39.1/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: 0x_Request

> Example: 0#114#2#57#1/r/n

Response:
0x39 - Node status
0x3A - Notify Node removed

5.10.2.2.16. 0x3D - Set color via Hue/Sat

This command can be used to set the **color of a target in the hue/saturation color space**. A target can

be, for example, a single device, a group, or the entire network.

Telegram parameters

Length: 7
Opcode: 0x3D (decimal **61**)

Value ranges

Parameter	Value range	Description
Hue	0 – 65,535	Color value in the Hue color
space Sat	0	Saturation
W	0	White component
Level	0	Brightness value

Special values:

- **W = 255** → Ignore white value
- **Level = 255** → Ignore level

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Hue_h.0x_Hue_l.0x_Sat.0x_W.0x_Target_Type.0x_Target_ID.0x_Level

> Example: 0.72.7.3D.ff.ff.fe.ff.1.1.ff/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Hue#Sat#W#Target_Type#Target_ID#Level

> Example: 0#114#7#61#65000#254#255#1#1#255/r/n

Parameter description

Parameter	Description Hue_h
	High byte of the hue value
Hue_l	Low byte of the hue value
Sat	Saturation value
W	White component
Target_Type	Target type
Target_ID	ID of the target
Level	Brightness value

Target_Type and Target_ID:

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
3	1-255	Scenes (only currently active lights)
4	1-255	Scenes (all lights)
5	0-255	All lights with the same manufacturer ID

5.10.2.2.17. 0x3E - SetTargetDimmers

This command can be used to set **the dimmer channels of a target**. A device can have **up to 4 dimmer channels (index 0–3)**.

One or more dimmer values can be transmitted **simultaneously**.

Telegram parameters

Length: variable, **minimum 7 bytes**
Opcode: 0x3E (decimal **62**)

Fade time

The fade time is specified internally in **10 ms increments**.

Formula:
Fade time = value × 10 ms

Special case:

- **Fade time = 0** → The **default value from the Casambi app** is used.

Dimmer parameters

Parameter	Description
Index	Dimmer channel of the device (0–3)
Value	Value of the dimmer channel

Multiple dimmer values can **be transmitted in succession**. The first **index/value pair** is followed by the other pairs.

Maximum of **4 dimmers per device**. **Data**

transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_TargetType.0x_TargetID.0x_Duration_low.0x_Duration_high.
[0x_Index(0-3).0x_Value(0-3)]

Additional dimmers are appended by additional **index/value pairs**.

Data transmission 2 "dec with hash":

In this variant, the **fade time** is **transmitted as a single value**. This reduces the **telegram length by 1 byte**.

Alternatively, the fade time can also be transmitted as **high and low bytes**. In this case, the length corresponds to the **"hex with dot**" variant.

Casambi_Data[1...X]: TargetType#TargetID#Duration#.[Index(0-3)#0x_Value(0-3)] Here,

too, several **index/value pairs** can follow one after the other.

Target_Type and Target_ID:

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
3	1-255	Scenes (only currently active lights)
4	1-255	Scenes (all lights)
5	0	All lights with the same manufacturer ID

5.10.2.2.18. 0x3F - SetTargetElements

This command can be used to set **custom elements of a target**. A device can have **up to 8 custom elements (index 0–7)**.

One or more elements can be transferred **simultaneously**.

Telegram parameters

Length: variable, **minimum 7 bytes**
Opcode: 0x3E (decimal **62**)

Fade time

The fade time is specified internally in **10 ms increments**.

Formula:
Fade time = value × 10 ms

Special case:

- **Fade time = 0** → The **default value from the Casambi app** is used.

Element parameters

Parameters	**Description** Index
	Element number (0–7)
Value	Value of the element

Multiple index/value pairs can be transferred in succession. The first **index/value pair** is followed by additional pairs.

Maximum of **8 custom elements per device**.

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_TargetType.0x_TargetID.0x_Duration_low.0x_Duration_high.
[0x_Index(0-3).0x_Value(0-3)]

Additional elements are appended by additional **index/value pairs**.

Data transmission 2 "dec with hash":

In this variant, the **fade time** is transmitted **as a single value**. This reduces the **telegram length by 1 byte**.

Alternatively, the fade time can also be transmitted as **high and low bytes**. In this case, the length corresponds to the **"hex with dot**" variant.

Casambi_Data[1...X]: TargetType#TargetID#Duration#.[Index(0-3)#0x_Value(0-3)]

Here, too, several **index/value pairs** can follow one after the other.

Target_Type and Target_ID:

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
3	1-255	Scenes (only currently active lights)
4	1-255	Scenes (all lights)
5	0	All lights with the same manufacturer ID

5.10.2.2.19. 0x45 - Scene status

This command can be used to query the **status of a scene** in the Casambi network.

> This function is **only** available **from Evolution firmware version 33.22 onwards**.

Telegram parameters

Length: 2
Opcode: 0x45 (decimal **69**)

Parameters

Parameter	Description
Scene_ID	ID of the scene to be queried scene

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Scene_ID

> Example: 0.72.2.45.1/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Scene_ID

> Example: 0#114#2#69#1/r/n

Response:
0x45 - Scene status

5.10.2.2.20. 0x46 - Target status

This command can be used to query the **status of a target** in the Casambi network. A target can be, for example, a **device, a group, a scene, or a broadcast**.



This function is **only** available **from Evolution firmware version 34.50 onwards**.

Telegram parameters

Length: 3
Opcode: 0x46 (decimal **70**)

Parameter

Parameter	Description
Target_ID	ID of the target
Target_Type	Type of target

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Target_ID.0x_Target_Type

> Example: 0.72.2.46.1.0/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Target_ID#Target_Type

> Example: 0#114#2#70#1#0/r/n

Response:
0x46 - Target status

5.10.2.2.21. 0x48 - Set color temperature

This command can be used to set the **color temperature (Tc)** of a target in the Casambi network.

A target can be, for example:

- a **single device**
- a **group**
- a **scene**
- **or broadcast (all devices)**.

Telegram parameters

Length: 7
Opcode: 0x48 (decimal **72**)

Fade time

The fade time is specified internally in **10 ms increments**.

Formula
Fade time = value × 10 ms

Data transmission 1 "hex with dot":

The value for the fade time is not optional and must be sent.

Casambi_Data[1...X]: 0x_Tc_low.0x_Tc_high.0x_Duration_low.0x_Duration_high.0x_Target_Type.0x_Target_ID

> Example: 0.72.7.48.0.ff.0.10.0.0/r/n

Data transmission 2 "dec with hash":

In this variant, the **fade time** is **transmitted as a single value**. This reduces the length to **5 bytes**.

Casambi_Data[1...X]: Tc#Duration#Target_Type#Target_ID

> Example: 0#114#5#72#16000#1000#0#0/r/n

Target_Type and Target_ID:

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
3	1-255	Scenes (only currently active lights)

4	1-255	Scenes (all lights)
5	0	All lights with the same manufacturer ID

Color temperature (Tc):

Tc	Comment
0x400 - 0x4000	Value in Kelvin (1000K - 16000K)
0x00-0xFF	Normalized value for min Tc and max Tc respectively.
0x00	Warmest possible value

5.10.2.2.22. 0x49 - Target Color



This function is **only** available **from Evolution firmware version 36.70 onwards**.

This command can be used to query the **current color of a target** in the Casambi network. A target can be:

- **Broadcast (all lights)**
- **a single device**
- **all ungrouped devices**
- **a group**

Telegram parameters

Length: 4
Opcode: 0x49 (decimal **73**)

Parameters

Parameter	Description
Target_Type	Type of target
Target_ID	ID of the target
ResponseSize	Number of bytes returned in the response

For complete color information, **ResponseSize** should be set **to 15**.

Data transmission 1 "hex with dot":

Casambi_Data[1...X]: 0x_Target_Type.0x_Target_ID.0x_ResponseSize

> Example: 0.72.4.49.0.0.15/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Scene_ID

> Example: 0#114#2#69#1/r/n

Target_Type and Target_ID:

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses

Response Size:
Number of bytes to be returned in the response. For all data, this is 15.

Response:
0x49 - Target Color

5.10.2.2.23. 0x4A - Resume Automation



This function is **only** available **from Evolution firmware version 37.80 onwards**.

This command can be used **to reactivate or resume automation** for a target in the Casambi system.

This is typically used when **manual control or an override** has been terminated and the system is to return to **automatic operation (e.g., presence or time control)**.

Telegram parameters

Length: 3
Opcode: 0x4A (decimal **74**)

Parameters

Parameter	Description
Target_Type	Type of target Target_ID
	ID of the target

Data transfer 1 "hex with dot":

Casambi_Data[1...X]: 0x_Target_Type.0x_Target_ID

> Example: 3.4A.1.1/r/n

Data transmission 2 "dec with hash":

Casambi_Data[1...X]: Target_Type#Target_ID

> Example: 003#074#001#001/r/n

Target_Type and Target_ID:

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses

5.10.2.2.24. 0x4B - NotifyControlValues

This function is **only** available **from Evolution firmware version 37.90 onwards**.

This command can be used to query or automatically subscribe to **the current control values** of one or more targets.

This allows values such as **lux, PIR, dimmer, slider**, **or other custom elements** to be received cyclically from the Casambi system.

Telegram parameters

Property	Value
Length	4 or 8 (for SetDefaultMask)
Opcode	0x4B (decimal **75**)

Recommended order

1. **Set Default Mask**
2. Then either
   - **Subscribe** (receive automatic updates)
   - **Read** (one-time query)

Data transfer 1 "hex with dot":

Casambi_Data[1...X] - SetDefaultMask:
3.0.0.FF.FF.FF.FF

Casambi_Data[1...X] - Unsubscribe, Subscribe: 0x_Request.0x_Target_ID_min.0x_Target_ID_max

Data transfer 2 "dec with hash":

Casambi_Data[1...X] - SetDefaultMask: 3#0#0#255#255#255#255

Casambi_Data[1...X] - Unsubscribe, Subscribe, Read:
Request#Target_ID_min#Target_ID_max

Request
0 = Unsubscribe
1 = Subscribe
2 = Read
3 = SetDefaultMask

Target_ID
0 = All devices
1-250 = Devices

Response behavior

- **Targeted queries (ID > 0) always** return **a response**.
- If no data is available:
  - an **empty response** is sent
  - This response contains **only the target ID**.

0x4B - Notify Control Response

5.10.2.2.25. 0x50 - NotifyButtonEvent



This function is **only** available **from Evolution firmware version 39.50 onwards**.

This command can be used to enable or disable **button events in the Casambi system** as **notifications**.

When enabled, the system automatically sends messages as soon as **buttons are pressed in the network** (e.g., short press or long press).

Telegram parameters

Property	Value
Length	2
Opcode	0x50 (decimal **80**)

Parameter

Parameter	Description
Request	Enables or disables button notifications

Data transfer 1 "hex with dot":

0x_Request

Data transmission 2 "dec with hash":

Request

Request values

Value	Meaning
0	Deactivate button notifications 253
(0xFD)	Enable button notifications

Result

When notifications are enabled, the Casambi system automatically sends **button event messages** (opcode **0x51**).

These typically contain:

- **Unit_ID** of the device
- **Button type**
- **Button number**
- **Event type** (e.g., short press or long press)

[0x4B - Notify Control Response]

5.10.2.3. Demo programs

At the following URL, we provide two test programs (including source code) that show how to communicate with the gateway in "UDP Casambi Command" operating mode via UDP:

https://github.com/KLKG/Casambi_Gateway_API_Test

Available programs

UDP_Test
Console application for cyclical querying of all Casambi participants. The source code is written in C++.

UDP_WPF
C# application with graphical user interface (WPF).
In addition to cyclical queries, other commands can also be sent manually to the gateway.



Both programs are for demonstration purposes only and show examples of how to use the API.

5.11. TCP Casambi Command

In this operating mode, an external control system—such as a visualization or a central control unit—can connect to the gateway.

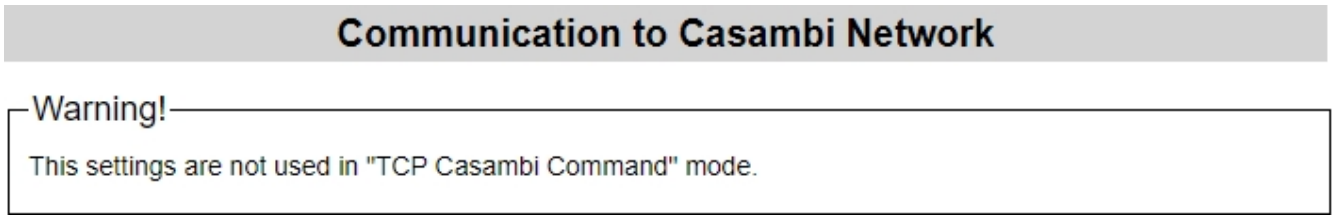
This connection can be used to:

- Actions can be triggered in the Casambi system
- Receive and evaluate scene calls
- Process status changes of devices, groups, or scenes

5.11.1. View in the gateway

The gateway settings are configured via the internal web interface.

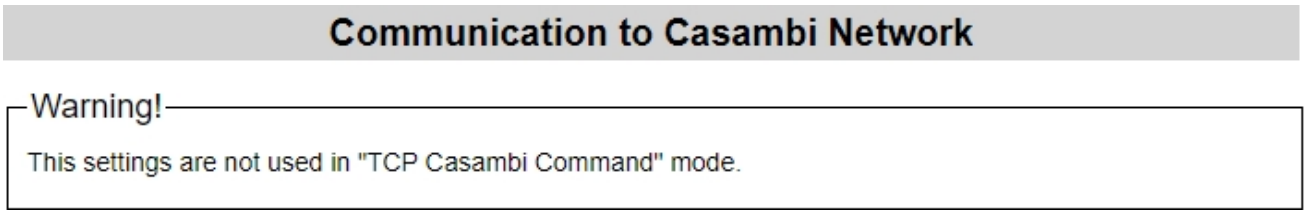
5.11.1.1. To Casambi



This page is not used in this operating mode.

The settings shown here have no function in this mode and are not evaluated.

5.11.1.2. From Casambi



This page is not used in this operating mode.

The settings shown here have no function in this mode and are not evaluated.

5.11.2. Control in the network

The structure of the telegrams corresponds to the structure in the "UDP Casambi Command" operating mode. A detailed description of the telegram format can be found in chapter 5.10.2.

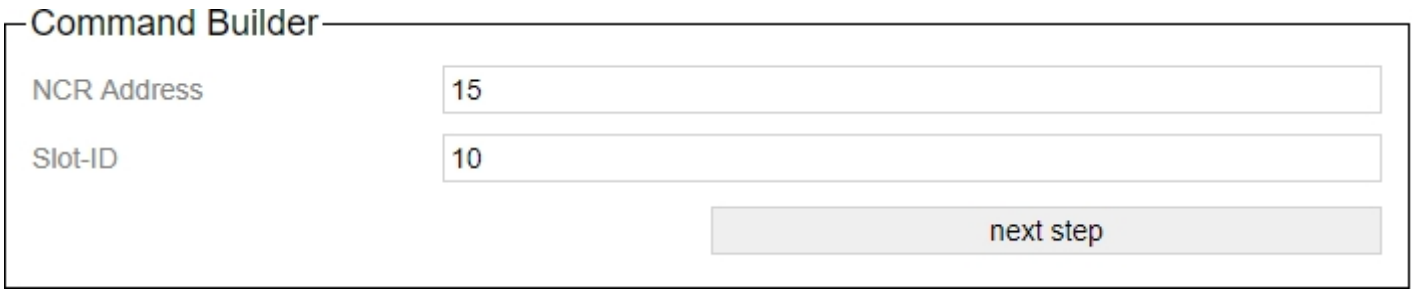
5.12. UDP Casambi Bridge

In this operating mode, multiple gateways can communicate directly with each other. Information and

actions can be exchanged between the gateways.

This makes it possible to connect multiple independent Casambi networks via the gateways and transmit synchronized actions or status messages.

5.12.1. Bridge Mode Command Builder



Navigation in the wizard

The "Next Step" button takes you to the next step in the wizard. The "Step Back"

button allows you to go back one step.



Applying the settings

After setting the command-specific parameters, the generated command is displayed. The command can be

executed directly with "Test" to check the function.

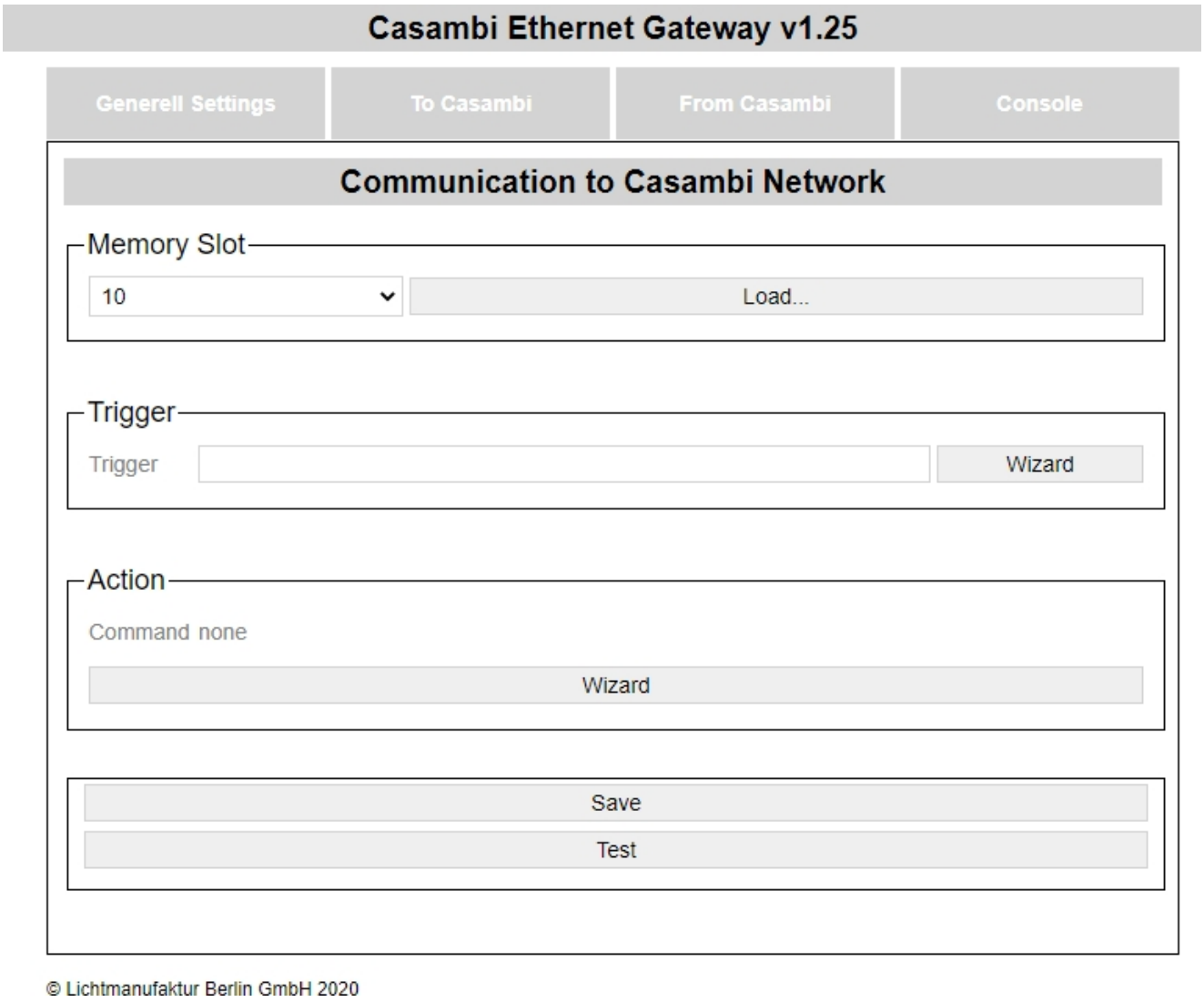
The "Apply" button applies and saves the command.

5.12.2. To Casambi

This section defines which actions are to be performed in the Casambi system when a corresponding command is received from the network at the gateway.

The assignment depends on the selected protocol and the respective trigger definition.

A corresponding Casambi action can be stored for each defined network trigger (e.g., scene, group, level, color value, or button function).



Save

The "Save" button saves the configured entry in the currently selected slot. The settings are permanently

stored in the gateway.

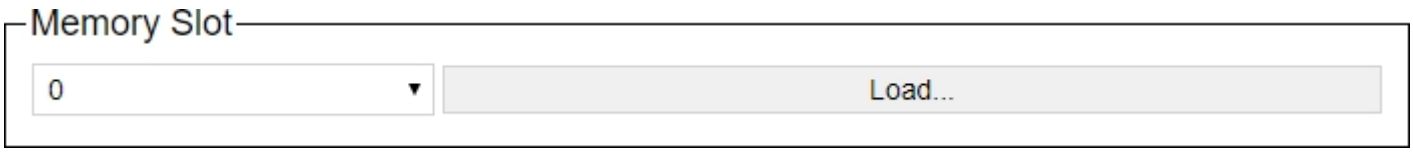
Test

The "Test" button immediately executes the configured action.

This function is used to check whether the correct action has been selected and configured correctly.

5.12.2.1. Select storage space

The first step is to select a storage location (slot) where the desired action is to be saved.



The corresponding storage location can be selected from the drop-down list.

The "Load..." button loads the currently stored content of this slot and displays it on the website.

5.12.2.2. Action



The "Wizard" button opens the dialog box for configuring the desired action. A new page opens with

step-by-step instructions for creating the command.



Navigation in the wizard

Click "Next Step" to proceed to the next configuration step. Click "Step Back"

to return to the previous step. **Command description**

A detailed description of the commands available in the wizard can be found in the chapter: "Protocols / Casambi"



Applying the settings

Once the action-specific settings have been completed, the generated command is displayed. Click "Test"

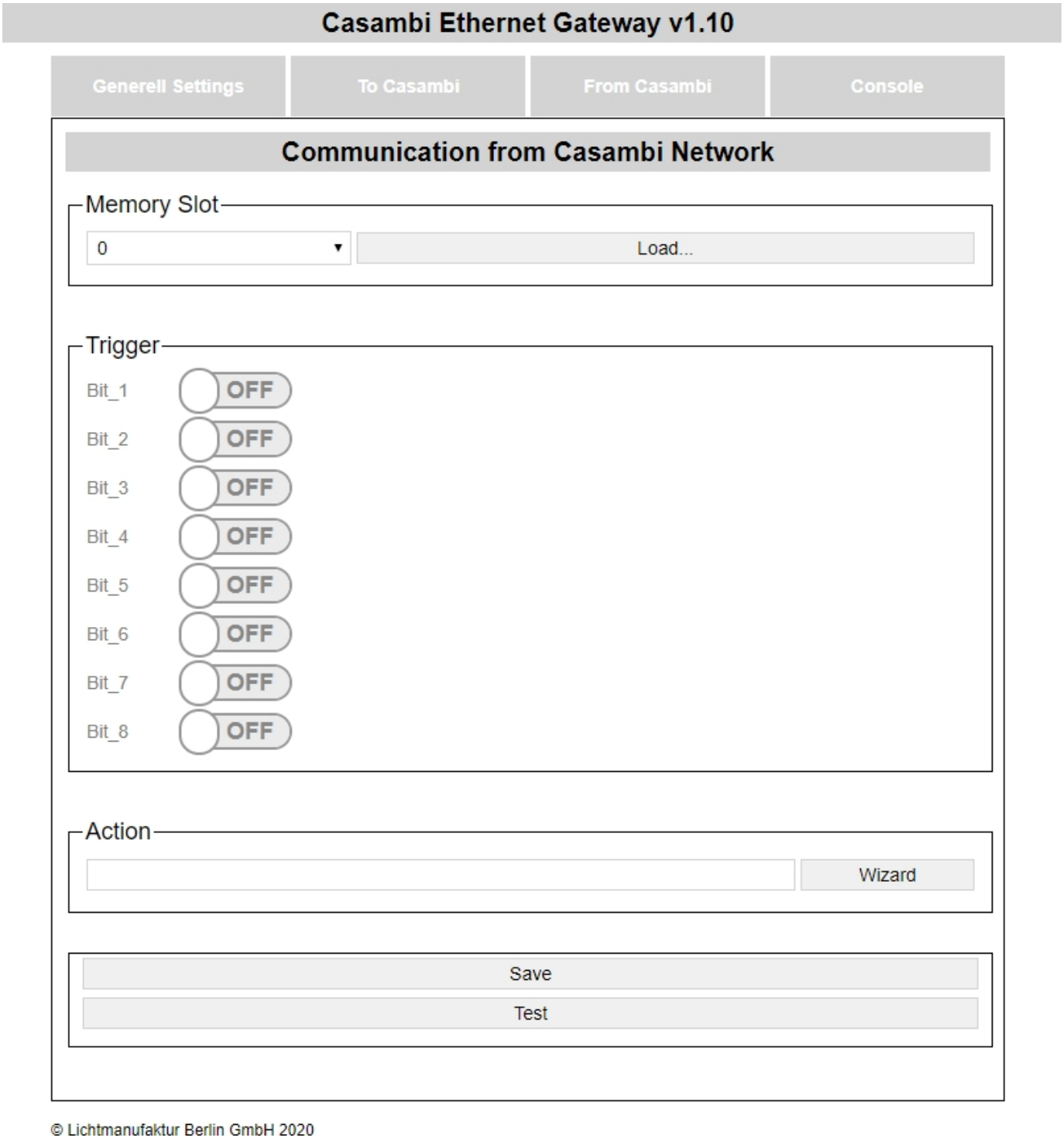
to execute the command immediately and check that it works. Click "Apply" to apply and save the

command.

5.12.3. From Casambi

This area is used to specify which data the gateway should send to the network as soon as corresponding events occur in the Casambi system (e.g., scene calls or status changes).

For each configured slot, you can define which Casambi action triggers a network transmission and which command is sent.



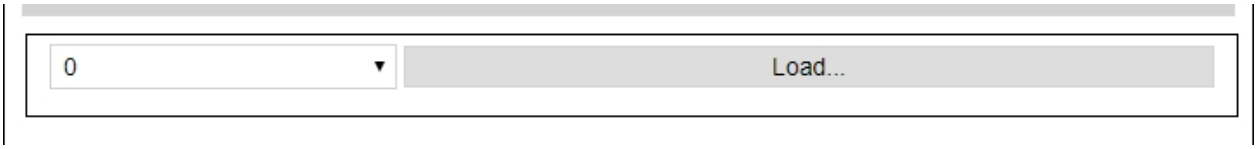
Save and test

Save
The "Save" button saves the configured entry in the selected slot.

Test
The "Test" button triggers the configured action to check whether the correct network transmission is taking place.

5.12.3.1. Memory space selection

The first step is to select a storage location (slot) where the desired action is to be saved.

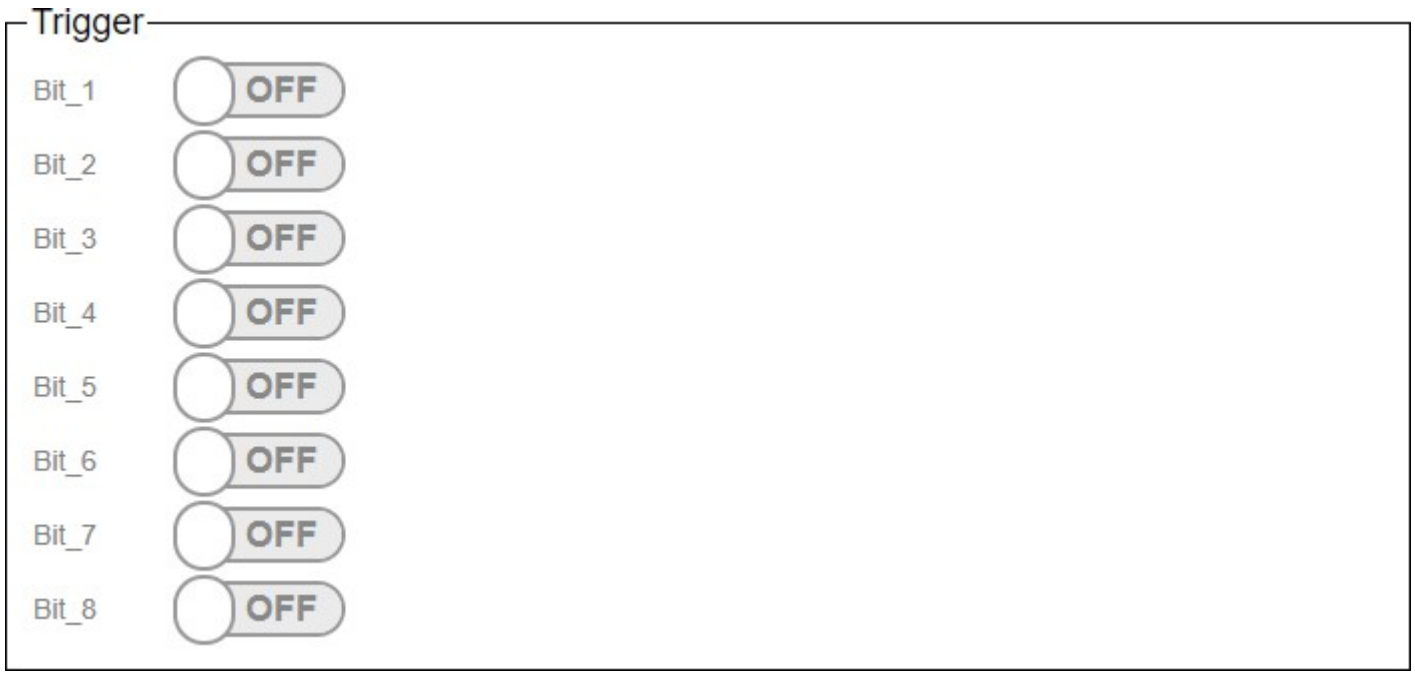


The corresponding storage space can be selected from the drop-down list.

The "Load..." button loads the currently stored content of the selected slot and displays it on the website.

5.12.3.2. Trigger

The "Trigger" defines the conditions under which a configured action is triggered.



The trigger settings determine when the network command stored under "Action" should be sent when a scene is called up in the Casambi system.

Use in the Casambi system

In the Casambi system, the corresponding trigger bits can be activated within a scene. Depending on the set

bit, the assigned action is triggered in the gateway when the scene is called up.

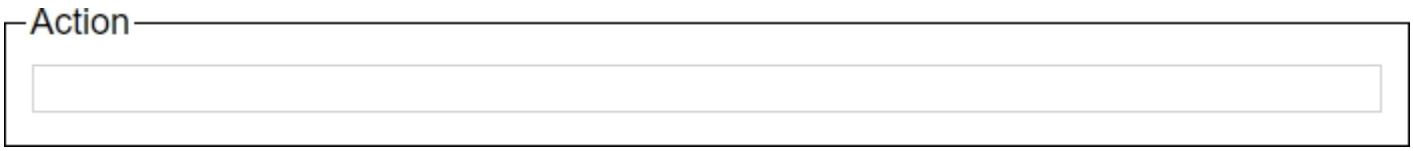


Saving and testing

Submit
Saves the entered trigger configuration.

Test
Performs the stored action to verify that the configured network action is correct.

5.12.3.3. Action



The command that the gateway should send to the network when the trigger is activated is entered in this text field.

5.13. Casambi

This chapter describes the commands that can be created and configured using the Casambi Wizard.

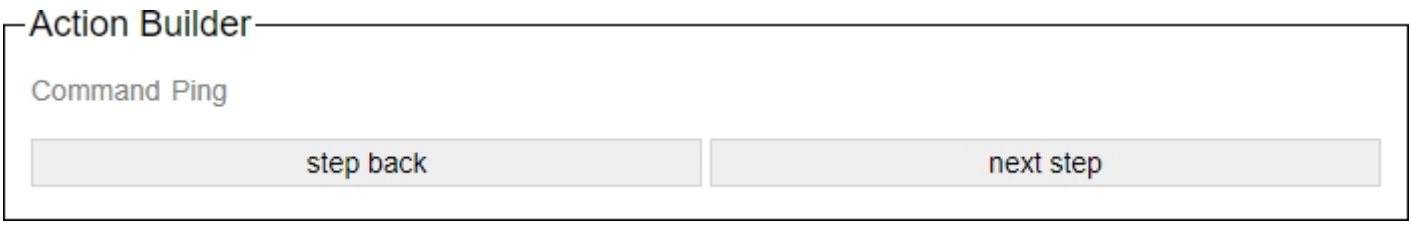
The wizard assists in selecting and parameterizing the respective action and automatically generates the corresponding command.

Depending on the command selected, different parameters are available, for example:

- Device
- Group
- Scene
- Level (brightness)
- Color values (RGBW or Hue/Sat)
- Color temperature (Tc)
- Fade time

The following sections describe the individual command types and their parameters in detail.

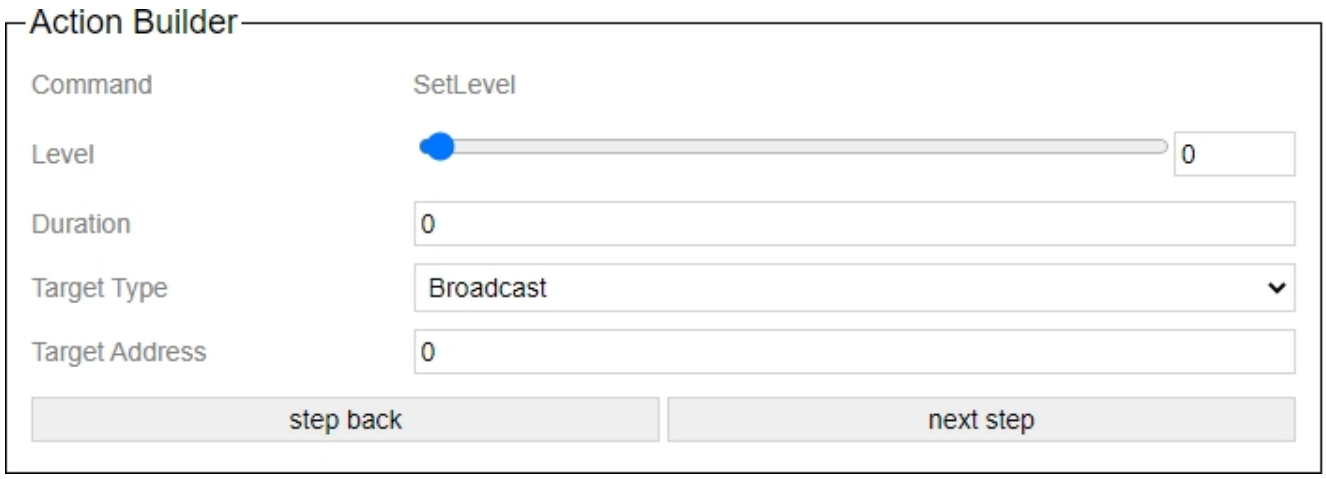
5.13.1. Ping



Sends a "ping" signal to the Casambi system.

This command is used to check the availability of and communication with the Casambi network.

5.13.2. Set Level



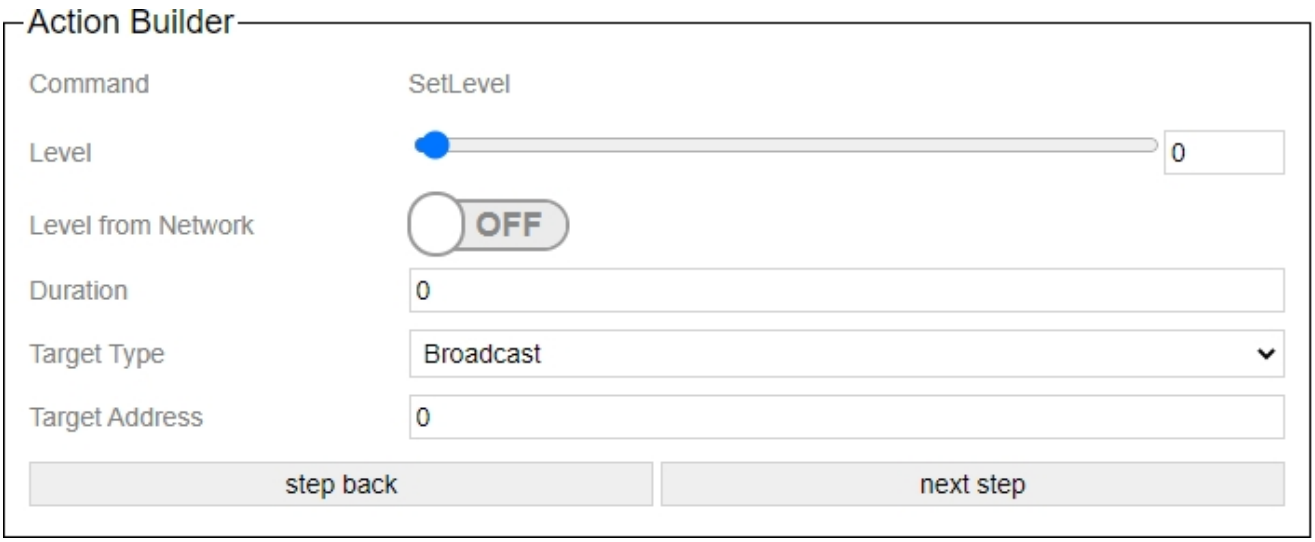
Sets the target defined by "Target Type" and "Target Address" to the set value.

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
4	1-255	Scenes (all lights)
5	0-255	All lights with the same manufacturer ID

When connecting via "HelvarNet" or to a "Netcomposer" system, a customized configuration window is displayed.

The interface differs depending on the selected protocol, as additional system-related parameters are required.

In this window, you can configure specific settings for the respective target system.



Level from Network

The "Level from Network" option can be used to enable a level signal received from the connected system to be accepted directly.

This requires that a command containing a level value is configured in the trigger.

Only then can the received level be correctly evaluated and forwarded to the Casambi system.

Special feature of HelvarNet

When "Dimm Group" or "Dimm Device" is selected in HelvarNet mode, dimming is automatically applied to the level.

This applies to the following modes:

- SetLevel
- SetSceneLevel
- SetGroupLevel
- SetRGBW
- SetHue/Sat

In these modes, the received dimming command is transferred directly to the respective level value.

5.13.3. Push Button Pressed

From Casambi Evolution firmware 34.50 onwards, up to 8 buttons are available.



Set Push Button Pressed

Transmits the status "Button pressed" to the Casambi system.

The Casambi system then executes the action stored for the corresponding button.

5.13.4. Push Button Released

From Casambi Evolution firmware 34.50 onwards, up to 8 buttons are available.



Set Push Button Released

Transmits the "button released" status to the Casambi system.

The Casambi system then executes the action stored for the corresponding button.

5.13.5. Set Presence



Transmits to the Casambi system whether movement or presence has been detected. The

status is set accordingly depending on the transmitted value:

no = No presence detected yes =

Presence detected

The Casambi system processes this information according to the stored automation or sensor logic.

5.13.6. Set Scene Level



Set Scene
Calls up a scene in the Casambi system.

Scene
Enter the desired scene number here.

Level
Specifies the dimming level at which the scene should be called up.

Duration
Determines the fade time for the scene call.

Display in HelvarNet or Netcomposer

When connecting via "HelvarNet" or to a "Netcomposer" system, a customized configuration window is displayed.

The interface contains additional system-related parameters that are required for the respective target system.



Level from Network

The "Level from Network" option can be used to activate the transfer of a level signal received from the connected system.

This requires that a command containing a level value is configured in the trigger.

The signal can only be forwarded to the Casambi system if a corresponding level command is received.

Special feature of HelvarNet

When "Dimm Group" or "Dimm Device" is selected in HelvarNet mode, dimming is automatically applied to the level.

This applies to the following modes:

- SetLevel
- SetSceneLevel
- SetGroupLevel
- SetRGBW
- SetHue/Sat

In these modes, the received dimming command is transferred directly to the respective level value.

5.13.7. Set Group Level



This action allows a group to be set to a specific level.

Group
The desired group number is specified here.

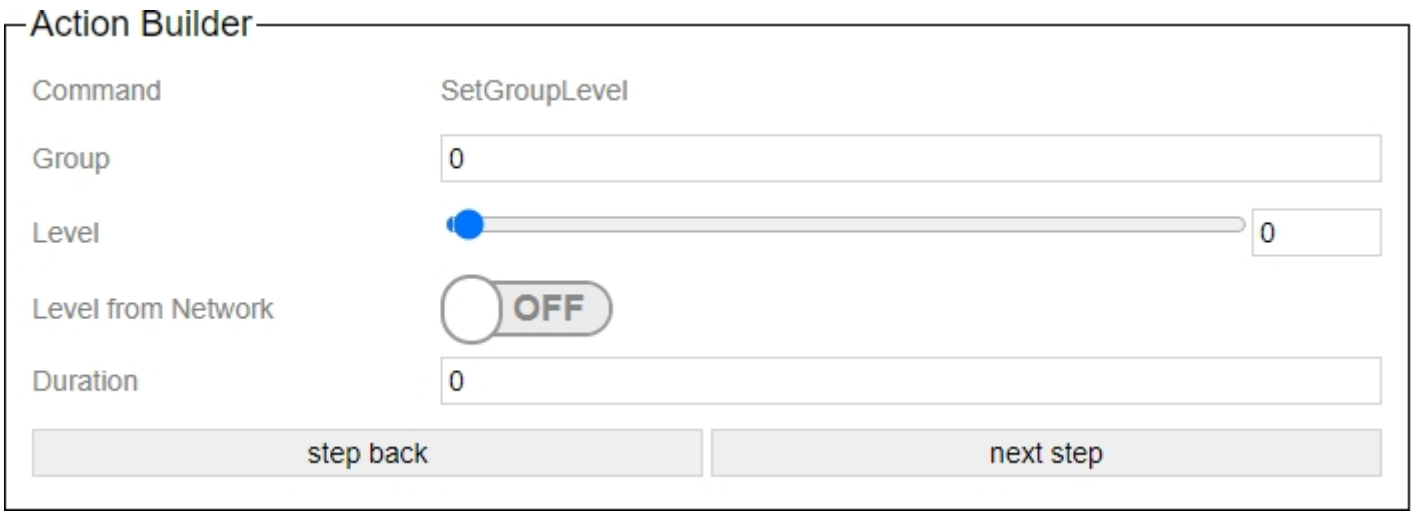
Level
Defines the desired brightness for the group.

Duration
Specifies the fade time with which the new value is applied.

Display on HelvarNet or Netcomposer

When connecting via "HelvarNet" or to a "Netcomposer" system, a customized configuration window is displayed.

The interface contains additional system-related parameters that are required for the respective target system.



Level from Network

The "Level from Network" option can be used to activate the adoption of a level signal received from the connected system.

This requires that a command containing a level value is configured in the trigger.

The signal can only be forwarded to the Casambi system when a corresponding level command is received.

Special feature of HelvarNet

If "Dimm Group" or "Dimm Device" is selected in HelvarNet mode, dimming is automatically applied to the level.

This applies to the following modes:

- SetLevel
- SetSceneLevel
- SetGroupLevel
- SetRGBW
- SetHue/Sat

In these modes, the received dimming command is transferred directly to the respective level value.

5.13.8. Set Push Button Level

Starting with Casambi Evolution firmware 34.50, up to 8 buttons are available.



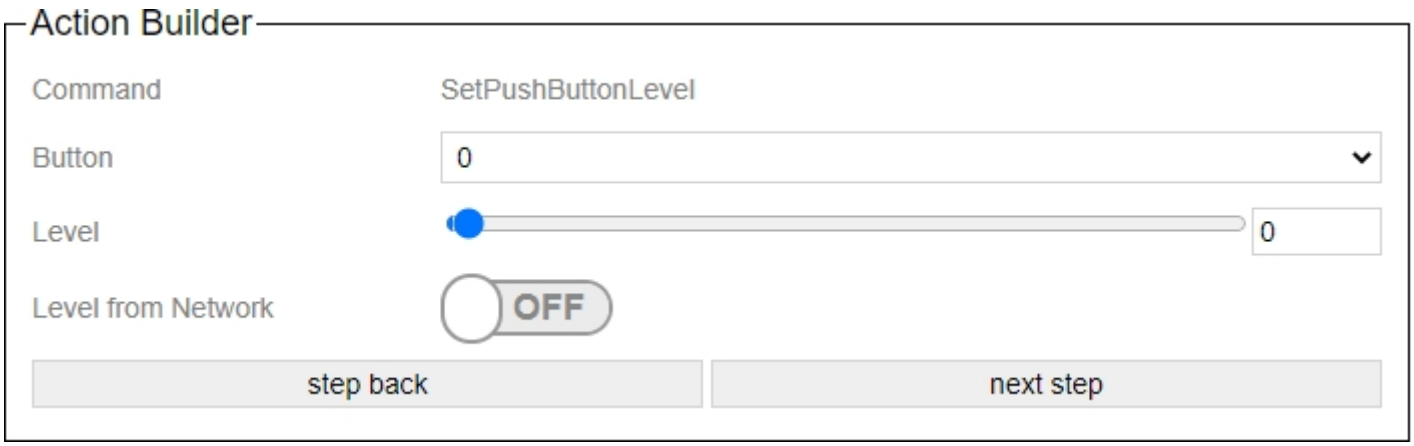
Sets the level of the device Sets the level of the device that is defined in the Casambi app as the target of the corresponding button.

The configured level value is applied to the device assigned to the button.

Display for HelvarNet or Netcomposer

When pairing via "HelvarNet" or to a "Netcomposer" system, a customized configuration window is displayed.

The interface contains additional system-related parameters that are required for the respective target system.



Level from Network

The "Level from Network" option can be used to activate the transfer of a level signal received from the connected system.

This requires that a command containing a level value is configured in the trigger.

The signal can only be forwarded to the Casambi system if a corresponding level command is received.

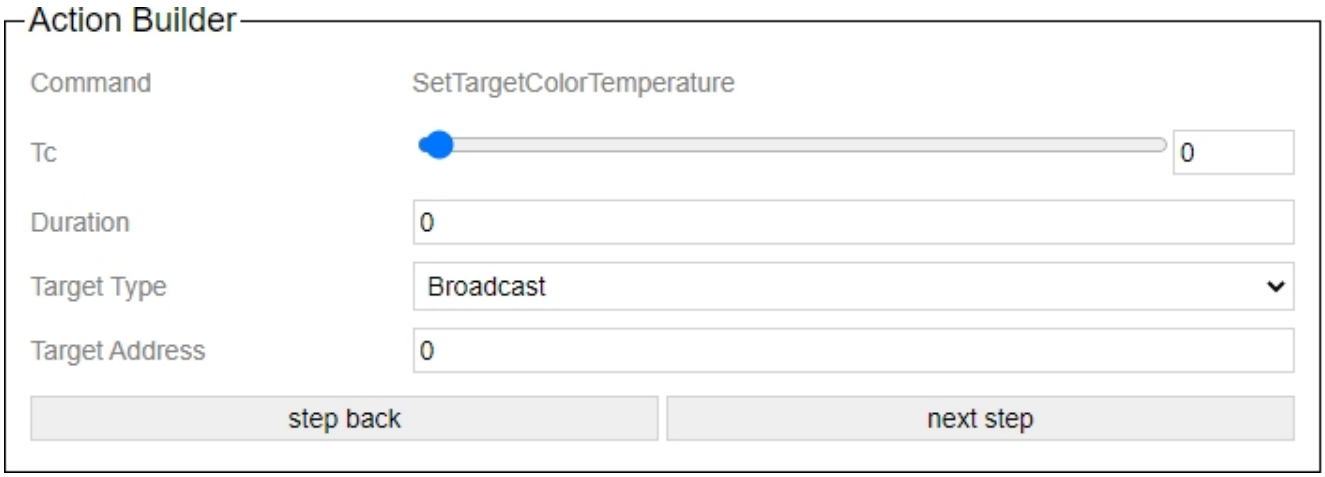
5.13.9. Set Lux Sensor



Displays the lux value to be sent.

The value shown corresponds to the brightness value that is transmitted to the Casambi system.

5.13.10. Set Tc

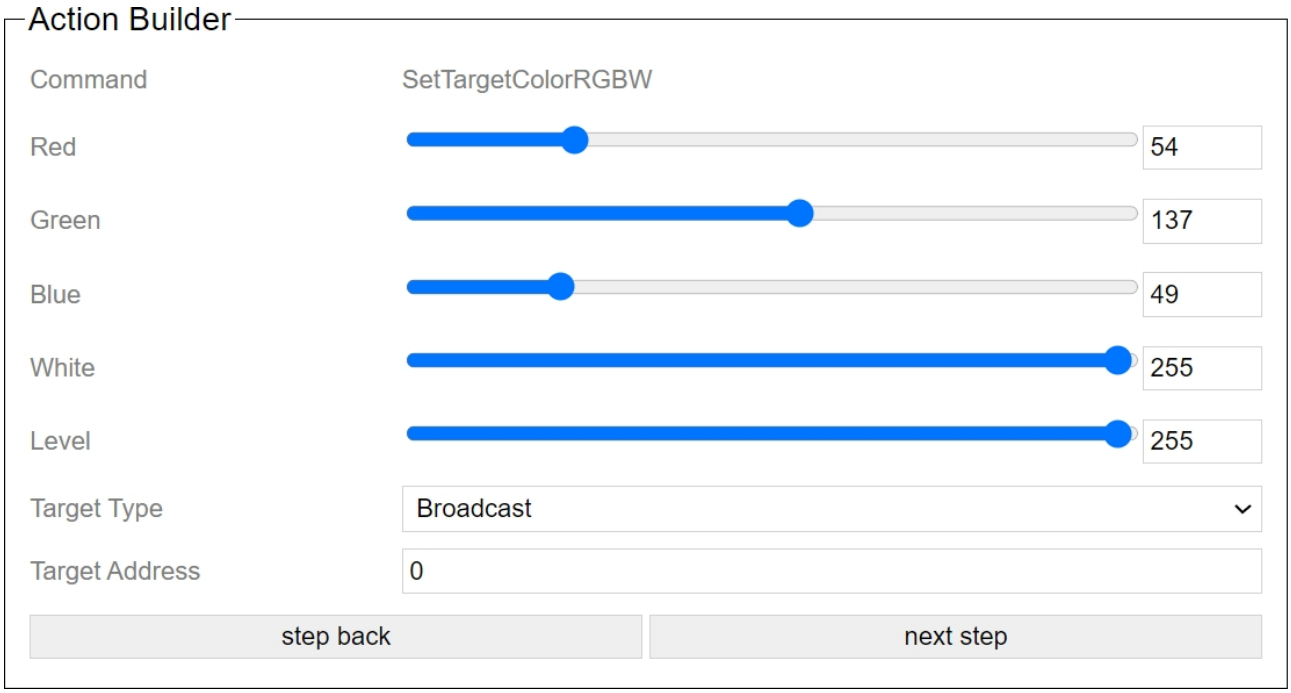


Sets the target defined via "Target Type" and "Target Address" to the set value.

The configured value is applied within the time specified under "Duration" (fade time).

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
4	1-255	Scenes (all lights)
5	0-255	All lights with the same manufacturer ID

5.13.11. Set RGBW



Sets the defined target to the set color values. White and Level =

255
Means that these values are ignored and not changed.

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
4	1-255	Scenes (all lights)
5	0-255	All lights with the same manufacturer ID

Note on HelvarNet – Dimming function

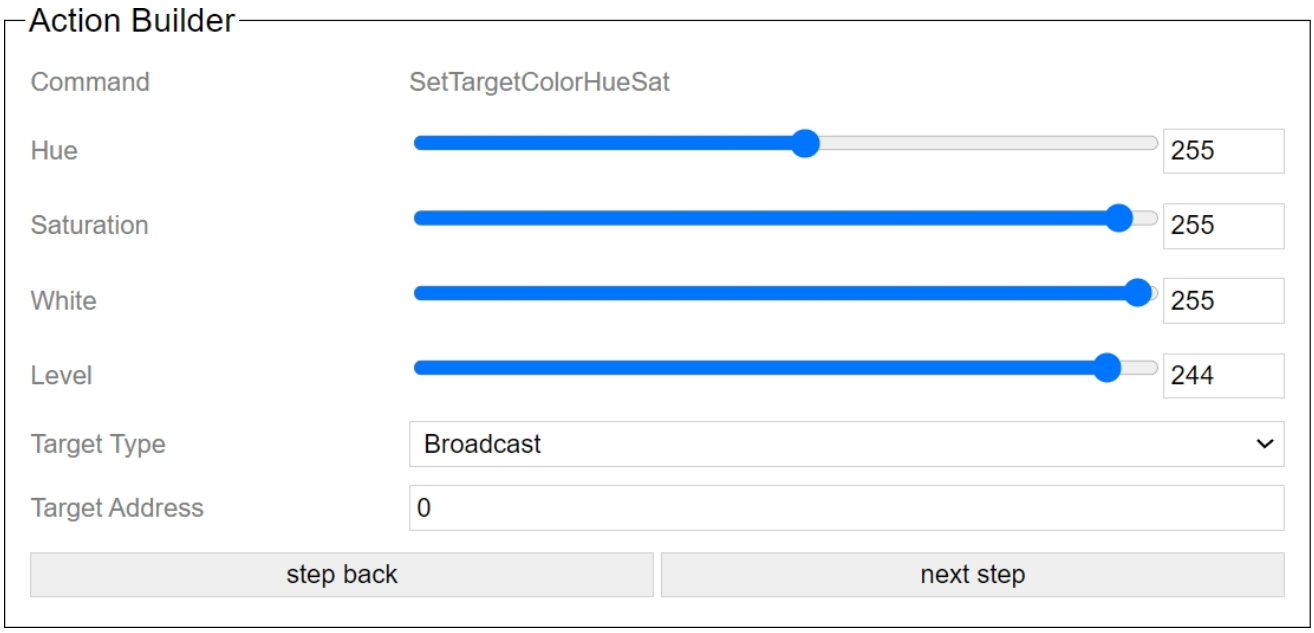
If "Dimm Group" or "Dimm Device" is selected in HelvarNet mode, dimming is automatically applied to the level value.

This applies to the following modes:

- SetLevel
- SetSceneLevel
- SetGroupLevel
- SetRGBW
- SetHue/Sat

In these modes, the received dimming value is interpreted directly as a level and transmitted to the Casambi system accordingly.

5.13.12. Set Hue / Sat



Sets the defined target to the set color values. White and Level =

255
Means that these values are ignored and not changed.

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
4	1-255	Scenes (all lights)
5	0-255	All lights with the same manufacturer ID

Note on HelvarNet – Dimming function

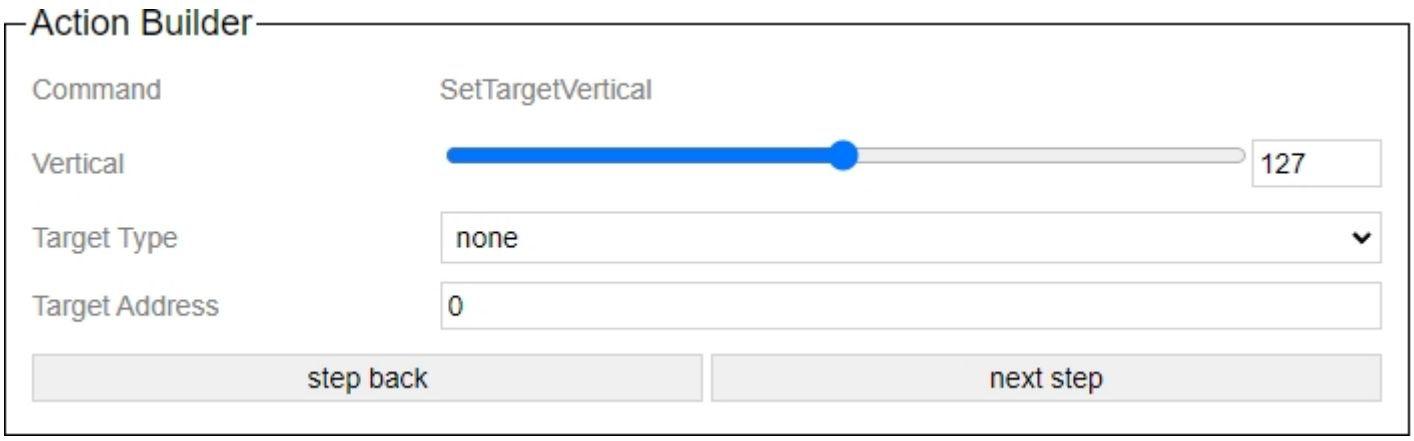
When "Dimm Group" or "Dimm Device" is selected in HelvarNet mode, dimming is automatically applied to the level value.

This applies to the following modes:

- SetLevel
- SetSceneLevel
- SetGroupLevel
- SetRGBW
- SetHue/Sat

In these modes, the received dimming value is interpreted directly as a level and transmitted to the Casambi system accordingly.

5.13.13. Set Vertical



Sets the defined target to the set vertical value.

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
4	1-255	Scenes (all lights)
5	0-255	All lights with the same manufacturer ID

5.13.14. Start Automation



Activates the automatic mode for the defined target.

Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
4	1-255	Scenes (all lights)
5	0-255	All lights with the same manufacturer ID

5.13.15. SetTargetDimmers

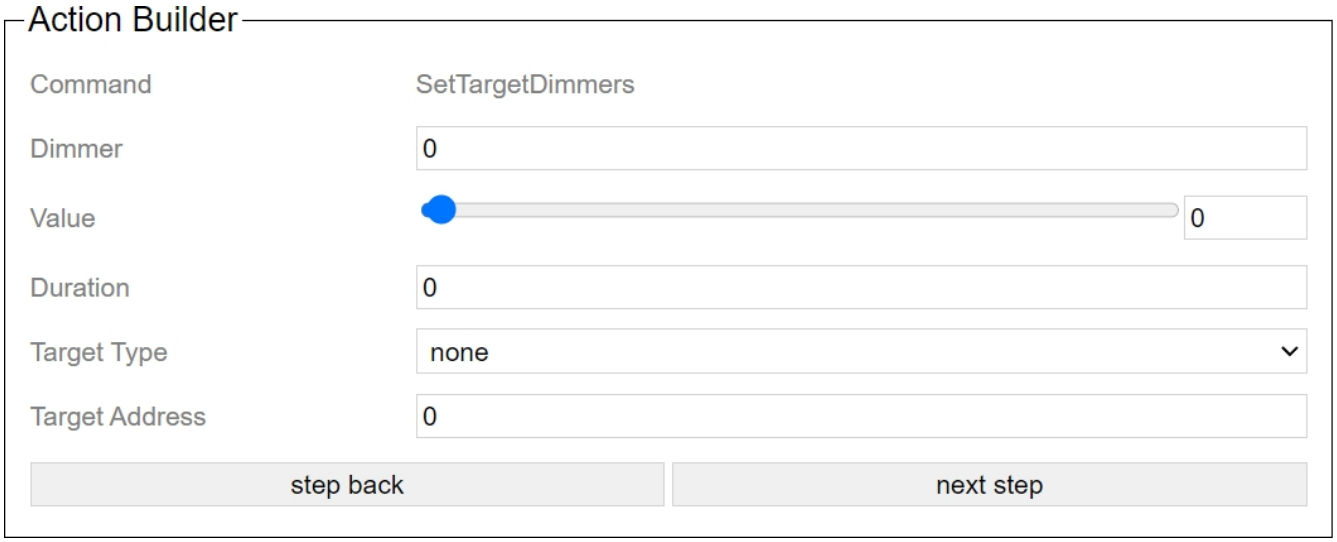
The dimming channel for the light is selected in the "Dimmer" field. Up

to 4 dimming channels may be available per device.
The number and function of the channels are determined by the manufacturer of the respective Casambi profile.

Duration

"Duration" defines the fade time.

Calculation: Duration = Value × 10 ms
Example: 100 = 1000 ms = 1 second



Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
4	1-255	Scenes (all lights)
5	0-255	All lights with the same manufacturer ID

5.13.16. SetTargetElements

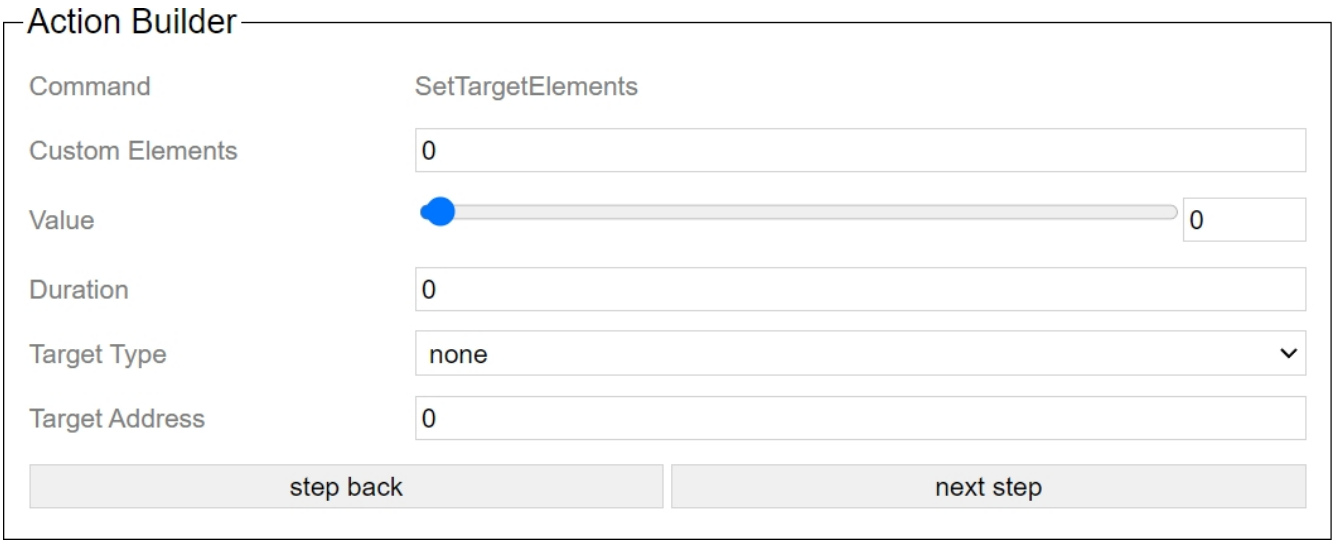
The luminaire element is selected in the "Custom Elements" field. Up to 8

elements may be available per device.
The number and function of the channels are determined by the manufacturer of the respective Casambi profile.

Duration

"Duration" defines the fade time.

Calculation: Duration = value × 10 ms
Example: 100 = 1000 ms = 1 second



Target_Type	Target_ID	Comment
0	0	Broadcast
1	1-250	Device address
2	0	Ungrouped devices
2	1-255	Group addresses
4	1-255	Scenes (all lights)
5	0-255	All lights with the same manufacturer ID

5.14. WebAPI

The endpoints are only available if the gateway is running in the corresponding operating mode: If another mode is active, the call will not be processed.

5.14.1. Set Target Value

The gateway currently provides a REST API endpoint through which values can be sent directly to the Casambi system.

```
GET /set/target_value
```

This endpoint allows you to set a value for a specific target (e.g., device, group, or broadcast) in the Casambi system.

REST parameters

type
Specifies the target type in the Casambi system (e.g., device, group, or broadcast).

id
ID of the target object in the Casambi system.

duration
Fade time of the change. The value is converted internally into the corresponding Casambi duration.

value
Target value to be set (e.g., level).

Response

The endpoint's response consists of a simple status value:

ok
The command was processed successfully.

error
An error occurred while executing the command.

Example call

```
/set/target_value?type=1&id=2&duration=10&value=80
```

This call sets the value 80 with a fade time of 10 for the target with ID 2.

6. Diagnostics

Diagnostics

Console

```
Casambi Input: 07. 6.62.00.F.7f.02 7f
CaambiInpu+:10*9.0262.0000.0000.00.0000.00.00.00.00.00.00
Casambi Output: 02.45.62 Casambi
Input: 0^.^5.62.00.P Casambi
Output: 03.46.63.02 Casambi
Output: 04.49.02.63.0*
Casambi Input: 07.^6.63.00.F.7f.02 7f
Casambi Input: 10.^9.02.63.00 00.00 00.00.00 00.00.00.00.00.00.00
Casambi Output: 02.45.63
Casambi Input: 0^.^5.63.00.P
Casambi Output: 03.46.64.02
Casambi Output: 04.49.02.64.0*
Casambi Input: 07.^6.64.00.P.7f.02 7f
Caambilnpu(:10^9.02t*0000.0000.00.0000.00.00.00.00.00.00
Casambi Output: 02.45.64
Casambi Input: 0^.^5.64.00.P
Casambi Input: 0a.^b.3c.8c.00.01.09.8d.00.01.94 Casambi
Output: 03.46.65.02
Casambi Output: 04.49.02.65.0*
Casambi Input: 07.^6.65.00.P.7f.02 7f
```

Submit

Refresn

Parameters

Scene 0	0	Group 0	0
Scene 1	0	Group 1	0
Scene 2	0	Group 2	0
Scene 3	0	Group 3	0
Scene 4	0	Group 4	0
Scene 5	0	Group 5	0
Scene 6	0	Group 6	0
Scene 7	0	Group 7	0
Scene 8	0	Group 8	0
Scene 9	0	Group 9	0
Scene 10	0	Group 10	0
Scene 11	0	Group 11	0
Scene 12	0	Group 12	0
Scene 13	0	Group 13	0
Scene 14	0	Group 14	0
Scene 15	0	Group 15	0

Warning: 0 = no value set in Casambi Software

Get Parameter Refresh

Licht Manufa<tur 2D26

6.1. Console

Console

```
Casambi Input: 07.46.62.00.ff.7f.02.7f
Casambi Input: 10.49.02.62.00.00.00.00.00.00.00.00.00.00.00.00.00.00
Casambi Output: 02.45.62 Casambi
Input: 04.45.62.00.ff Casambi
Output: 03.46.63.02 Casambi Output:
04.49.02.63.Of
Casambi Input: 07.46.63.00.ff.7f.02.7f
Casambi Input: 10.49.02.63.00.00.00.00.00.00.00.00.00.00.00.00.00.00
Casambi Output: 02.45.63 Casambi
Input: 04.45.63.00.ff Casambi
Output: 03.46.64.02 Casambi Output:
04.49.02.64.Of
Casambi Input: 07.46.64.00.ff.7f.02.7f
Casambi Input: 10.49.02.64.00.00.00.00.00.00.00.00.00.00.00.00.00.00
Casambi Output: 02.45.64 Casambi
Input: 04.45.64.00.ff
Casambi Input: 0a.4b.3c.8c.00.01.09.Bd.00.01.94 Casambi
Output: 03.46.65.02
Casambi Output: 04.49.02.65.Of Casambi
Input: 07.46.i55.00.ff.7fy02.7f
```

Submit

Refresh

Parameter

Scene 0	0	Group 0	0
Scene_1	0	Group_1	0
Scene 2	0	Group 2	0
Son 3	0	Group 3	0
Sunday 4	0	Group 4	0
Sunday 5	0	Group_5	0
Sun 6	0	Group_6	0
Scene 7	0	Group 7	0
Scene 8	0	Group B	0
Scene 9	0	Group 9	0
Scenes_10	0	Group_10	0
Sunday 11	0	Group 11	0
Sun 12	0	Group 12	0
Sun 13	0	Group 13	0
Sun 14	0	Group 14	0
Sun 15	0	Group 15	0

Warning: 0 = no value set in Casambi software

Get Parameter

RePesh

6.1.1. Console

This section displays the most recent commands exchanged between the Casambi system and the network.



Manual command transfer

A command can be sent directly to the Casambi system in the text line. The command

entered is transmitted by clicking the "Submit" button.

The display is updated by clicking the "Refresh" button.

Meaning of the displays

Casambi Input
Commands sent from the gateway to the Casambi system.

Casambi Output
Commands or responses received by the Casambi system.

Network Input
Commands received from the network.

Network Output
Commands sent by the gateway to the network.

6.1.2. Parameters

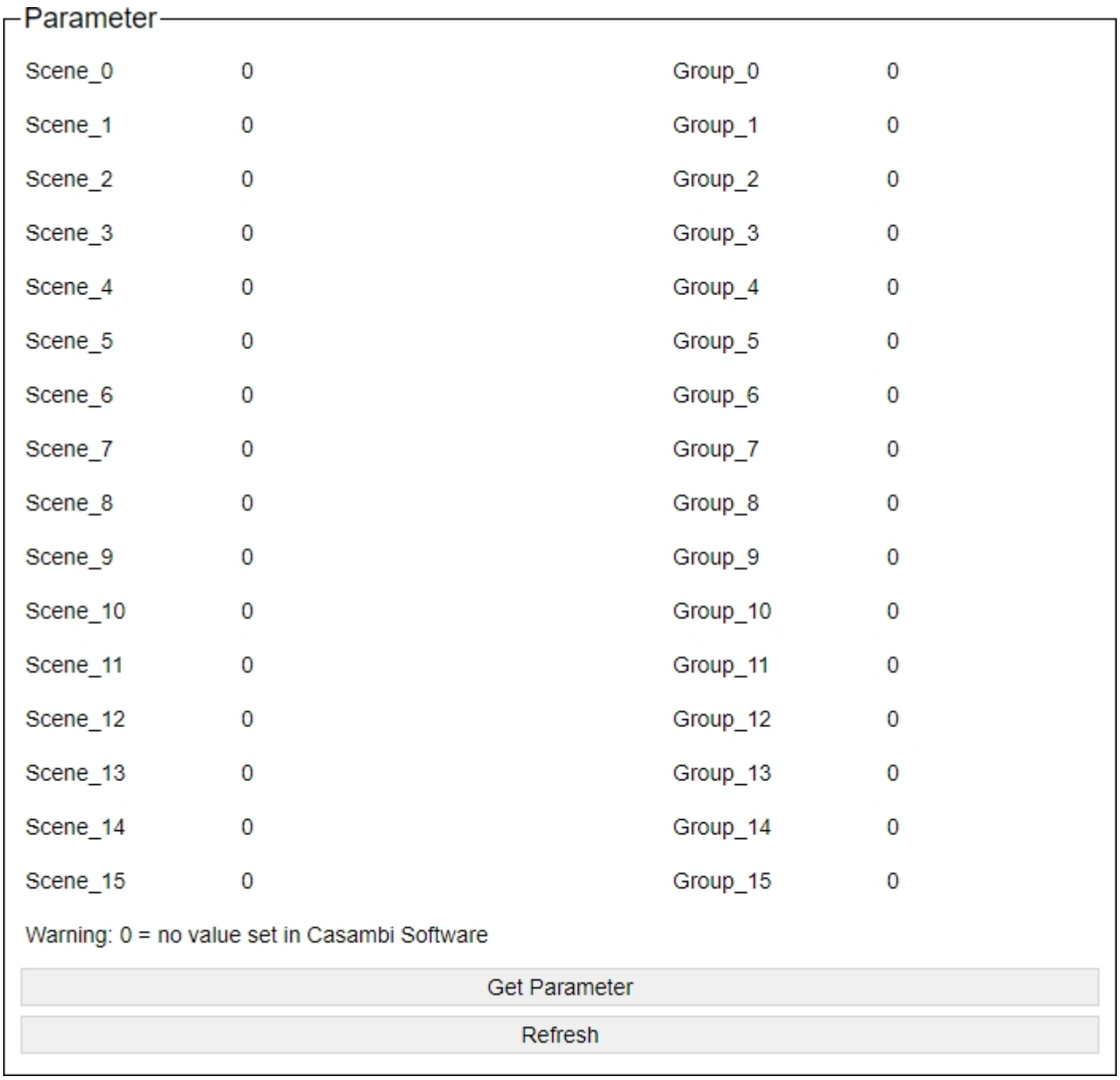
The "Parameters" section displays the parameter values currently stored in the Casambi system. These parameters are configured in advance in the Casambi app.

The display depends on the selected profile. Profile-dependent parameter ranges:

Standard and "_EVO" profile 16 groups + 16 scenes

"_Groups" profile
64 groups

"_Scenes" profile
64 scenes



Query parameters

The "Get Parameter" button sends a query to the Casambi module.

The page must then be refreshed using "Refresh" to display the current values.

Using the parameters

The parameters displayed are particularly relevant for scene and group calls.

Within the Casambi app, scenes and groups can be assigned to specific parameters.

The parameter display can then be used to determine which internal ID is behind the respective parameter.
This ID can then be used for calls and integrations.



The parameter display is primarily used for integration and troubleshooting when connecting to external control systems.

6.2. System Status

Report Memory

Total heap	309100
Free heap	92384
Total PSRAM	4194304
Free PSRAM	3477616
Used PSRAM	716688
Total FS	1916636
Used FS	0

Report System Stats

Startup	1041

Partition Table

Label	Type	Subtype	Offset	Size
otadata	DATA (0x1)	OTA	0xe000	8192
app0 (RUNNING)	APP (0x0)	OTA_0	0x10000	6553600
app1	APP (0x0)	OTA_1	0x650000	6553600
eeprom	DATA (0x1)	EEPROM	0xc90000	4096
nvs	DATA (0x1)	NVS	0xc91000	1507328
spiffs	DATA (0x1)	0x82	0xe01000	2093056

Refresh

This page displays internal system information about the gateway's memory usage and partitioning.

The information is primarily used for diagnostics and error analysis.

Report Memory

This section displays the current memory values:

Total heap
Total available heap memory.

Free heap
Currently free heap memory.

Total PSRAM
Total available PSRAM memory.

Free PSRAM
Currently free PSRAM memory.

Used PSRAM
PSRAM memory currently in use.

Total FS
Total available file system memory.

Used FS
Currently occupied file system memory.

These values provide information about the current system load.

Report System Stats

Startup
Indicates how often the device has been started since commissioning.

An unusually high value may indicate frequent restarts or instability.

Partition Table

The partition table shows the internal memory allocation of the flash memory. Important

entries:

otadata
OTA management area.

app0 (RUNNING)
Currently active firmware partition.

app1
Alternative OTA firmware partition.

eeprom
Memory area for persistent data.

nvs
Non-volatile storage (system configuration).

spiffs
File system area.

The "RUNNING" display indicates the firmware partition currently in use.

Refresh

The "Refresh" button updates the displayed values.



This page is intended solely for service and diagnostic purposes. Changes to the partitioning are not possible.

7. Settings in the Casambi app

Within the Casambi network, the gateway behaves like a regular Casambi device (e.g., light, button, or sensor).

In the Casambi app, the gateway is recognized as a Bluetooth device and can be added to the network like a normal device.

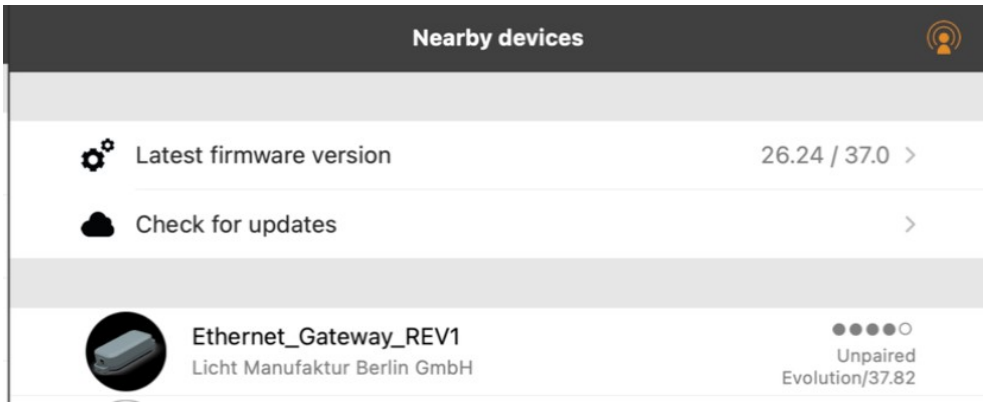
After successful integration, the gateway appears:

- in the light overview
- Additionally in the area of sensors and switches

This allows it to be configured accordingly within the Casambi system and integrated into scenes, groups, or automations.

7.1. Profile selection

In the "Nearby devices" list, the profile can be selected or changed for unpaired devices.

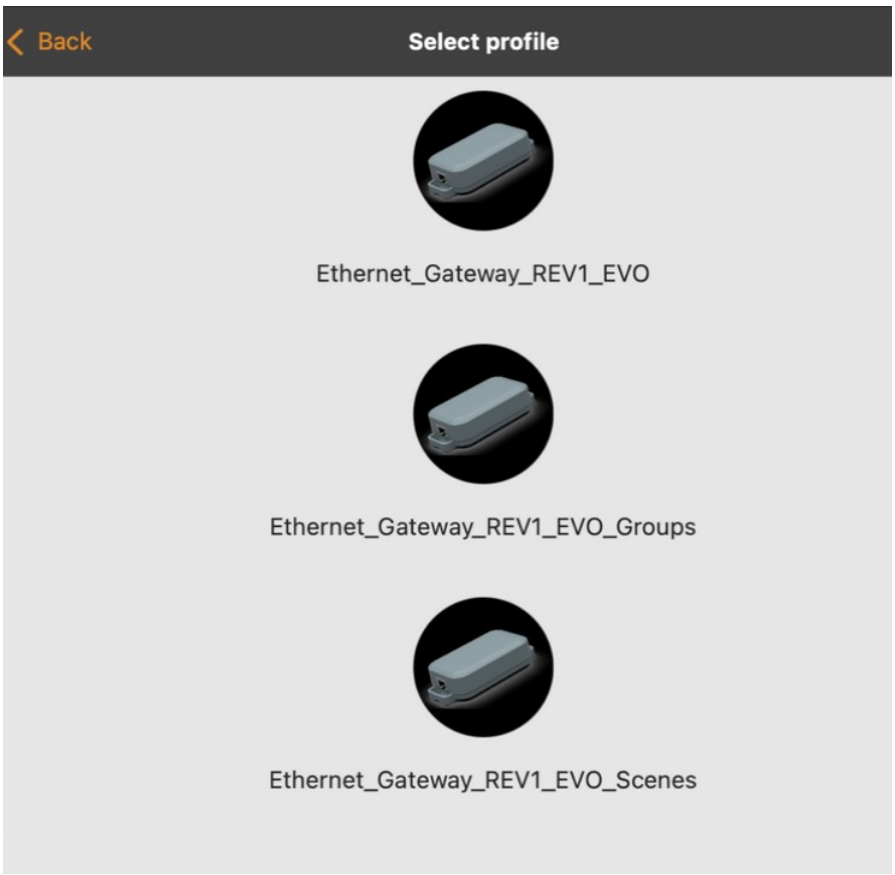


Profiles without "_EVO"

Profiles without the suffix "_EVO" are suitable for use in Casambi Classic networks. Range of functions:

- 4 buttons
- 16 groups
- 16 scenes

These parameters are available in the configuration.



Profiles with "_EVO"

Profiles with the suffix "_EVO" are intended for Casambi Evolution mode. Available variants:

_EVO

- 32 groups
- 32 scenes
- 8 buttons

_EVO_Groups

- 64 groups
- 8 buttons

_EVO_Scenes

- 64 scenes
- 8 buttons

Hardware revision

For second-generation hardware devices, the profile designation "REV2" is displayed (instead of "REV1").

The profile designation must match the hardware revision used.

7.2. Behavior as a light

The gateway can be integrated into scenes or groups within the Casambi system like a normal device.

Instead of a dimming level, the gateway has 8 virtual switches. These switches trigger

the actions configured in the gateway.



How it works

Each of the 8 switches represents a possible trigger in the gateway.

Depending on the switch status (on/off), a previously defined trigger can be executed.

This allows specific functions in the gateway to be triggered via scenes, groups, or manual operation.

> The exact assignment of the switches to the respective triggers is done in the gateway configuration.

7.3. Settings as a light

The relevant parameters can be configured on the gateway settings page (displayed as "Light" in the Casambi app).

Among other things, group and scene addresses can be defined here, which are evaluated or output by the gateway.

The available range of functions depends on the selected profile.

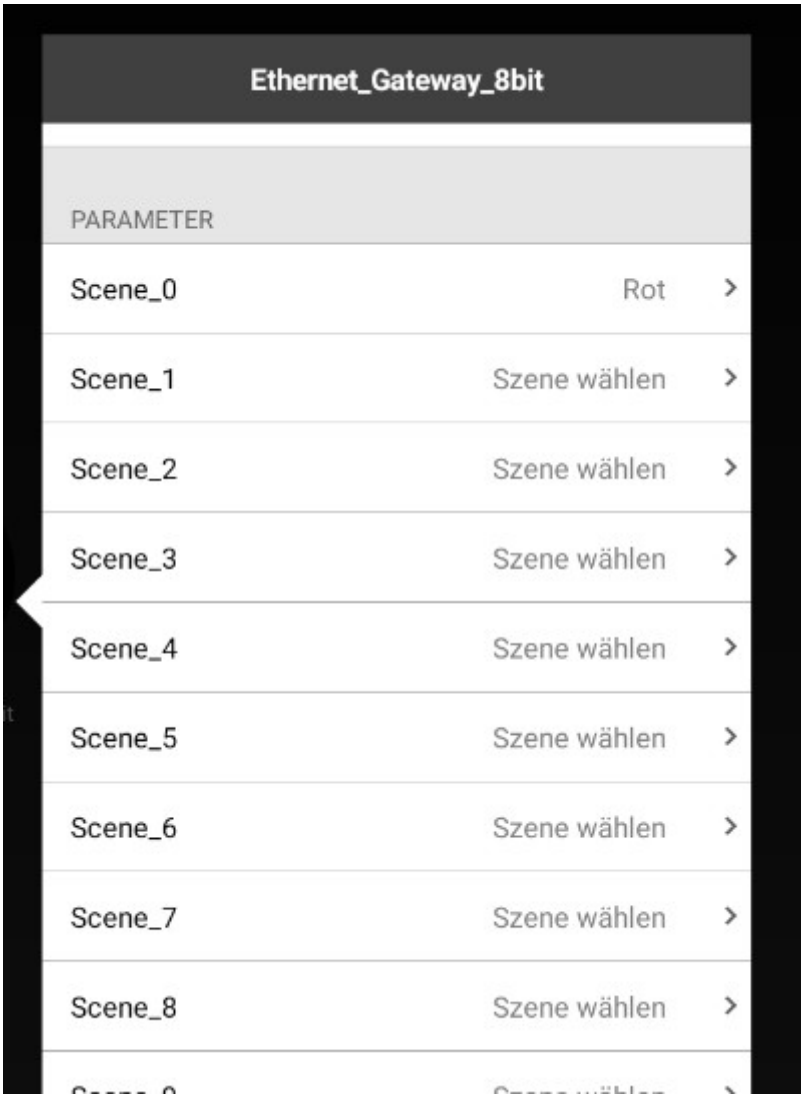
Depending on the profile, the following parameter ranges are available:

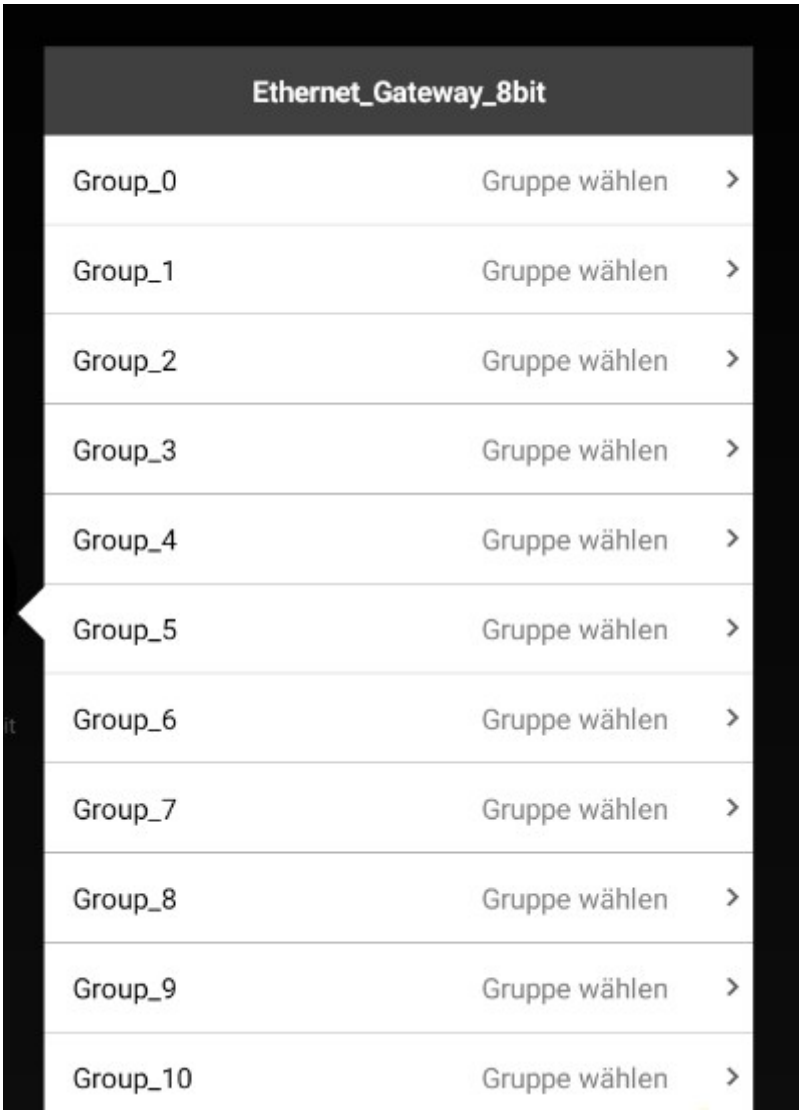
- 16 groups + 16 scenes
- 32 groups + 32 scenes
- 64 groups
- 64 scenes

The parameters displayed correspond to the profile selected in the Casambi app.



The profile selection directly determines the number of available group and scene parameters on the configuration page.


Ethernet_Gateway_8bit
PARAMETER
Scene_0
Rot
Scene_1
Szene wählen
Scene_2
Szene wählen
Scene_3
Szene wählen
Scene_4
Szene wählen
Scene_5
Szene wählen
Scene_6
Szene wählen
Scene_7
Szene wählen
Scene_8
Szene wählen


Ethernet_Gateway_8bit
Group_0
Gruppe wählen
Group_1
Gruppe wählen
Group_2
Gruppe wählen
Group_3
Gruppe wählen
Group_4
Gruppe wählen
Group_5
Gruppe wählen
Group_6
Gruppe wählen
Group_7
Gruppe wählen
Group_8
Gruppe wählen
Group_9
Gruppe wählen
Group_10
Gruppe wählen

7.4. Settings as buttons

In the Casambi app, the gateway can be selected in the "Buttons" section on the respective settings page.

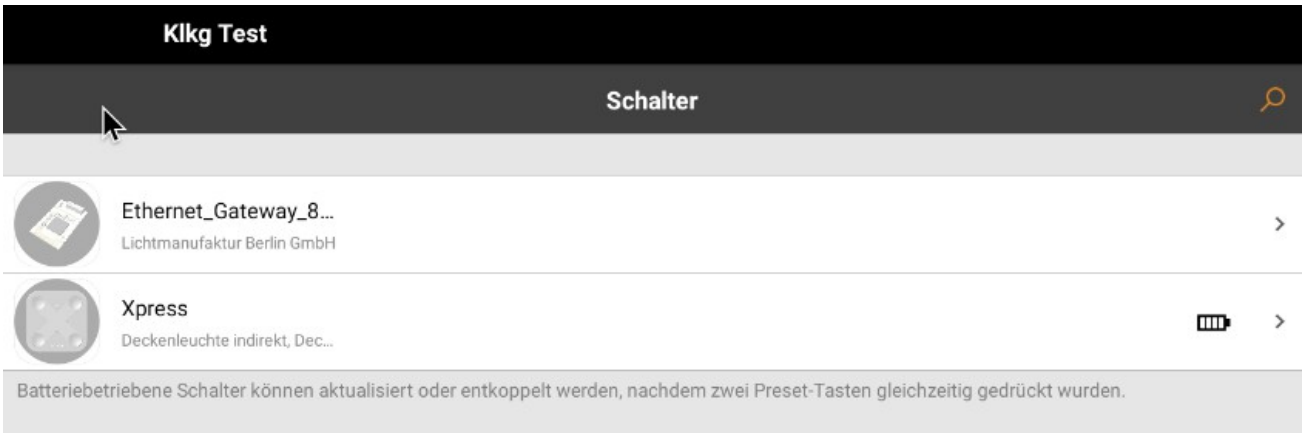
Depending on the profile used, virtual buttons can be defined there. Number of available

buttons:

- 4 buttons for profiles without "_EVO"
- 8 buttons for profiles with "_EVO"

The defined buttons can then be linked to corresponding actions or scenes.

The number of available buttons depends directly on the selected profile.



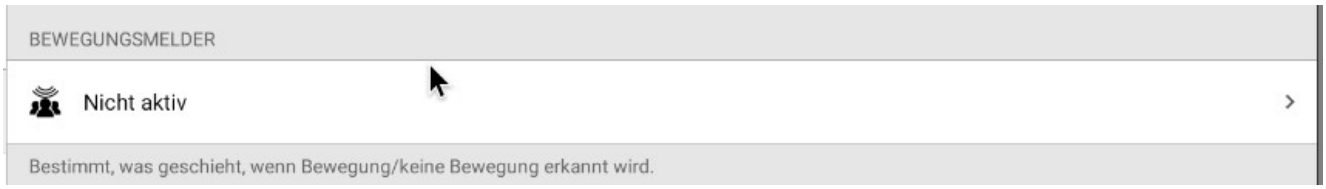

Zurück
Ethernet_Gateway_8bit
VOREINSTELLUNGEN
0
Nicht aktiv
1
Nicht aktiv
2
Nicht aktiv
3
Nicht aktiv
TASTER
Nicht aktiv
Nicht aktiv
Nicht aktiv
Nicht aktiv
Bestimmt das Verhalten, wenn der Taster betätigt wird.

7.5. Settings as a PIR sensor

In the Casambi app, the gateway can be selected in the "Sensor" section on the respective settings page.

The gateway can be configured accordingly in the "Motion Detector" section.

From the perspective of the Casambi system, the gateway behaves like a regular sensor and can be integrated into automations or control logic.



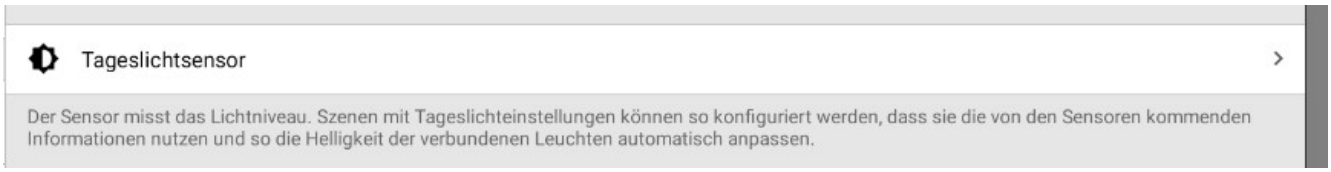
The actual triggering and processing of sensor data is performed according to the trigger logic configured in the gateway.

7.6. Settings as a lux sensor

In the Casambi app, the gateway can be selected in the "Sensor" section on the respective settings page.

The gateway can be configured accordingly in the "Daylight Sensor" section.

From the perspective of the Casambi system, the gateway behaves like a regular daylight sensor and can be integrated into light-dependent controls or automations.



The sensor data is processed and forwarded according to the logic configured in the gateway and the defined triggers.

7.7. Identify

When adding the gateway to a wireless Casambi network, the device can be identified.

If the identification function is activated in the Casambi app, the gateway behaves as if the "Identify" button on the web interface had been pressed.

During the identification phase, the device's LEDs clearly signal the selected gateway.



The identification function is used to uniquely identify the device within an installation with multiple gateways.

8. Firmware changelog

An overview of the changes and enhancements in each firmware version is available online. The complete changelog can be viewed at the following address:

https://changelog.lithernet.de/

9. Support

Email support

Support requests can be sent by email to the following address: support@lithernet.de

We will endeavor to process your request as quickly as possible.

Online ticket system

Alternatively, you can create a support ticket via our website: https://support.lithernet.de/

Registration is required to use the ticket system.

With a user account, you can:

- create new support requests
- view existing tickets
- track the processing status

Knowledge base

A knowledge base is currently under construction and can be accessed at the following address:

https://support.lithernet.de/help/de-de

Instructions, tips, and solutions to problems will be published there on an ongoing basis.