

SYMPL FUSION Base Device

Information for Use



SYMPL FUSION

Read the Information for Use and the Safety Instructions carefully. Subject to modification without prior notice.

Typographical and other errors do not justify any claim for damages. Modification of the product is prohibited.

This manual is designed for electricians, system administrators, and product users.

All product names and trademarks mentioned in this manual are trademarks of their respective owners.

Except for internal use, relinquishment of the instructions to a third party, duplication in any type or form - also extracts - as well as exploitation and / or communication of the contents is not permitted.

Downloads and more information at:
www.ecue.com

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1 Safety instructions

Please read the safety instructions, provided in a separate manual, carefully. Make sure that the environmental, mounting, and installation prerequisites are met. This manual should be kept at a safe place and in reach of the device.

1.1 Symbols



The exclamation mark warns about possible damage of the device itself, to connected devices, and to the user.



The information symbol gives general hints and informs about handling and procedures for use of the device.

1.2 General safety instructions



- Connect cables and data only when the device is powered down.
- The device must be supplied by a power supply that is certified according to the local regulations (e.g. SELV, Class 2).



If safety instructions are missing, please contact Traxon e:cue to receive a new copy.

2 General device description

e:cue SYMPL Nodes are a system of interfaces for e:cue Sympholight only. They provide various connection types like e:pix/RDM, DALI, digital inputs and outputs etc. SYMPL Nodes always operate in online mode, as a device interface for Sympholight. All interactions are initiated and controlled by Sympholight. Connections between servers, Cores and Nodes are always made with e:net via Ethernet.

Whatever setup your project requires, the SYMPL Fusion always has the right configuration at hand. The modular slot card concept allows the freedom to compose your individual demands. The SYMPL Fusion can be used as a simple standalone controller, expandable in a network with other e:cue devices, or as a decentralized control unit. Remote control for the user is available via the SymphoCity app and Sympholight's Action Pad, both operating on all standard web browsers. The SYMPL Fusion is the right choice for all lighting control requirements, functional lighting, dynamic lighting control or if needed the combination of both!

Highlights

- 4 x Modular slot cards per device, different options available:
 - DMX512 Module
 - DALI-2 Module
 - 0 ... 10 V / 1 ... 10 V, SPI, Relay, Serial (coming soon)

- Free configuration and combination of slot cards
- 2 x Ethernet for daisy chaining or independent operation
- 4 x Digital inputs
- 2 x Freely assignable versatile buttons
- DMX & DALI test mode accessible with device button – no software needed
- Integrated RTC with improved accuracy
- Expandable with additional SYMPL devices via network
- Art-Net and sACN output
- DALI-2 certified
- BACnet / KNX interface via additional Gateway.



- To operate SYMPL FUSION Base Devices a SYMPHOLIGHT version 5.5 or higher is mandatory. Earlier versions do not support the SYMPL Fusion.
 - To link to the third party protocols BACnet and KNX, connect a SYMPHOLIGHT Gateway BACnet and SYMPHOLIGHT Gateway KNX to the SYMPL FUSION Base Device.
-

2.1 Delivery content

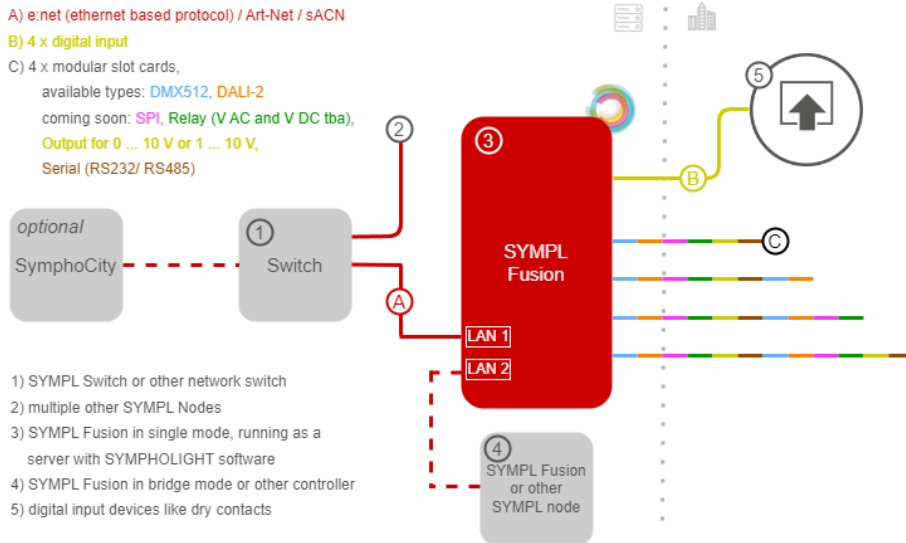
Delivery content of the e:cue SYMPL FUSION Base Device - Product number CL24100603935:

1. SYMPL FUSION Base Device
2. Welcome card
3. Safety instructions
4. Power supply connector, 2-pin (Würth 691 3611 00002)
5. Dry contact connector, 6-pin (Würth 691 3611 00006)
6. 4 x Slot cover
7. 4 x Screw.

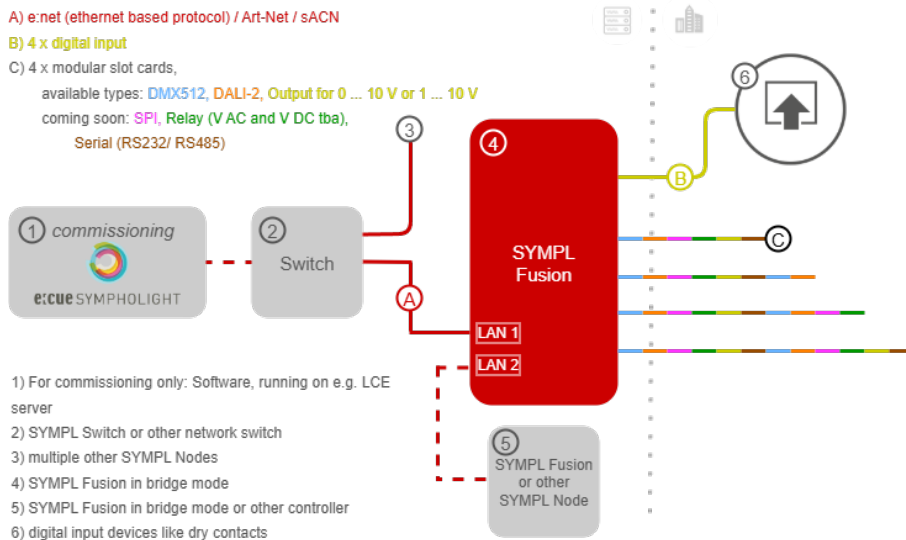


2.2 System overview

Standalone



Decentralized mode



Remote control

A) e-net (ethernet based protocol)

B) 4 x digital input

C) 4 x modular slot cards,

available types: DMX512, DALI-2, Output for 0 ... 10 V or 1 ... 10 V

coming soon: SPI, Relay (V AC and V DC tba),

Serial (RS232/ RS485)

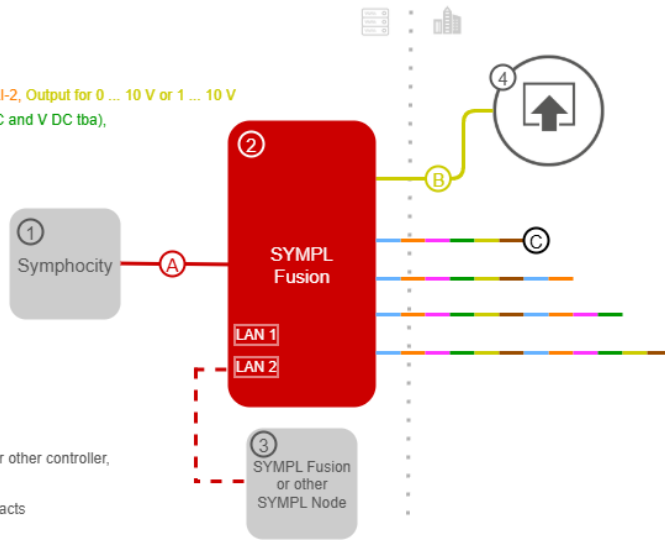
1) remote control via SymphoCity

2) SYMPL Fusion

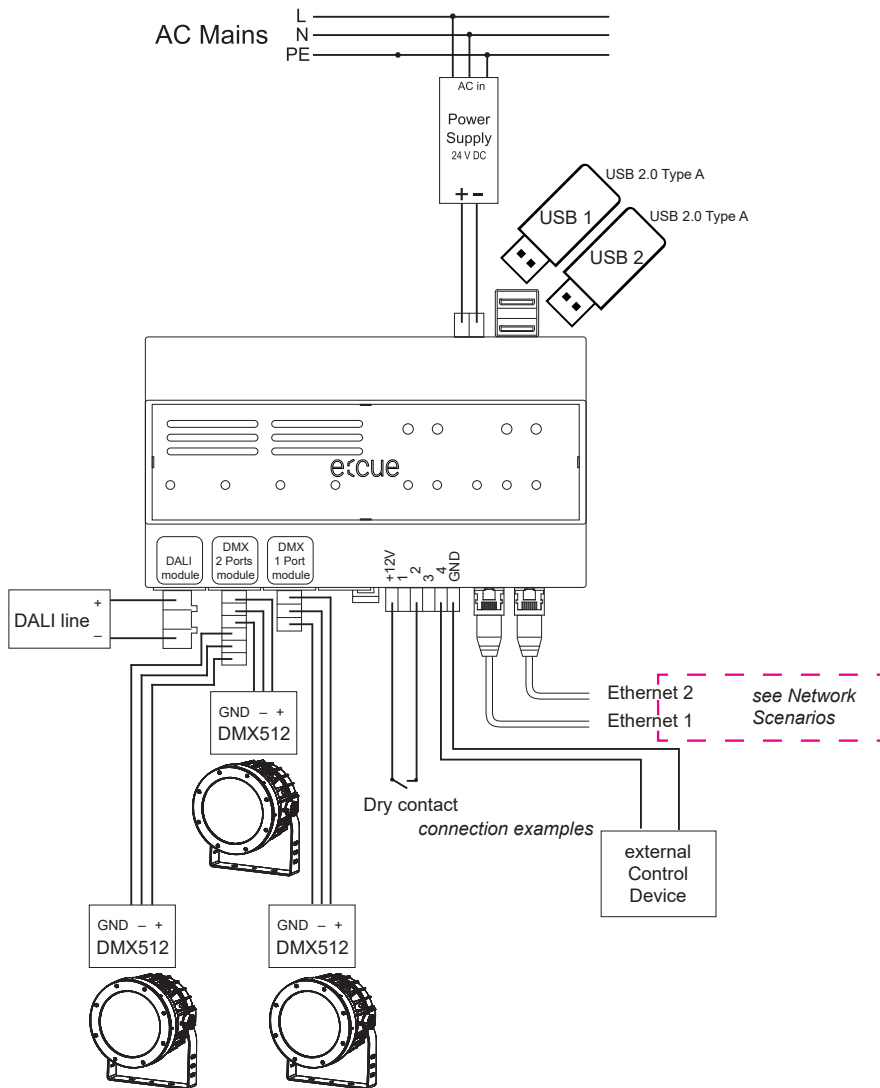
3) SYMPL Fusion in bridge mode or other controller,

Art-Net, sACN

4) digital input devices like dry contacts

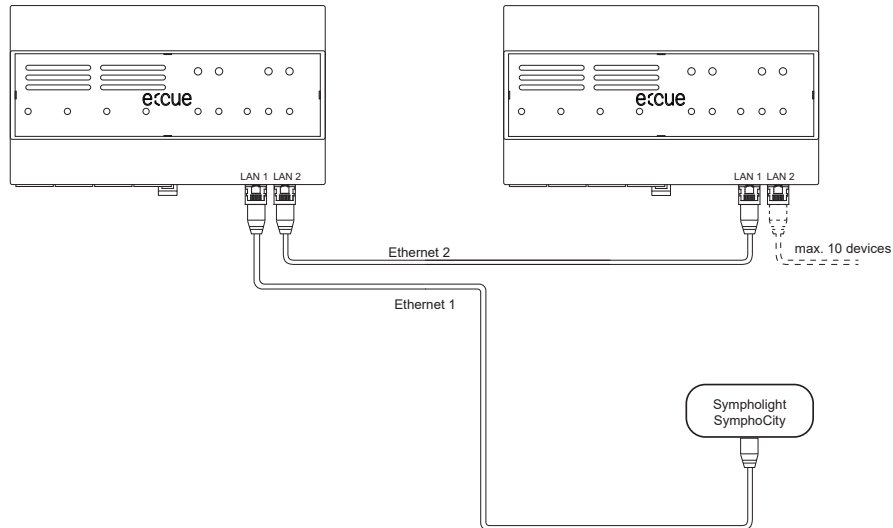


2.3 Wiring diagram

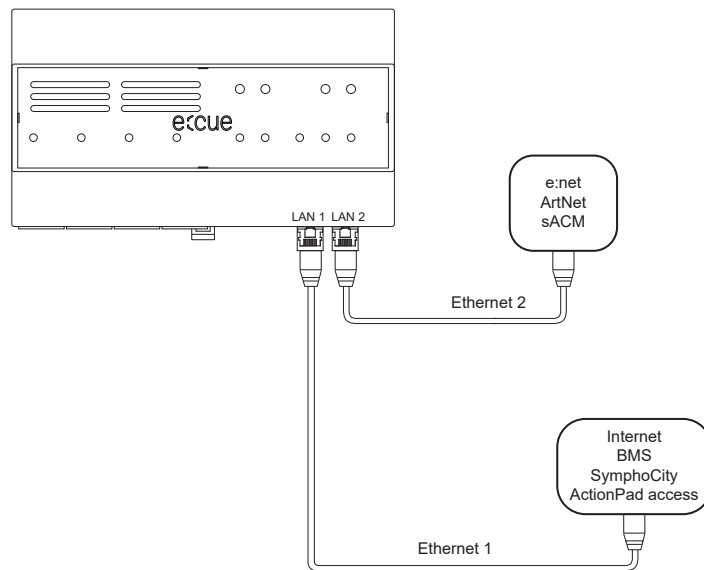


2.4 Network scenarios

Scenario 1: Bridge mode (daisy chain) - to send triggers to connected SYMPL Fusions - example



Scenario 2: Single mode (standalone) with e:net and internet / 3rd party protocol - example

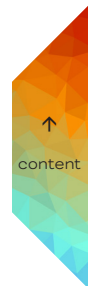


2.5 Product specifications

Dimensions (W x H x D)	160 x 90 x 60 mm / 6.3 x 3.54 x 2.36 in (excl. fastening clip) Width: 9 units
Weight	250 g / 0.55 lb
Power supply input	24 V DC on terminal plug, wire gauge: 0.2 ... 1.3 mm ²
Power consumption	max. 30 W @ 4x DALI-2 modules @ full load 7 W @ no modules
Operating temperature	-20 ... 40 °C / -4 ... 104 °F
Storage temperature	-20 ... 70 °C / -4 ... 158 °F
Op. / Stor. humidity	0 ... 80% RH, non-condensing
Cooling	Fanless, convection
Protection class	IP20
Electrical safety	SELV
Housing	Self extinguishing blend PC/ABS
Mounting	On 35 mm DIN rail (EN 60715)
Certificates	CE, ETL

Interface specifications

Output interfaces	4 x Modular slot card, types: DMX512 Module DALI-2 Module coming soon: 0 ... 10 V / 1 ... 10 V Module SPI Pixel Module Relay Module RS232 / RS485 Module								
Input interfaces	4 x Digital input common ground connector terminal plug row wire gauge: 0.08 ... 1.31 mm ² max. input voltage 24 V DC <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="border-top: 1px solid black; border-bottom: 1px solid black;">Input voltage</th> <th style="border-top: 1px solid black; border-bottom: 1px solid black;">Input current</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">5 V DC</td> <td style="border-bottom: 1px solid black;">2 mA</td> </tr> <tr> <td style="border-bottom: 1px solid black;">12 V DC</td> <td style="border-bottom: 1px solid black;">6 mA</td> </tr> <tr> <td style="border-bottom: 1px solid black;">24 V DC</td> <td style="border-bottom: 1px solid black;">12 mA</td> </tr> </tbody> </table> 12 V source: max. output current 50 mA high level input threshold: 3 ... 24 V low level input threshold: 0 ... 1 V	Input voltage	Input current	5 V DC	2 mA	12 V DC	6 mA	24 V DC	12 mA
Input voltage	Input current								
5 V DC	2 mA								
12 V DC	6 mA								
24 V DC	12 mA								
System interfaces	2 x e:net / Ethernet, 10/100/1000 Mbit/s, RJ45, CAT shielded 2 x USB 2.0 Type A 1 x Service port (micro-USB)								



User interfaces	LEDs for Ethernet activity, device status, test pattern, power; 2 x Freely assignable versatile buttons DMX & DALI test mode accessible with device button 1 x LED per slot card
-----------------	---

3 General remarks

3.1 Transport

Only transport the device in its original packaging. This protects the device from damage.

3.2 Unpacking

Only unpack the e:cue SYMPL FUSION Base Device at its installation location. To protect the device against condensation water, unpack it and wait until all moisture remaining in the device has evaporated. Condensation can occur when the device is moved from a cold to a warm location. Keep the packaging for use in case of further transport. Inspect all parts for completeness regarding chapter „2.1 Delivery content“ on page 5. If there is apparent damage to the device or parts are missing from the delivery scope, please contact the Traxon e:cue Support service.

3.3 Warranty regulations

Depending on the product, warranty regulations are of different duration. The warranty time is usually noted in the quote and in the order confirmation. See www.traxon-ecue.com/terms-and-conditions for details. Legal warranty regulations apply in any case.

3.4 Maintenance and Repair

This device requires no maintenance.



- Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).
- Do not try to repair the device. Return it to your Traxon e:cue distributor for replacement or repair.

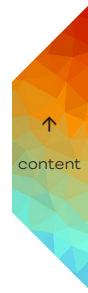
To update the firmware see „21 Firmware update“ on page 44.

3.5 Disposal



Batteries and technical appliances must not be disposed of with domestic waste, but should be handed in at the appropriate collection and disposal points.

The proper disposal of packing materials and of the device is the responsibility of the



respective user and for his account; in all other matters, the retrieval obligation for packing materials and the device is subject to the statutory regulations.

3.6 Support

In case of technical problems or questions regarding installation and repair please contact:

Traxon Technologies Europe GmbH
 Customer Service
 Im Dörener Feld 8
 33100 Paderborn, Germany
 +49 (5251) 54648-0
 support@ecue.com

3.7 Cybersecurity



Cybersecurity disclaimer

In order to protect building automation systems, plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art security concept. Traxon's product portfolio including this product you are about to install only forms one element of such a concept. Keep into account that Traxon's products including the product you are about to install contain the ability of third parties to connect to the device via USB, wired and wireless network interfaces.

You are responsible for preventing unauthorized access to your building automation system, plants, systems, machines and networks which should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. Additionally, Traxon's guidance on appropriate security measures should be taken into account.

Traxon's portfolio undergoes continuous development to make it more secure.

Traxon strongly recommends that updates are applied as soon as they are available and that the latest versions are used. Use of versions that are no longer supported, and failure to apply the latest updates may increase your exposure to cyber threats.

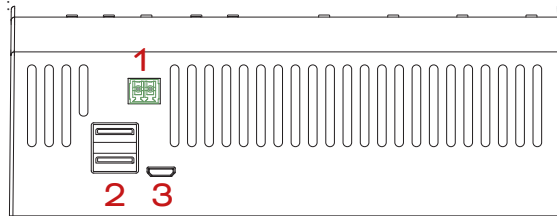
Traxon strongly recommends to comply with security advisories on the latest security threats, patches and other related measures.




4 Interfaces

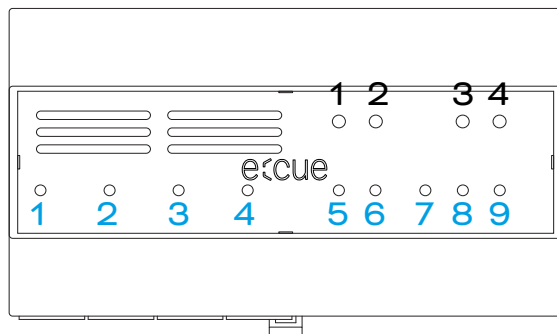
4.1 Connectors and interfaces of base device

View from top



Ports

- | | |
|--|--|
| <p>1 Power supply (Vcc-, Vcc+ left to right)</p>  | <p>Installation: „5.6 Power supply“ on page 22
 24 V DC, max. 30 W @ 4x DALI-2 modules @ full load, 7 W @ no modules</p> |
| <p>2 2 x USB 2.0 Type A</p> | <p>for e.g. providing video and audio files (coming soon), data storage and firmware update</p> |
| <p>3 Service port (micro-USB)</p> | <p>no user function.
 Do not connect anything here during operation. Otherwise, you may experience data loss or the device that cannot be started.</p> |



Buttons

- | | |
|-------------------------------------|---|
| <p>1 “Identify” button</p> | <p>Operation: „4.2 “Identify” button: Identification & Reset & Update“ on page 14</p> |
| <p>2 “Test Mode Pattern” button</p> | <p>Information: „4.3 “Test Mode Pattern” button“ on page 15
 Operation Test Slot <<: „14.1 Test mode via Test buttons“ on page 40</p> |

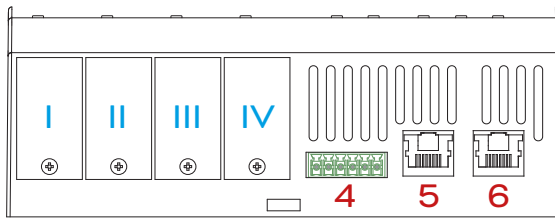


3	Act 1 button Test Slot <<	Information: „4.4 “Act / Test Slot” buttons” on page 15
4	Act 2 button Test Slot >>	Usage: „12 Use of Action buttons” on page 34 Operation Test Slot <<: „14.1 Test mode via Test buttons” on page 40

LEDs

1...	<i>Slot empty</i>	Off: no module installed. 4 See individual instruction for each module type.
5	Status	<p>Green: System activity</p> <p>Orange: System load > 75%</p> <p>Red: System error. Restart the system by disconnecting the power supply. If the error persists, re-upload the project. If the error continues, contact Traxon e:cue Service.</p> <p>Yellow static: Reset button mode (“4.2 “Identify” button: Identification & Reset & Update” on page 14)</p> <p>Yellow blinking: Reset in progress</p> <p>Violet static: Update button mode (“4.2 “Identify” button: Identification & Reset & Update” on page 14)</p> <p>Violet blinking: Update in progress</p> <p>Blue static: Modules and input are currently used by an external Sympholight instance (“11 Modules configuration” on page 32)</p> <p>Blue blinking: “Identify” triggered from Sympholight</p>
6	Pattern	see individual instruction for each module type
7	LAN 1 first network	<p>Off: No link</p> <p>On: Link present</p> <p>Blinking: Link activity</p>
8	LAN 2 second network	<p>Off: No link</p> <p>On: Link present</p> <p>Blinking: Link activity</p>
9	Power/Activity	<p>Green: Power on</p> <p>Orange: Internal storage access</p>





Slots

I	Slot 1	Installation: „5.6 Power supply“ on page 22
II	Slot 2	Configuration: „11 Modules configuration“ on page 32
III	Slot 3	LEDs: „LEDs“ on page 13
IV	Slot 4	Test mode: „14 Test mode“ on page 40

Ports

4	4 x Digital input (3.3 ... 24 V DC, 1, 2, 3, 4, GND left to right)	Installation: „5.5 Digital Input connection“ on page 21
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Usage: [„13 Use of Digital inputs“ on page 37](#)

5	e:net port (Ethernet)	LAN 1 Daisy chain IN Installation: „5.4 Ethernet connection“ on page 21
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6	e:net port (Ethernet)	LAN 2 Daisy chain OUT Installation: „5.4 Ethernet connection“ on page 21
---	-----------------------	--

4.2 “Identify” button: Identification & Reset & Update

The “Identify” button has three functions: to send an “Identify” message (A), to update the firmware of the SYMPL FUSION Base Device (B), to reset the SYMPL FUSION Base Device (C) and to exit an DALI bus error state (D).

(A) A short press during operation in online mode sends an “Identify” message to the connected Sympholight instance. This helps assign the SYMPL FUSION Base Device in the Layout in the Sympholight software.

The “Identify” button can also be used to update the firmware and to reset the device to factory state:

- (B) Keep the “Identify” button pressed while powering up, the Status LED lights up in **violet** at first. Releasing the button now **updates** the firmware when performing the update process using an USB flash drive. See [„21.3 Update with a USB flash](#)

drive" on page 47 for further information.

- (C) Keep the "Identify" button pressed until the Status LED lights up in **yellow**. Releasing the button now **resets** the device to its factory settings. The password and other settings are reset to their default values.
- When keeping the button pressed further on, the device proceeds to normal operation. No changes apply.
When the Status LED blinks green slowly, the device has booted and is operational.

(D) If a bus error occurs on a DALI module, the module LED will turn red. Pressing the Identify button will cause the module to switch the bus power back on. If the problem persists (usually a short circuit), the LED will turn red again. Continue pressing the button until the problem is rectified.

4.3 "Test Mode Pattern" button

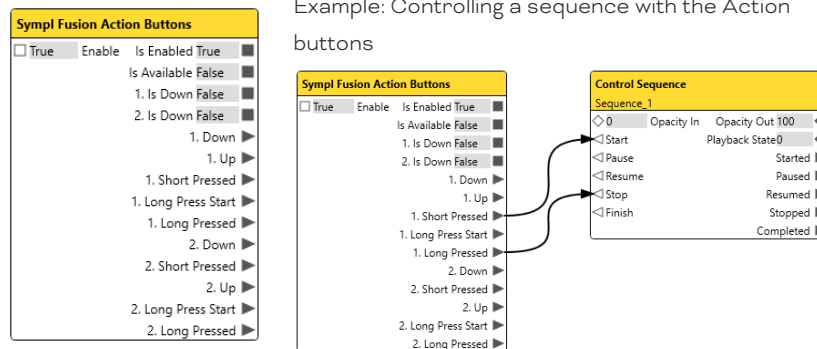
Long press the "Test Mode Pattern" button to switch the Test mode on/off. In case the test mode is active, short presses will change the test pattern for the selected module.

For a full description of the test procedure, see "14.1 Test mode via Test buttons" on page 40.

4.4 "Act / Test Slot" buttons

The two "Act / Test Slot" buttons have two different behaviors:

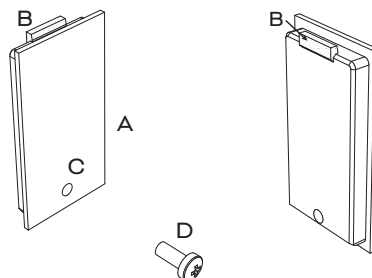
- By default (i.e. the device is not in the test mode), the action buttons trigger the action as configured in the Workflow Designer of Sympholight. See „12 Use of Action buttons“ on page 34.



- In case the test mode is enabled, use the test slot << / >> buttons to select the module that is to be tested (see „14.1 Test mode via Test buttons“ on page 40).

4.5 Interfaces of cover and modules

View of cover:

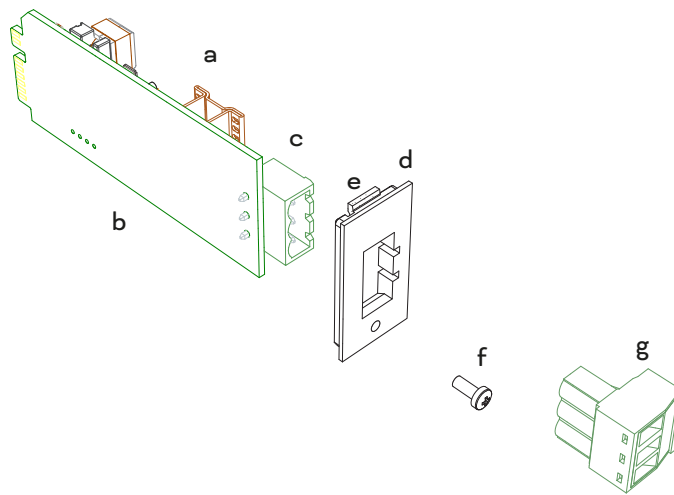


A	Cover	for unused, empty slots (no modules inserted)
B	Hook	Holds the top edge of a cover / module's bezel connected to the SYMPL FUSION Base Device.
C	Screw hole	
D	Screw	To fasten a cover or a module's bezel.



Always apply a cover if the module slot is not in use.

View of module - exemplary DALI module:



a	Module	
b	Bare side of module	
c	Plug	Fixed to the module, counterpart of connector.
d	Bezel	Module specific capping.
e	Hook	Holds the top edge of a cover / module's bezel connected to the SYMPL FUSION Base Device.
f	Screw	To fasten a cover or a module's bezel.
g	Connector	For connecting wires to the module, counterpart of plug.



5 Installation

The installation of the SYMPL FUSION Base Device consists of mounting the device, connections to power supply and to e:net. Optionally, you can also connect digital inputs and insert modules into the slots.

The sequence of wiring is not defined. Supply the device with power after all cabling is completed; it starts operating.



- Connect cables and data only when the device is powered down.
- The device must be installed and operate in ambient temperature -20 ... 40 °C and non-condensing.
- The device must be installed onto a 35mm DIN rail so that air can flow through the device. Do not place waste heat generating devices below the SYMPL FUSION Base Device.

5.1 Modules



- Do not insert or remove modules while the device is powered on.
- You must be protected against electrostatic discharge when installing the modules.



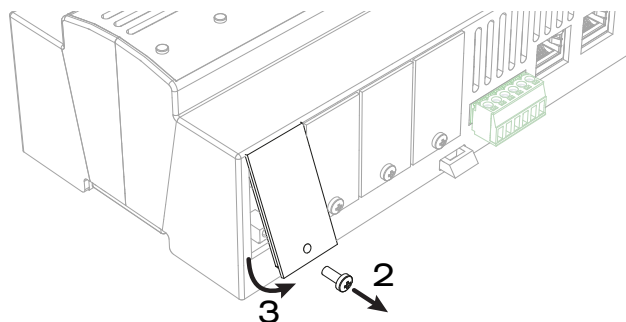
Always apply a cover if the module slot is not in use.

The modular slot card concept allows the freedom to compose your individual demands. The SYMPL FUSION Base Device can control four modules in free combination.

Insert a module into a slot and fix the module with a screw to the base device.

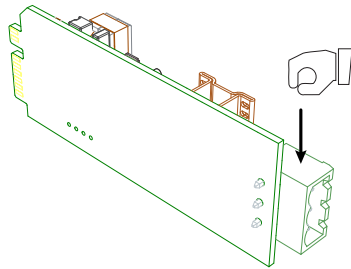
Remove cover:

1. Power off the SYMPL Fusion.
2. Loosen the screw of the cover.
3. Remove the cover: Because the cover is hooked at the top to the base device, undo the cover at the bottom first and rotate/ fold it upwards to loosen the hooked cover.

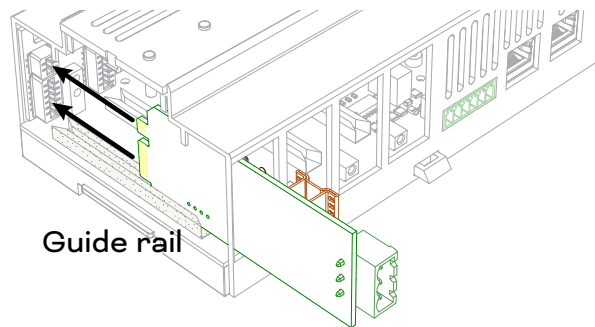


Insert module:

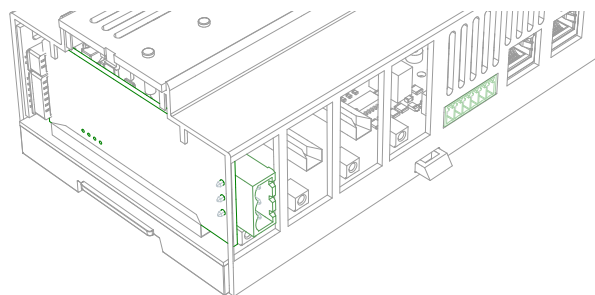
1. Power off the SYMPL Fusion.
2. Hold the module by the plug in your hand with the bare side to the left.



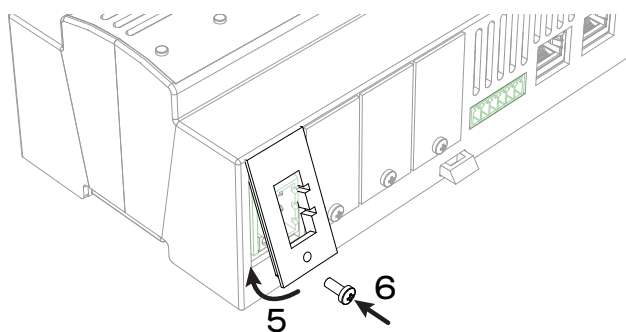
3. Insert the module into the base device using the guide rail in the base device. Keep the module upright.



4. Press the module lightly into the housing so that the module snaps into place at the back.



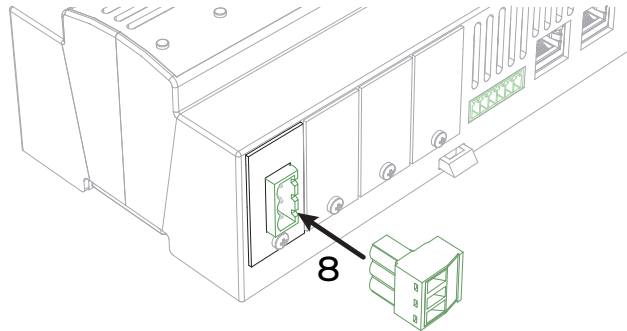
5. Hook the module's bezel into the top side of the slot frame and fold it downwards over the module's plug. The connector has to be detached from the plug for this step.



6. Fasten the bezel with a screw.

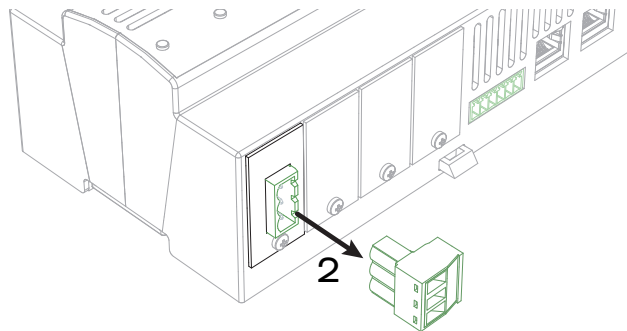


7. Connect all wires to the connector.
8. Attach the connector to the plug.

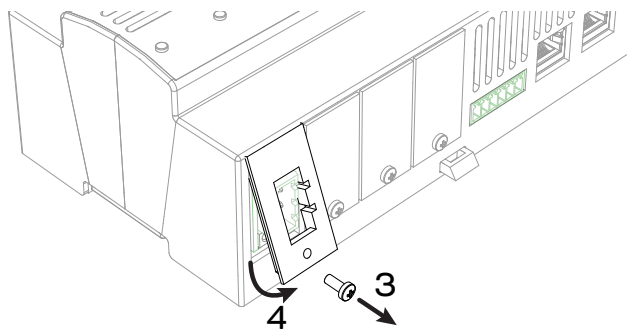


Remove module:

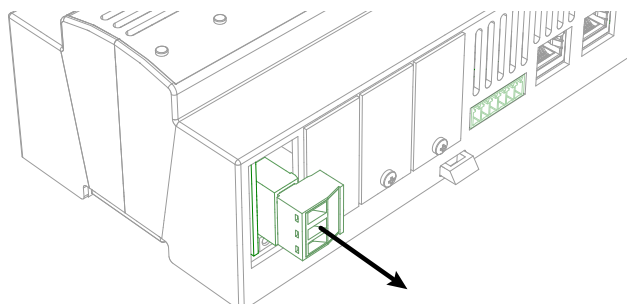
1. Power off the SYMPL Fusion.
2. Detach the connector from the plug.



3. Unfasten the screw.
4. Remove the bezel: Because the bezel is hooked at the top to the base device, undo the bezel at the bottom first and rotate/ fold it upwards to loosen the hooked bezel.

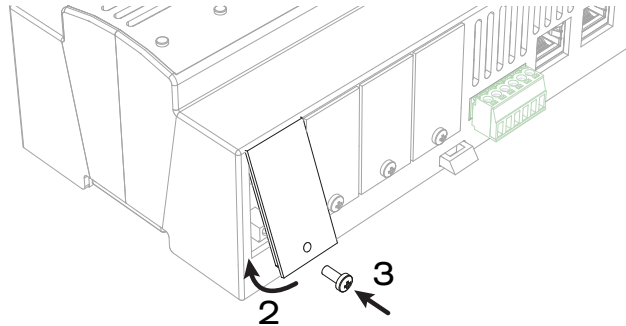


5. Pull out the module in an upright position. Tip: Attach the connector again to the plug to get a better grip on the module.



Place a cover on an empty slot:

1. Power off the SYMPL Fusion.
2. Hook the cover into the top side of the slot frame and fold it downwards.
3. Fasten the cover with a screw.



Details (wiring, configuration, LEDs behavior, button functions, testing) about the different module types, see their respective Information for Use documents. Download from:

<https://eu.traxon-ecue.com/products/syml-fusion/>

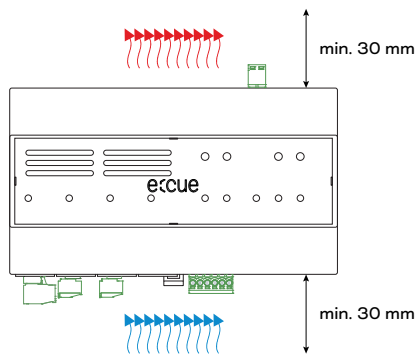


5.2 Installation conditions

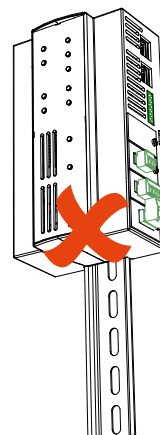
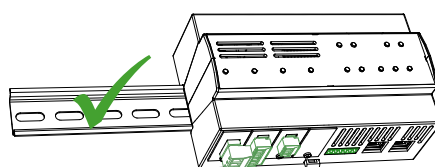


The device must be installed onto a 35mm DIN rail so that air can flow through the device. Do not place waste heat generating devices below the SYMPL FUSION Base Device.

- A minimum clearance of 30 mm above and below the device is required, in order to ensure adequate ventilation.

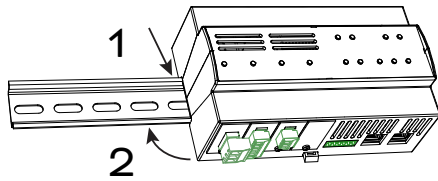


- Installation position: Terminals on top and bottom



5.3 Mounting

The SYMPL FUSION Base Device is designed to mount onto a 35mm DIN rail (EN 60715) in a horizontal position.



1. Clip the device to the rail from top.
2. Apply gentle pressure to the top front to snap it in place. The device has been mounted successfully.

You can also mount the device on any flat surface. Use a 3 to 3.5mm screw for the hanger hole.

For mechanical stability, mounting on a rail is recommended.

5.4 Ethernet connection



Ground the Ethernet cable for outdoor installations (optional for indoor only).



- Ethernet cable length \leq 70 m.
- The maximum amount of devices in a daisy chain is 7.

The SYMPL FUSION Base Device offers two Ethernet ports with the option to operate in two separate networks. Alternatively, you can daisy chain SYMPL FUSION Base Devices. For further information, see [“6 Network configuration” on page 22](#) and [“2.4 Network scenarios” on page 8](#).

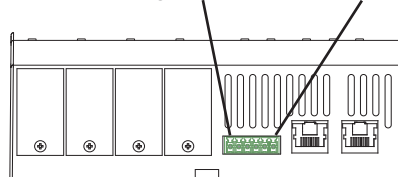
The pin-assignment of the Ethernet ports corresponds to RJ45 standards. You can use every common Ethernet component and switches. Connect the SYMPL FUSION Base Device at the designated Ethernet interfaces with a patch cable (RJ45, CAT5).

5.5 Digital Input connection

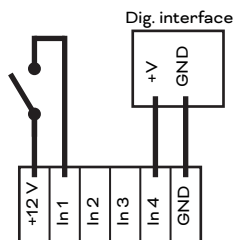
The SYMPL FUSION Base Device offers four configurable optically isolated digital inputs for connectivity to separate systems/sensors.

The appropriate pin assignment is defined as follows:

From left to right: V + , 1, 2, 3, 4, GND



Connection example:



- The input voltage range for the digital inputs is 3.3 to 24 V DC (input current 2 mA @ 5 V DC, 6 mA @ 12 V DC, 12 mA @ 24 V DC).
- Digital inputs cable length \leq 10 m.

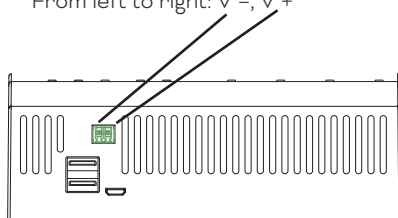
5.6 Power supply

Connect the SYMPL FUSION Base Device to a 24 V DC power supply unit that complies with the local regulations. Present power supply equates to the status “On” or running of the SYMPL FUSION Base Device.

To connect the device to a power supply unit, use the provided 2-pin terminal connector and lay the wires as stated on the front label.

The appropriate pin assignment is defined as follows:

From left to right: V -, V +



Turn the power on when all cables are connected to the SYMPL FUSION Base Device. The device starts operating. The device is in operation when the LED Status constantly flashes in green.



- Power supply cable length \leq 2 m.
- The DALI system may take several minutes to initialize when the SYMPL FUSION Base Device is powered up. You can check the status at the “DALI” tab of the web interface of the SYMPL FUSION Base Device.

6 Network configuration

The network properties of the device are preconfigured (see “6.1 Default network properties” on page 23). The successful installation of the power supply is required for changing the network configuration. You can adjust the network settings using the



web interface of the device.

The SYMPL FUSION Base Device provides two Ethernet ports that can be operated individually and configured for different subnets, or interconnected in Bridge mode.

Bridge mode (Daisy chain) - default

Use the Bridge mode to daisy chain SYMPL FUSION Base Devices or other SYMPL devices. The maximum number of devices is 10. In the Bridge mode of the SYMPL FUSION Base Device (factory default), its two Ethernet ports are connected via the internal network bridge. LAN 1: daisy chain IN, LAN 2: daisy chain OUT.



Design your network with a central switch. Do not design your network in a way that simply connects one SYMPL FUSION Base Device to another.

Use “Static” if you have a network plan where the IP addresses are predefined. Use “DHCP Client” if you use a central DHCP server for network management. Select “Automatic DHCP client or server” if you want the SYMPL FUSION Base Device to act as the DHCP server when no external DHCP server is present.



If you decide to use “Automatic DHCP client or server”, enable this mode on one of the SYMPL FUSION Base Devices. Having multiple SYMPL FUSION Base Devices with “Automatic DHCP client or server” in one network is not supported. The IP addresses provided by the integrated DHCP server cannot be configured further (e.g., static leases). Use an external DHCP server if you have this requirement.

Single mode (Standalone configuration)

Use the Single mode to use separate networks. In the Single mode of the SYMPL FUSION Base Device, its two Ethernet ports must be configured to use two non-overlapping subnets. Otherwise, routing errors will occur.

6.1 Default network properties

Bridge network:

A SYMPL FUSION Base Device has the following network configuration in the factory-new state:

- Bridge Mode is enabled. Any port can be used for the initial setup.
- DHCP is enabled.
- If DHCP is unavailable, the SYMPL FUSION Base Device uses the IP address 192.168.123.100 and the subnet mask 255.255.255.0.
- If the IP address 192.168.123.100 is occupied by another device, the SYMPL FUSION Base Device searches for a free IP address in the 192.168.123.x range with a subnet mask of 255.255.255.0.



Use Sympholight, a network sniffer, or your router’s dashboard to find the SYMPL FUSION Base Device in the network.

LAN 1:

Network Bridge member.



LAN 2:

Network Bridge member.

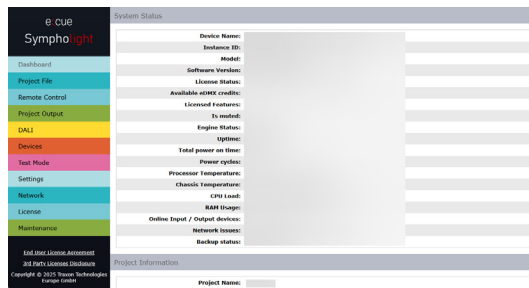
6.2 Network configuration via web interface

1. For the initial setup, locate the SYMPL FUSION Base Device on the network.
2. Open a common web browser on a connected PC. Enter the SYMPL FUSION Base Device's IP address into the address bar:
e.g. http://192.168.123.100.

The remote console of the device is displayed:



3. Select “Configuration” and the dashboard of the SYMPL FUSION Base Device is displayed:



4. On first access, define your login credentials for the web interface of the SYMPL FUSION Base Device under “Settings”.

Web Server Settings

You need to set a password to get access to all Web UI features, including project upload.

Server Port: Port of the web server. Default: 80 (8081 on Windows platforms)

Configuration user name: The user name required for login. Default: admin

Configuration Password: Enter a new password to change it. Leave it empty to leave it untouched.

Confirm Configuration Password: Re-enter the password from above.

5. Configure the network settings to match your network topology and subnets.

Bridged Network configuration

Network Configuration:

Static IP Address:

Static Subnet Mask:

Static Gateway:

LAN 1 [eth0] configuration

Network Configuration:

Static IP Address:

Static Subnet Mask:

Static Gateway:

LAN 2 [eth1] configuration

Network Configuration:

Static IP Address:

Static Subnet Mask:

Static Gateway:

5.1 Decide whether to use the bridge.

5.2 Define the setup for either the bridge or the individual networks. If you use the bridge, configure the network on the bridge and only configure the other ports as bridge members. If you do not have a bridge, configure the networks individually (i.e. DHCP or static).

- If you deactivate the bridge, which is equivalent to there being no longer a bridge member, you must follow this sequence:
 1. Configure the port used to access the SYMPL FUSION Base Device to a new IP address that does not correspond to the bridge IP address.
 2. Reopen the web interface under the newly configured IP.
 3. Configure the other network port individually.
 4. Restart the SYMPL FUSION Base Device.
 - If you activate the bridge after having two separate networks you must follow this sequence:
 1. Configure the port that you are not currently using to access the SYMPL FUSION Base Device as a bridge member, and set its other IP addresses to 0.0.0.0.
 2. Restart the SYMPL FUSION Base Device. The bridge will then appear for configuration.
 3. Configure the bridge as desired.
 4. Configure the port that you are currently using to access the SYMPL FUSION Base Device as a bridge member.
6. Click **Apply** to apply the settings.

The network configuration of the device is completed.



Do not connect a SYMPL FUSION Base Device configured for “Automatic DHCP client or server” to a company network or another network with critical infrastructure. In some cases, the SYMPL FUSION Base Device may not detect external DHCP servers and may start its own. This could result in severe network malfunction and significant recovery efforts.



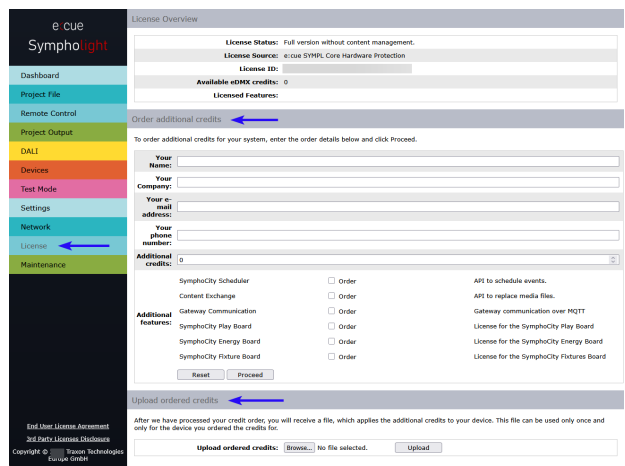
- Note down all employed and, if applicable, reserved IP addresses. Keep the information for future network configurations.
- You can change the login password to the SYMPL FUSION Base Device's configuration page and its device name at “Settings” page. Do not forget the new password.

6.3 Art-Net and sACN

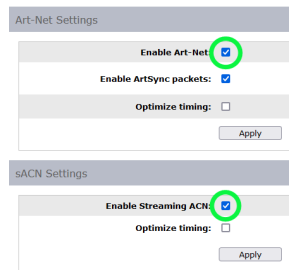
The SYMPL FUSION Base Device supports Art-Net and sACN output. You will need one credit for each physical DMX universe.

- To order credits, open the web interface and go to “License”. Send your order and upload the new credits to empower the Art-Net and sACN output.





- To enable Art-Net and sACN output, go to “Network” and configure their settings accordingly.



7 Device configuration

In the web interface’s Dashboard, you see an overview about the SYMPL Fusion and the uploaded project. Open the web interface either by entering the SYMPL FUSION Base Device’s IP address into the address bar or by selecting in Sympholight the device’s context menu “Open Web UI in Browser”.

As no project is loaded when initially accessing the Dashboard, this part is empty. On first access, define your login credentials for the web interface of the SYMPL FUSION Base Device under “Settings”.

The editable parameters in the Settings window all have a description on the right side. Edit them and click **Apply** to commit the changes. The system has now its basic configuration and the complete configuration is possible.

The full list of menu entries at the left:

Dashboard	Overview of the SYMPL FUSION Base Device, firmware version, uptime, project details, input and output devices and more.
-----------	---

Project file Upload and download a project to this SYMPL FUSION Base Device by drag-and-drop or upload. *.lprj and *.hfp formats are supported. By uploading the project from any source, no SYMPHOLIGHT server is necessary. Use an USB memory stick.

Background images of Layouts are not included when uploading a project onto a SYMPL FUSION Base Device. It is therefore recommended to keep a local project backup from the original SYMPHOLIGHT instance which contains the background images, at a safe place.

Remote Control Other SYMPHOLIGHT instances from which remote control is possible. You can execute basic operations from Remote Control instances, for example to start and stop Sequences.

Project Output Overview over running Sequences. Work with Sequences and Sequence opacity.

DALI Indicator when the DALI system of a standalone SYMPL FUSION Base Device is ready to be used. This might take up to several minutes.
Only the expanded line is scanned and updated.
Refresh automatically: rate is every 10 sec. Faster/ manual refresh: click "Expand" again.

Devices SYMPHOLIGHT instances and devices, available or included, with updating option.

Test Mode Run tests on the connected modules.

Settings Basic SYMPL FUSION Base Device, date and time, web server, Rest API and backup settings. MQTT and external MQTT broker settings are only available when the Gateway Communication feature is activated.

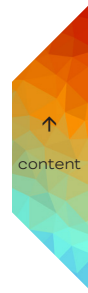
Network Basic and advanced network settings. Art-Net and sACN settings - you will need one credit for each physical DMX universe.

License Order and upload credits for and to the SYMPL FUSION Base Device.

Maintenance Reset, restart, update SYMPL FUSION Base Device. Access log files. Capture network packets.



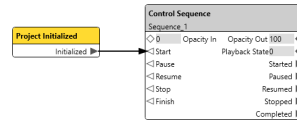
The MQTT interface is in the testing phase and should not be used in production environments. It is subject to ongoing changes without backward compatibility. Currently, the interface is intended exclusively for use with SymphoCity. Only available when the Gateway Communication feature is activated.



After assigning a SYMPHOLIGHT project to the SYMPL FUSION Base Device via the web interface, the SYMPL FUSION Base Device will begin executing the project. As long as the SYMPHOLIGHT server runs, the SYMPL FUSION Base Device cannot get SYMPL Nodes or other interfaces. As soon as the SYMPHOLIGHT server releases the devices, the SYMPL FUSION Base Device will take over the devices and integrate them as configured in the running project.



If you want the SYMPL FUSION Base Device to start a Sequence or do anything else after system start, do not forget to include the Project Initialized Block in the Workflow Designer.



8 Date, Time & NTP settings

In the web interface, set the date, time and NTP settings of the SYMPL FUSION Base Device: Go to the Settings tab and set the properties according to your requirements.

If you need to change both the time zone and the time, proceed as follows:

1. Change the time zone.
2. Restart the SYMPL FUSION Base Device, device.
3. Adjust the time.

The SYMPL FUSION Base Device runs on an integrated clock that needs to be configured/calibrated. This is done via an NTP server. On the first/initial start-up of the SYMPL FUSION Base Device, connect it to an NTP server (e.g. internet). Set the NTP server settings in the web interface of the Fusion.



- i** – It is recommended to have an NTP server permanently present in the installation, especially in time sensitive projects, to ensure the correct time on the SYMPL Fusion. The NTP server should also coordinate the full system.
- Otherwise, if less time critical, it is recommended to re-connect the SYMPL FUSION Base Device to an external NTP server (e.g. internet) once in a while, e.g. once a year to correct any time deviation.

Enter the IP address or host name of the appropriate NTP server. If the SYMPL FUSION Base Device can reach an Internet resource, you can use a public NTP server. Otherwise, an internal NTP resource can be defined. You can set a sync interval (10 ... 1440 min (24h)) to query the NTP server for the current time. If NTP is not to be used, leave the NTP server entry empty.

- i** – Restart the SYMPL FUSION Base Device after changing the time zone.
- Do not use manual update intervals for public NTP servers. This could result in the SYMPL FUSION Base Device being blocked or subject to rate limiting. Use short update intervals only with NTP server that accepts them.

When the time on the Fusion is synchronized via Network Time Protocol (NTP) and the user manually adjusts the time in the web interface, the internal Real-Time Clock (RTC) drift is calibrated assuming the NTP or user-provided time is correct.

- The recommended approach is to use NTP, which provides a calibrated clock. Enable “Calibrate the hardware clock on NTP update”.
- If you do not have access to an NTP server, you can manually calibrate the clock. Set the time as precisely as possible. Enable “Calibrate the hardware clock on manual time set”.
- If you use NTP to set the local time to UTC and distribute time zone changes via NTP, disable both “Calibrate the hardware clock on NTP update” and “Calibrate the hardware clock on manual time set”.

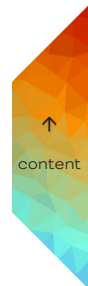
9 Fusion instance indicator

In Sympholight, a SYMPL Fusion and modules are indicated as follows:

Indicator Color	Module - Local Sympholight instance perspective
White	A module which is unassigned.
Grey	A module is required but not properly inserted into the slot. A module is disconnected but desired in the show, and Sympholight tries to establish the connection.
Green	A module that is available, but not required.



Lime	A module that is available and required.
Yellow	A module that is in test mode.
Red	A module that is in the wrong runlevel or otherwise occupied or unavailable. A module that is mismatched and does not fit.
Indicator Color	SYMPL FUSION Base Device - Local Sympholight instance perspective
White	An e:net device which is unassigned.
Grey	An e:net device that is required but not found in the network. An e:net device disconnected but desired in the show, and the Sympholight tries to establish the connection.
Green	An e:net device that is available but not required.
Lime	An e:net device that is available and required.
Yellow	An e:net device that is in test mode.
Red	An e:net device that is in the wrong runlevel or unavailable.
Black	An e:net device which is connected to another instance and the user tries to add it to his local Sympholight.
Blue	An e:net device which is connected to another instance.
Indicator Color	SYMPL FUSION Base Device - Other Sympholight instance perspective
Grey	A SYMPL FUSION Base Device / Sympholight / SYMPL Core Sp which is muted.
Blue	A SYMPL FUSION Base Device that redirects its modules and input to some instance (higher priority).
Sky blue	A SYMPL FUSION Base Device that is occupied by another system but the local system wants to redirect to itself (higher priority).
Black	A SYMPL FUSION Base Device / Sympholight that has none of its modules/nodes available. A SYMPL FUSION Base Device / Sympholight that has not all but some required modules or nodes.

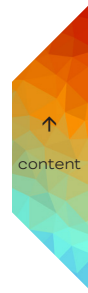


Yellow	A SYMPL FUSION Base Device / Sympholight that has at least one unassigned module (or node), i.e. the system device's address equals the empty address of the specified system device type.
Lime	A SYMPL FUSION Base Device / Sympholight which has all required modules or nodes and is available.

10 Operations in Sympholight

A right-click on the SYMPL FUSION Base Device in the Sympholights list opens a context menu for additional function for the SYMPL FUSION Base Device. Over the context menu of the SYMPL FUSION Base Device the following functions are available:

Download project	Download the current project file from the SYMPL FUSION Base Device. The project remains unchanged on the SYMPL FUSION Base Device.
Upload project	<p>Upload a project to the SYMPL FUSION Base Device. Set a password in the Web Interface beforehand, otherwise the upload will not run.</p> <p>Background images of Layouts are not included when uploading a project onto a SYMPL FUSION Base Device. It is therefore recommended to keep a local project backup from the original SYMPHOLIGHT instance which contains the background images, at a safe place.</p> <p>Click the Handover & Close button when you want to immediately start the project on the SYMPL FUSION Base Device and its devices.</p>
Delete currently loaded project	Deletes the currently loaded project from the SYMPL FUSION Base Device.
Redirect modules and input events to this instance	Hand over the control over the modules and inputs to the local instance.
Give back the modules and input access to the device	Return the control over the modules and inputs back to the SYMPL Fusion.



Mute controller detection	Select to become invisible for other SYMPHOLIGHT instances in the network. Click again to unmute.
Share License	Use the SYMPL FUSION Base Device as License Key. For details see „15 Using SYMPL FUSION Base Device as License Key for SYMPHOLIGHT“ on page 41.
Restart controller	Restart the SYMPL FUSION Base Device e.g. in case of project problems.
Reset controller to factory defaults	Reset all settings and configuration to the factory defaults. This will also delete the project.
Download log files	Download the log files of the SYMPL FUSION Base Device via a web browser.
Open Web UI in Browser	Configure and control the SYMPL FUSION Base Device in a web browser.
Open Rest API (Swagger) in Browser	Configure and control the SYMPL FUSION Base Device in a Rest API (Swagger).
Open Scheduler in Browser	Configure the Scheduler of the SYMPL FUSION Base Device in a web browser.
Configure Network	Configure the network settings of the SYMPL FUSION Base Device.
Copy Instance ID	Copy the SYMPHOLIGHT instance ID to the clipboard.
Upload software	Upload a firmware file (e.g. updated version) of the SYMPL FUSION Base Device.
Update software in browser	Update the firmware of the SYMPL FUSION Base Device via a web browser.

11 Modules configuration

You can pre-arrange a Sympholight project for a SYMPL FUSION Base Device including the modules and digital inputs. The modules are handled the same way as other devices and can be configured in the Device Manager

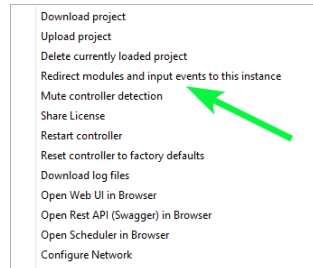
Starting point

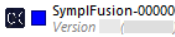
Open the Sympholight software and your project file.



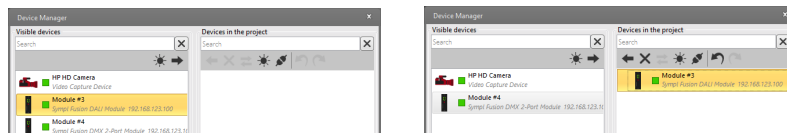
11.1 Scenario: Modules from SYMPL FUSION Base Device

1. Connect the SYMPL FUSION Base Device.
2. Open the context menu of the SYMPL FUSION Base Device.
3. Select “Redirect modules and input events to this instance”.
- 4.



5. The status box of the SYMPL FUSION Base Device and the Status LED turn blue indicating the redirection. 

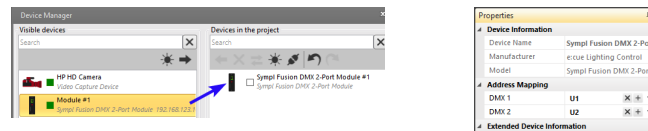
6. Drag the recognized modules from “Visible Devices” into the project.



7. You can test it.
8. Upload the project to the SYMPL FUSION Base Device.
9. Return the control of the modules to the SYMPL FUSION Base Device.

11.2 Scenario: New modules for not specified slots

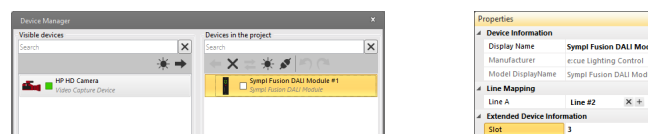
1. Create new modules.
2. Configure the properties of the modules. See the individual instruction for each module type. Leave the slot number at 0.
3. Connect the SYMPL FUSION Base Device.
4. Assign the modules with drag-and-drop.



5. You can test it.
6. Upload the project to the SYMPL FUSION Base Device.
7. Return the control of the modules to the SYMPL FUSION Base Device.

11.3 Scenario: New modules for designated slots

1. Create new modules.
2. Configure the properties of the modules. See the individual instruction for each module type.
3. Set the slot number in which the corresponding module type is installed in the SYMPL FUSION Base Device.



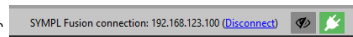
4. Connect the SYMPL FUSION Base Device.



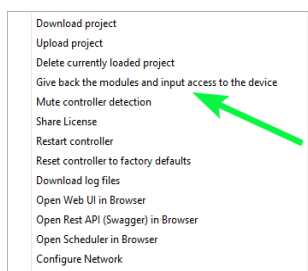
5. You can test it.
6. Upload the project directly to the SYMPL FUSION Base Device.
7. Return the control of the modules to the SYMPL FUSION Base Device

11.4 Return of control

To complete the modules configuration, return the control over them back to the SYMPL FUSION Base Device. To return the control, click “Disconnect” in the main menu bar



Alternatively, open again the context menu of the SYMPL FUSION Base Device and select “Give back the modules and input access to the device”.



Upon uploading a project file to the SYMPL FUSION Base Device and clicking “Handover & Close”, the control over the modules also returns back to the SYMPL Fusion.

The status box of the SYMPL FUSION Base Device turns back to green indicating the full control of the device.

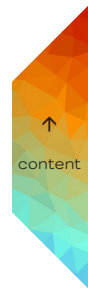


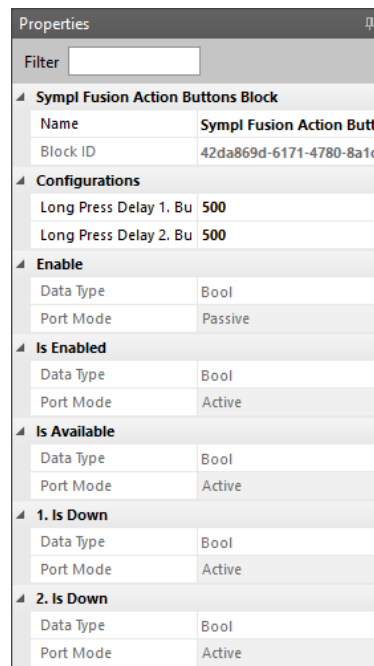
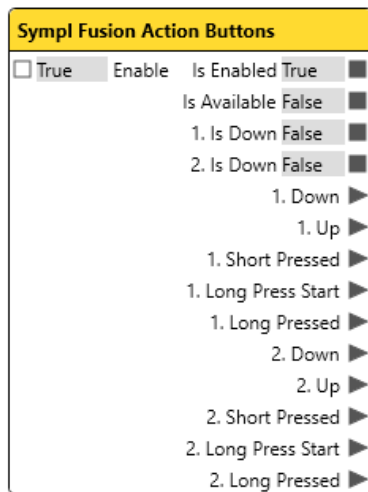
- If the connection between Sympholight and the SYMPL FUSION Base Device is interrupted while Sympholight has control of the modules, Sympholight will try to re-establish the connection continuously until you return control. While the connection is interrupted, the SYMPL FUSION Base Device will take back control after 30 seconds.
- Each SYMPL FUSION DALI module and each SYMPL FUSION 0/1-10V Module 4 Ports has its own DALI line in the SYMPL FUSION Base Device. Therefore, when a base device contains e.g. two DALI modules and two 0/1-10V modules which are set to DALI, then four DALI lines are created and used within one Fusion.

12 Use of Action buttons

The two Action buttons can be assigned as needed and are versatile. Their function is defined by the Workflow in Sympholight.

To integrate the two Action buttons of the device into your project and to react to their events, add the Workflow block “Sympl Fusion Action Buttons” to your Sympholight workflow and connect it to your automation according to your requirements.





Use this Block to trigger automation from the Action buttons of a SYMPL Fusion device.

The Block has an Enable PortIn, four PortOuts for the block and button states and ten EventOuts for button triggers.

- Define the long press delays.

Category	Property	Description
Configurations	Long Press Delay 1. Button	Define the amount of time that should elapse after pressing the Action 1 button before it is considered a long press. Value range from 100 to 5000 ms. Default= 500 ms.
	Long Press Delay 2. Button	Define the amount of time that should elapse after pressing the Action 2 button before it is considered a long press. Value range from 100 to 5000 ms. Default= 500 ms.
Enable		A passively received bool value to dis- or enable the Block.



Is Enabled	An actively sent bool value whether the Block is enabled or not at the “Enable” PortIn.
Is Available	An actively sent bool value whether the action buttons of a SYMPL Fusion are available or not. Depends on which instances has the control over the modules and inputs from a SYMPL Fusion. When FALSE, the button states and actions cannot be processed.
1. Is Down	An actively sent bool value whether the Action 1 button is currently being pressed or not.
2. Is Down	An actively sent bool value whether the Action 2 button is currently being pressed or not.

Event Port	Description
1. Down	Sends a trigger when the Action 1 button is down.
1. Up	Sends a trigger when the Action 1 button is up.
1. Short Pressed	Sends a trigger after a short press of the Action 1 button. Short press: a single push and release within a period that is shorter than the defined Long Press Delay 1 Button period.
1. Long Press Start	Sends a trigger after the long press start of the Action 1 button. Long press start: a single press that exceeds the defined Long Press Delay 1 Button period.
1. Long Pressed	Sends a trigger after the long press stopped of the Action 1 button. Long press stop: a release after a single long press.
2. Down	Sends a trigger when the Action 2 button is down.
2. Up	Sends a trigger when the Action 2 button is up.
2. Short Pressed	Sends a trigger after a short press of the Action 2 button. Short press: a single push and release within a period that is shorter than the defined Long Press Delay 1 Button period.



2. Long Press Start Sends a trigger after the long press start of the Action 2 button.
Long press start: a single press that exceeds the defined Long Press Delay 1 Button period.

2. Long Pressed Sends a trigger after the long press stopped of the Action 2 button.
Long press stop: a release after a single long press.

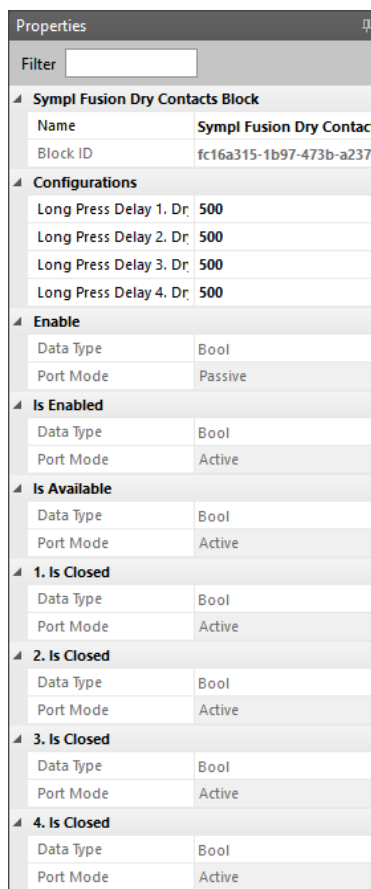
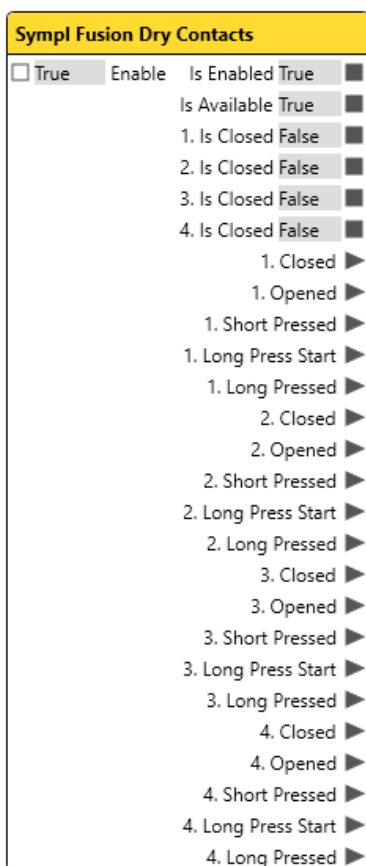
- When the access to the Action buttons is redirected to somewhere else, then no events or state changes are done. So the last known states are kept. When the access to the Action buttons is given back, then the state of the Action buttons are updated. And the all events that fit to the state are fired. So the correct update to the actual state is provided. The Block is updated to the current/actual state.
- When enabling the Block, it behaves in the same way as it does when giving back access to the Action buttons (see above).

13 Use of Digital inputs

The digital inputs can be assigned as needed and are versatile. Their function is defined by the Workflow in Sympholight.

To integrate the digital inputs into your project and to react to their events, add the Workflow block “Sympl Fusion Dry Contacts” to your Sympholight workflow and connect it to your automation according to your requirements.





Use this Block to trigger automation from the digital inputs of a SYMPL Fusion device.

The Block has an Enable PortIn, four PortOuts for the block and inputs states and ten EventOuts for digital input triggers.

- Define the long press delays.

Category	Property	Description
Configurations		Configure the definition of a long press.
	Long Press Delay 1. Dry Contact (respectively 2, 3, or 4)	Define the amount of time that should elapse after the digital input 1 (respectively 2, 3, or 4) closes before it is considered a long press. Value range from 100 to 5000 ms. Default= 500 ms.
Enable		A passively received bool value to dis- or enable the Block.



Is Enabled An actively sent bool value whether the Block is enabled or not at the “Enable” PortIn.

Is Available An actively sent bool value whether the digital inputs of a SYMPL Fusion are available or not. Depends on which instances has the control over the modules and inputs from a SYMPL Fusion. When FALSE, the inputs states and actions cannot be processed.

1. Is Closed (respectively 2, 3, or 4) An actively sent bool value whether the digital input 1 (respectively 2, 3, or 4) is closed or not.

Event Port	Description
1. Closed (respectively 2, 3, or 4)	Sends a trigger when the digital input 1 (respectively 2, 3, or 4) is closed.
1. Opened (respectively 2, 3, or 4)	Sends a trigger when the digital input 1 (respectively 2, 3, or 4) is opened.
1. Short Pressed (respectively 2, 3, or 4)	Sends a trigger after a short press of the digital input 1 (respectively 2, 3, or 4). Short press: a single close and open within a period that is shorter than the defined Long Press Delay 1 (respectively 2, 3, or 4) Dry Contact period.
1. Long Press Start (respectively 2, 3, or 4)	Sends a trigger after the long press start of the digital input 1 (respectively 2, 3, or 4). Long press start: a single close that exceeds the defined Long Press Delay 1 (respectively 2, 3, or 4) Dry Contact period.
1. Long Pressed (respectively 2, 3, or 4)	Sends a trigger after the long press stopped of the digital input 1 (respectively 2, 3, or 4). Long press stop: an open after a single long press.

- When the access to the digital inputs is redirected to somewhere else, then no events or state changes are done. So the last known states are kept. When the access to the digital inputs is given back, then the state of the digital inputs are updated. And the all events that fit to the state are fired. So correct update to the actual state is provided. The Block is updated to the current/actual state.
- When enabling the Block, it behaves in the same way as it does when giving back access to the digital inputs (see above).



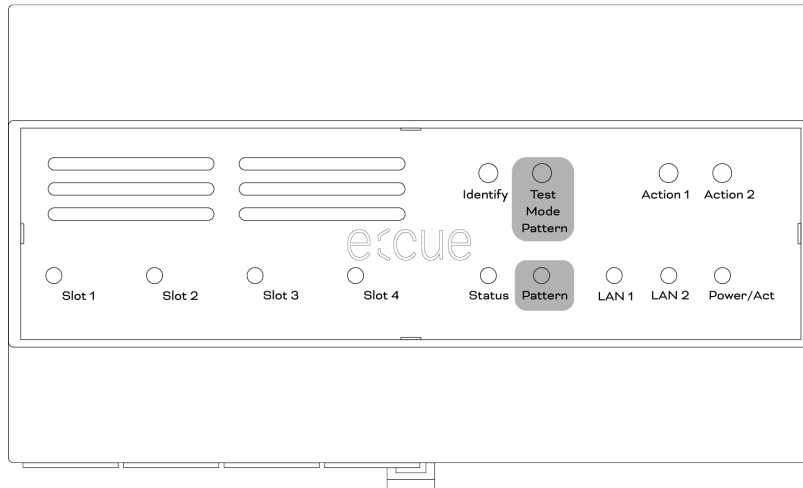
14 Test mode

The SYMPL FUSION Base Device provides a Test mode for connected fixtures.

There are two kinds: using the Test button and using the web interface of the SYMPL FUSION Base Device.

Please note that the Test mode overwrites all other output like running project content for the time of testing. A running show is reverted to after exiting the Test mode.

14.1 Test mode via Test buttons



You can directly test fixtures connected to installed modules via the “Test Mode Pattern” button and the “Act / Test Slot” buttons on the device.

- Long press the “Test Mode Pattern” button: Test mode on/off. The Pattern LED blinks in blue when the Test mode is activated.
- Press the “Act / Test Slot” buttons: Select the slot you want to test. The LED of the currently selected slot blinks in red.
- Short press the “Test Mode Pattern” button: Switch between test patterns for the selected slot. The available test patterns depend on the installed module type.

When you do not deactivate the test mode for each module explicitly by switching the test pattern to “Off”, the test remains active on the module, even when the slot is deselected. This makes it possible to create a test mode across all modules with different content on each module.

The Test mode can be turned off using different methods: :

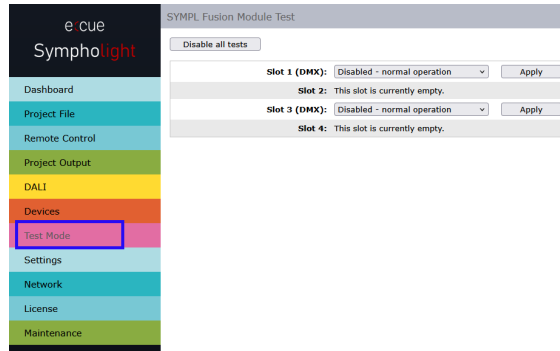
- Press and hold the Pattern button. This also works for tests started from the web interface.
- On the web interface, disable all tests button. This also works for tests started with the buttons.
- Restart the device.

14.2 Test mode via web interface

The web interface of the SYMPL FUSION Base Device provides four different test patterns.

To access the web interface, open a web browser on a connected PC. Enter the SYMPL FUSION Base Device's IP address into the address bar:
e.g. http://192.168.123.100.

Open the Test mode page by selecting “TestMode” on the left side of the web interface of the SYMPL FUSION Base Device:



Each module is tested individually:

- Select the test pattern. The available test pattern depends on the module type.
- Start and stop the test.

Click “Disable all tests” to stop all running tests and return to normal operation. Tests started using the buttons before show up in the web interface. You can change the patterns and disable the tests there as well.



In case a Test mode is running and a Desktop Sympholight connects to the SYMPL FUSION Base Device, the Test mode remains active.

15 Using SYMPLFUSION Base Device as License Key for SYMPHOLIGHT

The SYMPL FUSION Base Device can be used as License Key for the SYMPHOLIGHT Software. In order to transfer the License to another SYMPHOLIGHT instance, go to the Setup Tab of the SYMPHOLIGHT the License shall be transferred to. Open the context menu of the SYMPL FUSION Base Device in the Devices Window. Select Share License and enter the password for the SYMPL FUSION Base Device you've configured before. If you did not set a password for the SYMPL FUSION Base Device

before, please refer to chapter “6.2 Network configuration via web interface” on page 24 for further instructions and set a password.

Once the License has been transferred successfully, the red “Trial Version” label will be removed. This can take a few moments.



- Please be aware that the Share License feature is not meant for permanent operation, but is limited for a certain period of time (4 hours). Once the License is expired, it can be renewed by selecting Share License from the context menu again.
- Any automated use of the license sharing feature violates the license conditions and is forbidden, including, but not limited to, scripts and UI automation.

16 Uploading a Project

Before uploading a project, try the project and its triggers/ automation on a PC running SYMPHOLIGHT.

Upload a project to the SYMPL FUSION Base Device via its web interface or its context menu in SYMPHOLIGHT.

17 Using Video with the SYMPLFUSION Base Device

Please be aware that the SYMPL FUSION Base Device is capable of decoding a maximum of two videos in parallel.

18 Accessing the Logfiles

You can ccess the log files in two different ways:

- Access or download via the web interface’s Maintenance tab.
- Directly enter the following URL in the browser: `http://[IP Address]/logs/`.



19 Automatic Node Replacement Mode

Via the web interface of a SYMPL FUSION Base Device in SYMPHOLIGHT, enable this mode to automatically replace an (offline) node with another, available node of the same type on the SYMPL FUSION Base Device.



Only replace one Node at a time.

Prerequisites

- A computer to download and upload files and with a supported web browser. Supported web browsers are: Google Chrome, Microsoft Edge, Mozilla Firefox, Safari.
- A stable network access of the computer to the SYMPL FUSION Base Device. It is recommended to use a wired network connection.
- The SYMPL FUSION Base Device is running.
- On the SYMPL FUSION Base Device an installed SYMPHOLIGHT v5.2 or newer.
- The password to the web interface of the SYMPL FUSION Base Device is set.

How to perform the replacement

1. If the replacing node is already connected, remove it from the network.
2. Remove the node to be replaced from the network.
3. Open the SYMPL FUSION Base Device web interface and select “Configuration”.
4. In the “Settings” Tab enable the “Automatic Node Replacement Mode”. The search for an equivalent node automatically starts.
5. Connect the replacing node to the network. The node is integrated into the project. The project works like before the replacement.
6. Disable the “Automatic Node Replacement Mode” in the “Settings” Tab.
7. Go to the “Project File” Tab.
8. Press the “Download project with media (as *.hfp)” button and download the project file.
9. Upload the project file again. Now the replacement implemented.

When you have more than one node to be replaced, proceed with the next replacing node by starting from the first step.

20 Remote control

20.1 ActionPad

Call the project’s user interface - the ActionPad of Sympholight - by opening the web interface in a browser:

1. Open a common web browser on a connected PC. Enter the

SYMPL FUSION Base Device's default IP address into the address bar:
e.g. <http://192.168.123.100>.

The remote console of the device is displayed:



2. Select "ActionPad" and the ActionPad of the loaded project of the SYMPL FUSION Base Device is displayed.

Alternatively, you can also install the SymphoTouch app on a mobile device ([Google Play](#), [Apple Store](#)) and, when connected with the SYMPL FUSION Base Device, open the ActionPad from there.

20.2 SymphoCity

For project control, scheduling and maintenance, the SymphoCity app offers extended remote control options. Install, configure and run the application on a server - a SYMPL FUSION Base Device does not work as a hosting instance.

However, a connection to the SYMPL FUSION Base Device is required in order to control the device from within SymphoCity. For further information and requirements, visit <https://eu.traxon-ecue.com/symphocity/>.



21 Firmware update

The SYMPL FUSION Base Device runs on an integrated firmware of Sympholight without user interface.

There are different ways to update the SYMPL FUSION Base Device:

1. Update via the context menu - see [page 44](#)
2. Update via web interface - see [page 44](#).
3. Update with a USB flash drive - see [page 47](#).

21.1 Update via context menu

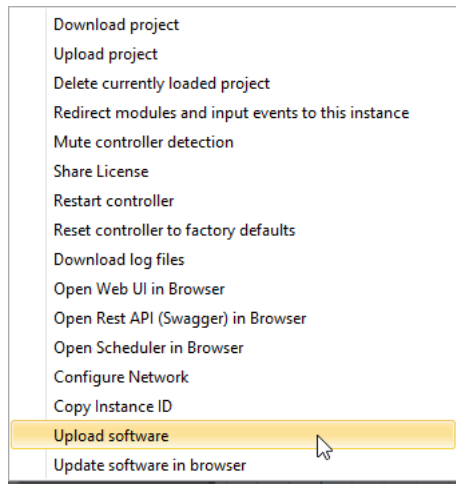
Update a SYMPL FUSION Base Device in Sympholight. The configuration, i.e. the settings, the Sympholight project file, and any media files, is preserved.

21.1.1 Prerequisites

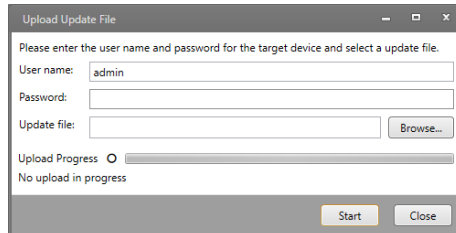
- A computer with a running Sympholight.
- A stable network access of the computer to the SYMPL FUSION Base Device. It is recommended to use a wired network connection.
- The SYMPL FUSION Base Device is running.
- The password to the web interface of the SYMPL FUSION Base Device is set.

21.1.2 How to perform the update

1. Download the new update file from www.ecue.com to the computer. The update file has the extension *.scfs and contains the new software.
2. Connect the computer to the same network as the SYMPL FUSION Base Device.
3. In Sympholight, go to **Setup - Sympholights**.
4. Right-click on the SYMPL FUSION Base Device.
5. In the context menu, select **Upload software**.



6. Enter user name and password. Browse for the update file. Click the **Start** button.



The update process starts. It will take some minutes, indicated by a progress bar.



In case of an upload error, try the update again from [step 4](#) onwards **without restarting** the SYMPL FUSION Base Device.

At the end of the update process, the SYMPL FUSION Base Device restarts and resumes normal operation. When the Status LED blinks green slowly, the device has restarted and is operational. The update is now completed.



Do not interrupt the network connection or disconnect the power from the SYMPL FUSION Base Device while the update is in progress. Otherwise, the device may fail to start.

21.1.3 Troubleshooting

If the SYMPL FUSION Base Device does not restart properly after the update, try the other update option „[21.3 Update with a USB flash drive](#)“ on page 47.

21.2 Update via web interface

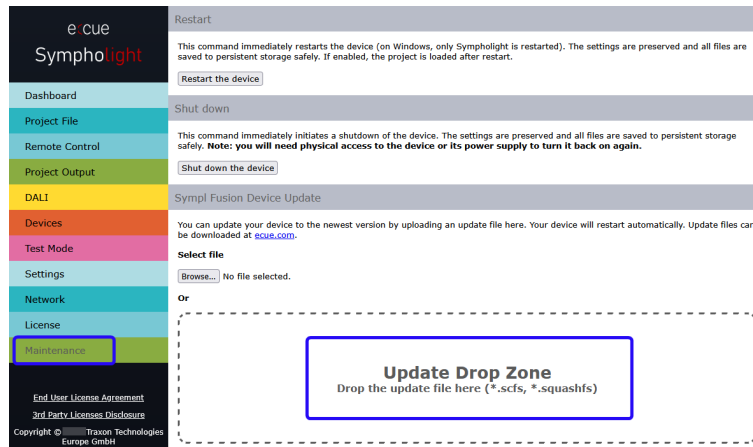
Update a SYMPL FUSION Base Device remotely using its web interface. The configuration, i.e. the settings, the Sympholight project file, and any media files, is preserved.

21.2.1 Prerequisites

- A computer with internet access and a supported web browser. Supported web browsers are: Google Chrome, Microsoft Edge, Mozilla Firefox, Safari.
- A stable network access of the computer to the SYMPL FUSION Base Device. It is recommended to use a wired network connection.
- The SYMPL FUSION Base Device is running.
- The password to the web interface of the SYMPL FUSION Base Device is set.

21.2.2 How to perform the update

1. Download the new update file from www.ecue.com to the computer. The update file has the extension *.scfs and contains the new software.
2. Connect the computer to the same network as the SYMPL FUSION Base Device.
3. Open the web interface of the SYMPL FUSION Base Device.
4. Open the “Maintenance” page.
5. Drag and drop the update file onto the “Update Drop Zone”.



The update process starts. It will take some minutes.



- Do not leave or refresh the “Maintenance” page or hide the SYMPL FUSION Base Device browser tab while the update is in progress. This will lead to an incomplete update.
- In case of an upload error, try the update again from [step 4](#) onwards **without restarting** the SYMPL FUSION Base Device.

At the end of the update process, the SYMPL FUSION Base Device restarts and resumes normal operation. When the Status LED blinks green slowly, the device has restarted and is operational. The update is now completed.



Do not interrupt the network connection or disconnect the power from the SYMPL FUSION Base Device while the update is in progress. Otherwise, the device may fail to start.

21.2.3 Troubleshooting

If the SYMPL FUSION Base Device does not restart properly after the update, try the other update option „21.3 Update with a USB flash drive“ on page 47.

21.3 Update with a USB flash drive

Update a SYMPL FUSION Base Device using a USB flash drive. The configuration, i.e. the settings, the Sympholight project file, and any media files, is preserved.

21.3.1 Prerequisites

- A computer with internet access and USB port.
- A USB flash drive with min. 4 GB storage capacity and file system FAT32.

21.3.2 How to perform the update

1. Connect the USB flash drive to the computer.
2. Remove all files from the USB flash drive.
3. Download the new update ZIP file from www.ecue.com to the computer. The update ZIP file contains the new software.
4. Unzip the update file.
5. Copy all unzipped files to the root directory of the USB flash drive.
6. Use “Safely Remove Hardware and Eject Media” from the Windows task bar or “Eject” for Macs.
7. Unplug the USB flash drive from the computer.
8. Power off the SYMPL FUSION Base Device.
9. Insert the USB flash drive into the SYMPL FUSION Base Device.
10. Keep the “Identify” button pressed while powering the SYMPL FUSION Base Device up.
11. After several seconds, the Status LED lights up in violet. Release the “Identify” button now. The update process starts. It will take 1-2 minutes.

At the end of the update process, the SYMPL FUSION Base Device restarts and resumes normal operation. When the Status LED blinks green slowly, the device has restarted and is operational. The update is now completed.



Do not interrupt update processes. This will lead to an incomplete update. Wait until the SYMPL FUSION Base Device resumes normal operation.

22 Modules update

A SYMPL Fusion module runs on an integrated firmware. The firmware is a specific Sympholight application.



It is recommended to update the firmware whenever a newer version is available.

There are different ways to update the firmware:

1. Update via the context menu - see [page 48](#)
2. Update via web interface - see [page 48](#).
3. Upload an specific firmware version via context menu - see [page 50](#).

22.1 Update via context menu

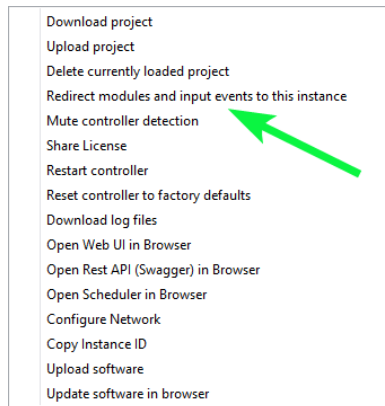
Update a module in Sympholight to the firmware version that comes along the .SYMPL FUSION Base Device firmware The configuration is preserved.

22.1.1 Prerequisites

- A computer with a running Sympholight.
- A stable network access of the computer to the SYMPL FUSION Base Device. It is recommended to use a wired network connection.
- The SYMPL FUSION Base Device is running.
- The password to the web interface of the SYMPL FUSION Base Device is set.

22.1.2 How to perform the update

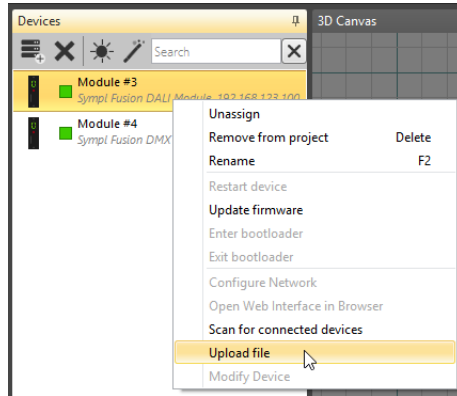
1. Connect the computer to the same network as the SYMPL FUSION Base Device.
2. In Sympholight, go to **Setup - Sympholights**.
3. Right-click on the SYMPL FUSION Base Device.
4. In the context menu, select **Redirect modules and input events to this instance**.



5. Go to **Devices**.
6. Right-click on the module which you want to update.



- In the context menu, select **Update firmware**.



The update process starts, indicated by a red status box.

At the end of the update process, the module resumes normal operation. When the status box changes back from red, the module is operational. The update is now completed. You can hand back the modules to the SYMPL FUSION Base Device.

22.2 Update via web interface

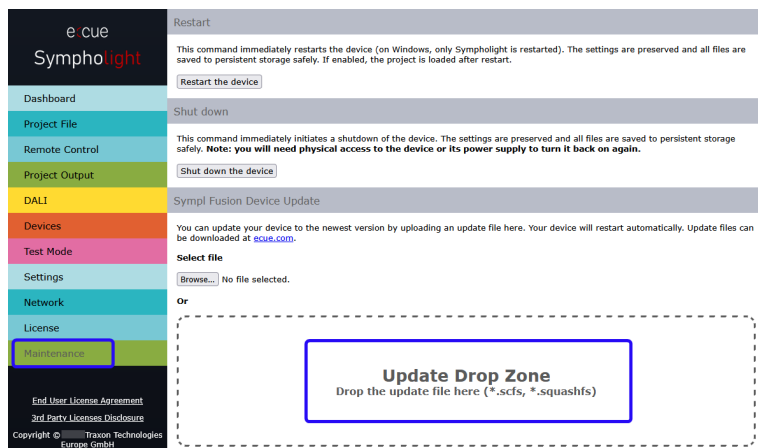
Update a module remotely using the web interface of the SYMPL FUSION Base Device to the firmware version that comes along the .SYMPL FUSION Base Device firmware. The configuration is preserved.

22.2.1 Prerequisites

- A computer with internet access and a supported web browser. Supported web browsers are: Google Chrome, Microsoft Edge, Mozilla Firefox, Safari.
- A stable network access of the computer to the SYMPL FUSION Base Device. It is recommended to use a wired network connection.
- The SYMPL FUSION Base Device is running.
- The password to the web interface of the SYMPL FUSION Base Device is set.

22.2.2 How to perform the update

1. Connect the computer to the same network as the SYMPL FUSION Base Device.
2. Open the web interface of the SYMPL FUSION Base Device.
3. Open the “Devices” page.
4. When a new module firmware is available, click the “Update firmware” button in the Actions column.



The update process starts, indicated by a red status box.



- Do not leave or refresh the “Devices” page or hide the SYMPL FUSION Base Device browser tab while the update is in progress. This will lead to an incomplete update.
- In case of an upload error, try the update again from [step 3](#) onwards **without restarting** the SYMPL FUSION Base Device.

At the end of the update process, the module resumes normal operation. When the status box changes back from red, the module is operational. The update is now completed.

22.3 Upload a specific firmware version via context menu

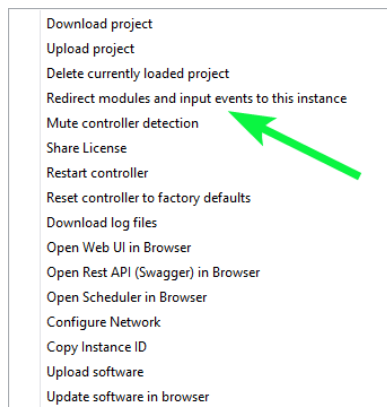
Upload a specific module firmware version. Available in Sympholight. The configuration is preserved.

22.3.1 Prerequisites

- A computer with a running Sympholight.
- A stable network access of the computer to the SYMPL FUSION Base Device. It is recommended to use a wired network connection.
- The SYMPL FUSION Base Device is running.
- The password to the web interface of the SYMPL FUSION Base Device is set.

22.3.2 How to perform the update

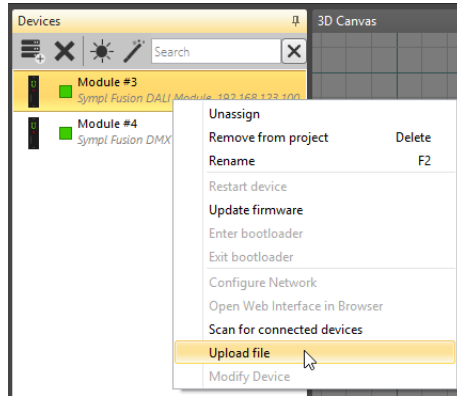
1. Download the new update file to the computer, e.g. from www.ecue.com. The update file has the extension *.dwn or *.bxt and contains the new firmware.
2. Connect the computer to the same network as the SYMPL FUSION Base Device.
3. In Sympholight, go to **Setup - Sympholights**.
4. Right-click on the SYMPL FUSION Base Device.
5. In the context menu, select **Redirect modules and input events to this instance**.



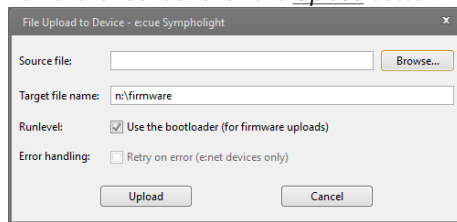
6. Go to **Devices**.
7. Right-click on the module which you want to update.



- In the context menu, select **Upload file**.



- Browse for the update file (source file). Keep the target file name unchanged and the runlevel checked. Click the **Upload** button.



The update process starts, indicated by a red status box.

At the end of the update process, the module resumes normal operation. When the status box changes back from red, the module is operational. The update is now completed. You can hand back the modules to the SYMPL FUSION Base Device.

23 Restart

To restart the SYMPL FUSION Base Device, use the Restart button in the web interface of the SYMPL FUSION Base Device. It is located at the “Maintenance” page.



Restarting via power disconnect should be the exception. Restarting or shutting down from the web interface ensures data integrity, whereas sudden power loss may result in data loss.

24 Dismounting



Before dismounting, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).

Disconnect all attached cables. Dismount the e:cue SYMPL FUSION Base Device from the rail by pulling down the handle of the DIN rail bracket at the back and unhitching the SYMPL FUSION Base Device. The dismounting is completed.

25 Certifications



Conforms to ANSI/UL Std. 62368-1
Certified to CSA Std. C22.2 NO. 62368-1



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.

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 the equipment and receiver.
- 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.



26 Dimensions

All dimensions in mm

