

ecue



AM476230031, AM476240031, AM476250031

SYMPHOLIGHT Gateway BACnet

Information for Use

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 specialists trained in control and automation technology with experience in installing, commissioning and using gateways

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Downloads and more information at: www.ecue.com

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Information for Use

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



1

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

The hardware and software present no direct hazards. However, in their function as a router or gateway between networks in building infrastructures, they are able to seriously disrupt the interaction of network components.



Misconfiguration of hardware and software:

- Faulty configuration of hardware and software can cause malfunctions in the building infrastructure on network components, sensors or actuators, for example:
- Monitoring devices, such as fire alarm or intrusion detection systems, are deactivated.
- Machines and fans start up unexpectedly.
- Gate valves and other valves open or close unintentionally. Under certain circumstances, this can lead to serious injuries or death.
 - The device should only be configured by specialist personnel who are familiar with network configuration.
 - A connection to a network must not be established, before the device has been fully configured.
- 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

The SYMPHOLIGHT Gateway BACnet is an MQTT to BACnet interface. It converts data from the lighting management system SYMPHOLIGHT into the building management system compliant format. Forward e.g. movement and brightness information and to process it smartly in the building management system.

With the integrated web interface, you can configure the SYMPHOLIGHT Gateway using a web browser, save the configuration and call up statistics and documentation. That makes configuring the devices significantly easier, allowing them to be commissioned more quickly. The web interface also enables the use of different upgrade options of the gateway, such as activation on up to 2,500 data points.

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Main functions of the SYMPHOLIGHT Gateway BACnet

- Converting SYMPHOLIGHT's MQTT to BACnet
- Forwarding of any data from SYMPHOLIGHT via MQTT, e.g. brightness and color information, sensor, energy and luminaire information (RDM, DALI)
- Available with 25, 500 or 2500 data points (1 data point corresponds to one unidirectional piece of information from SYMPHOLIGHT)
- Automation functions (alarms, trend log recording and scheduling) on a data point basis
- Reporting of system status, sequence information and failures
- Web interface for configuration
- Fast import of large data point configuration via Excel file
- BACnet/SC Encrypted transmission via BACnet standard 22
- Incl. SYMPHOLIGHT license for transmission of MQTT data

2.1 Delivery content

Delivery content for the e:cue SYMPHOLIGHT Gateway BACnet:

- 1. e:cue SYMPHOLIGHT Gateway BACnet with:
 - 25 data points (AM476230031)
 - 500 data points (AM476240031)
 - 2,500 data points (AM476250031)
- 2. Safety instructions
- 3. Welcome note
- 4. 2-pin Power terminal plug

2.2 Optional accessories

Power supply 15W 24V DIN rail (AM1884100HA)

2.3 Number of data points

A data point corresponds to a unidirectional connection between two data points. The direction of value transmission is irrelevant here.

The number of data points (DP) available is determined by the device type and license. The number of DPs supplied with the gateway is shown on the back of the device. The number of DPs corresponds to the number of different addresses entered in the file *dispatch.txt* with the keyword **target =**.

With regard to data points, gateways of the SYMPHOLIGHT Gateway BACnet are available in three gradations:

- 25 data points (AM476230031)
- 500 data points (AM476240031)
- 2,500 data points (AM476250031)

You can upgrade your data points at any time. Please contact support@ecue.com.

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2.4 Product specifications

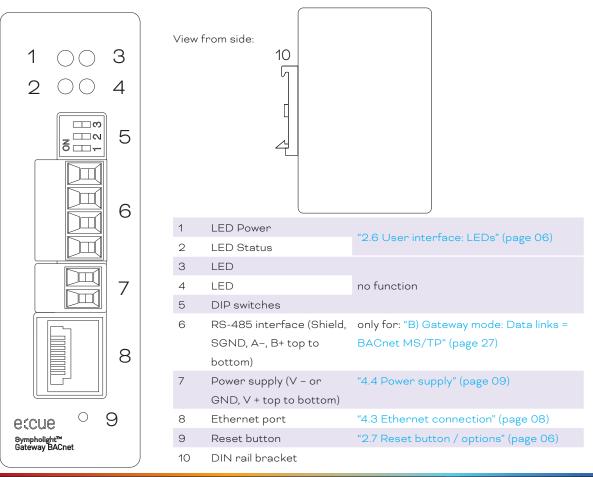
Dimensions	31 x 100 x 65 mm / 1.22 x 3.94 x
(W x H x D)	2.56 in (excl. fastening clip)
Weight	250 g / 0.55 lb
Power supply input	12 24 V DC or AC
Power consumption	1.7 W
Operating temperature	0 40 °C / 32 104 °F
Storage temperature	0 40 °C / 32 104 °F
Operating / storage	20 80% RH, non-condensing
humidity	
Protection class	IP20
Housing	metal
Mounting	on 35 mm DIN rail (EN 60715)
Certificates	CE, UKCA

Interface specifications

Power interface	Power supply on 2-pin terminal plug
	V + : 12 24 V DC or AC
	V – : GND or 12 24 V AC
	wire gauge: 0.2 - 1.3 mm ²
Ethernet-Port	1 x Ethernet 10/100 Mbit/s, RJ45
User interfaces	LEDs for Ethernet activity and device
	status;
	Reset button;
	web interface for configuration

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2.5 Connectors and interfaces



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On the casing, there is a product label with the following data:

- Ethernet MAC address(s)
- Default IP address

2.6 User interface: LEDs

The SYMPHOLIGHT Gateway BACnet has four LEDs on the front panel. The LEDS show the basic states of the device.

LEDs

1	Power	Off: no voltage applied. On: voltage applied.
2	Status	Orange for approx. 8 sec: System initialization after switch-on Flashing green: Normal state, all drivers communicating Flashing red and green: A communication partner isn't communicating. Red flashing: More than one communication partner isn't communicating. Flashing alternately red and green: During the reset process "2.7 Reset button / options" (page 06).
З	Тx	no function
4	Rx	no function

Status LED:

Color code	Definition	Data point
Flashing green	Normal state	
Flashing orange and green	Projected indicator	S LED info
Flashing red and green	A failure parameter on <i>defect</i>	S LED warning
Red flashing	Two or more failure parameters on defect	S LED error
Red	At least one driver not started properly	

The data points determine the LED color code with ascending priority. The **S led warning** and **S led error** parameters are set automatically by the gateway in accordance with the projected failure parameters.

2.7 Reset button / options

With the hardware Reset button, the device can be reset without calling up the configuration interface. You can find the reset button on the front of the device. The button may only be pressed with a suitable tool (Ø1.5mm).

Depending on the duration of pressing, the following changes are executed:

Duration in seconds	Action	Comments
1 5	Restart	Status-LED flashes green.
5 10	Sets the IP address to 192.168.123.1 (default) until the	Status-LED flashes orange.
	next restart.	
30+	Factory reset	Status-LED flashes red.

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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 SYMPHOLIGHT Gateway BACnet 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 04. 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.

3.5 Disposal

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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 Karl-Schurz-Str. 38 33100 Paderborn, Germany +49 (5251) 54648-0 support@ecue.com

Installation 4

The installation of the SYMPHOLIGHT Gateway BACnet consists of mounting the device, connections to the network via Ethernet and to power supply.

The sequence of cabling is not defined. Supply the SYMPHOLIGHT Gateway BACnet with power after all cabling is completed; it starts booting.



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Electric shock injury hazard:

The device may only be installed in a control cabinet (top-hat rail) when the power is disconnected. The system must be disconnected for installation.

4.1 Installation conditions

Installation position	No terminals on top and bottom
Horizontal spacing	No spacing necessary. A sufficient distance (≥ 15 mm) to the other components on the top hat rail is recommended for mounting the device in the control cabinet. This ensures better heat dissipation, which can have a positive influence on the service life of the device.
Vertical spacing	No spacing necessary
Installation location	Indoor

4.2 Mounting

The e:cue SYMPHOLIGHT Gateway BACnet is designed to mount onto a 35 mm DIN rail (EN 60715) in a vertical position. Install the gateway in the electrical cabinet and make sure that there is sufficient ventilation to ensure the specified temperature range (0 to 45 °C).

4.3 Ethernet connection

- Do not connect to a customer network before the gateway has been fully configured.
- Never connect more than one SYMPHOLIGHT Gateway BACnet in factory state to a network. The identical IP addresses will conflict and disturb proper communication.
- The Ethernet port of the SYMPHOLIGHT Gateway BACnet is not designed for inter-building connections with power and lighting transients. Use only intra-building networks to connect the SYMPL Nodes and Cores.

Connect the SYMPHOLIGHT Gateway BACnet at the designated Ethernet interface with a patch cable (RJ45, CAT5).Use CAT5 UTP or STP cable (or equivalent). The pin-assignment of the Ethernet port corresponds to RJ45 standards. You can use every common Ethernet component, like cable, splitters, and switches.

Avoid laying cables parallel to power lines, e.g. to motors, frequency converters, etc.

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Power supply 4.4

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Connect the gateway to the green, two-pole port with a power supply as per the technical specifications.

- Risk of injury due to electrical current on 230 V mains: Do not use a defective power supply unit or connection lines.

Do not switch the power supply on until the gateway has been installed and connected.

 The guarantee will become null and void if the gateway is connected to an unsuitable power supply or the casing is opened. There are no controls inside the casing.

Configuration using the web interface 5

To configure the gateway, the installation of Ethernet and power supply must be completed. You also need:

- Computer, connected to the network
- Installed web browser

5.1 Opening the web interface

The gateway has an integrated web server for configuration. The web server provides the configuration settings in the form of websites. You use the web interface to configure the IP and other settings, and you save the changes with [Save]. Following changes to the network configuration, it is sometimes necessary to restart the gateway.

Under factory settings, the web server is accessible at the following IP address:

- IP address: 192.168.123.1
- 255.255.0.0 Network mask:

Connect the SYMPHOLIGHT Gateway BACnet to your PC with the network cable for configuration. Enter the IP address of the SYMPHOLIGHT Gateway BACnet web server in a web browser: http://192.168.123.1.

Note that your computer's LAN connection has to be set appropriately. For a manual setting, define the IP address as 192.168.123.2, for example. The network mask must match that of the gateway.

Web browser support

The integrated web server has been tested with various browsers and operating systems and has been approved. If you have problems with your browser, please notify the support team. Please indicate the exact browser version, the exact version of the operating system and a brief description of the problem for the diagnosis.

Web server language

The gateway provides the website in both German and English. Switch the language in the web interface using the respective flag symbols in the top right.

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5.2 Logging in

Enter the following user name and password (preconfigured administrator access) to sign in to the web server:

- Username: admin
- Password: ecue

The password can be changed using the configuration pages (menu <u>General | Password</u>). Click [Log In].

e:cue		e:cue SYMPHOLIGHT Gateway
	cation required needs user name and password to login.	

5.3 Configuring

In the web interface, configure the settings and data points to your requirements. Consider the menu items "General", "System", "BACnet" and "MQTT".

For optional data point setup support via remote maintenance or on site, contact support@ecue.com.

6 Web interface: operation and functions

When you have successfully logged in, you will see the gateway configuration interface with an overview page. The upper menu bar is there for you to navigate this.

Upper menu area

010110						e:cue SYMPHOLIGHT Gateway ECUE BACnet Gateway
e:cue	General	System	BACnet	MQTT	Help	User: admin 🌵 🏶 🔴

The web interface contains the following menu areas for configuration of the gateway:

- General
- System
- BACnet
- MQTT
- Help

All gateway settings and functions can be found in the <u>General</u> menu area. Documents and diagnostic functions can be accessed via the <u>Help</u> menu.

The username of the current user is shown in the top right. The meanings of the symbols are as follows:



Click to log out.

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Click to change the language.

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Bottom left-hand menu area

Each menu area includes sub-menus in the left-hand column which you use to call up the individual configuration pages / views.

6.1 "General" menu

6.1.1 General | Overview

After logging in, the SYMPHOLIGHT Gateway BACnet loads an overview page for the device.

C You can reload and update the page with the <u>Refresh</u> button.

01010				e:cue SYN	IPHOLIGHT Gatewa	ay ECUE BACn	et Gatew	
e:cue	General	System	BACnet	MQT	T Help	User: admir	P 🕀	
General	Overview				Last Refres	h:	C	
General				Device			REFRE	
Overview	Type:		X-Serie	_				
○ Details	Name:		ECUE BACnet (Gateway				
○ IP-Network	Location:							
 System time 	Description:		Universal Gatew	ay				
O Dropbox	Description.					11		
O Web-Services			٤	system				
○ E-Mail	Status LED:		Warning					
O User	System star	t:						
O Backup/Restore	Datapoints:		2 / 100					
 Update Restart 	CPU load:		11 %					
	Free system	n memory:	ry: 16 / 26 MByte					
			Ľ)rivers				
	State	I	Route	Туре	Name	Info		
	Online		1	system	System			
	Online		940	bac	BACnet			
	Online		1630	mqtt	MQTT			

Type: SYMPHOLIGHT Gateway BACnet type display

Name, installation location, description: This project-specific information serves to identify the SYMPHOLIGHT Gateway BACnet. The name also appears in the upper-right corner of the menu and is displayed for you to check when backing up data.

Status LED: This describes the current state of the status LED on the front of the SYMPHOLIGHT Gateway BACnet.

System start: The time at which the SYMPHOLIGHT Gateway BACnet system was last started.

Data points: Displays the number of used data points and licensed data points.

CPU-Load: Displays CPU usage in %. Avoid prolonged CPU usage of over 50%.

RAM: Displays the size of the used and total RAM in MB. Too little free space can lead to operational problems.

Drivers: Lists the current statuses of the drivers. If a driver is not online, this suggests a booting problem or a problem with the configuration of a driver. Use the diagnostics tool in the Help menu to find out more information to solve the problem.

6.1.2 General | Details

In the SYMPHOLIGHT Gateway BACnet, you can store information on the device name, the installation location, a description of the SYMPHOLIGHT Gateway BACnet and contact partner details. This information is used to better identify the relevant SYMPHOLIGHT Gateway BACnet in the network when using several SYMPHOLIGHT Gateway BACnets.

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070110				e:cue SYMPHC	LIGHT Gateway	ECUE BACne	t Gateway
ecue	General	System	BACnet	MQTT	Help	User: admin	P 🟶 🗕
General	Details				Last Refresh:		C
	Paramete	r		Value			
O Overview	Name:	ECUE BAC	net Gateway				
Details	Location:						
O IP-Network		Universa	l Gateway				
 System time 	Description:						
 Dropbox 							
 Web-Services 	Contration						
○ E-Mail	Contact pers	son:					
O User							
Backup/Restore					📕 Save		
O Update							
○ Restart							

Edit the input fields for this purpose.

i

[Save].

An info dialogue then confirms the application of the entries.

To save the settings on the configuration pages, click on

6.1.3 General | IP network

Configure the IP network settings on this configuration page.

				e:cue SYMPH	OLIGHT Gatewa	y ECUE BACnet Gateway
e:cue	General	System	BACnet	MQTT	Help	User: admin 📭 🏶 🗲
General	IP-Network				Last Refresh:	REFRESH
General			Network ad	apter LAN1		REFRESH
Overview	MAC address					
○ Details	DHCP:		Off On			
IP-Network	IP address:]	
O System time	Netmask:		255.255.0.0		<u>,</u>	
○ Dropbox			Default ç	gateway		
○ Web-Services	Gateway:		NONE	X Delete		
O E-Mail	outonuy.		Advanced			
O User						
 Backup/Restore Update 	Nr. IP	Netm	iask G	ateway	Adapter	Edit
 Opdate O Restart 					O #	Add
			Network n	ame info		
	Hostname:		EcueBacnetGW]	
	Nameserver	via DHCP:	Off On			
	Nameserver *	1:]	
	Nameserver 2	2:]	
			Serv	ices		
	Webserver ac	ccess:	https (80 redirecte	ed to 443) 🗸		
	HTTPS Certif	icate:	Choose File No	file chosen	×	Upload
	SSH:		Off On			
			Sys	log		
	Local Logleve	el:	6			
	Remote:		Off On			
	Remote Serv	er:	logserver			
	Remote Serve	er Port:	514			
						Save

↑ content

Network adapter LAN1:

For the Ethernet interface, configure the IP address, network mask and default gateway (if required). The network adapter's MAC address is displayed.

Network name:

The host name as well as two name servers can be stated here for name resolution.

Services:

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Use the drop-down list Web server access to select which protocols to use to access the gateway in the network:

- Active port 80 with unencrypted http protocol
- Active port 443 with encrypted https protocol
- Active ports 80 and 443.

Webserver access:	https (80 redirected to 443) V
	https (443) https (80 redirected to 443) http and https (80/443)

Click [Save] to apply the changed IP network settings.

The new IP settings are also activated upon saving. It may be necessary to log in again after the IP address has been changed. If IP network services with an IP name resolution are required, it is necessary to enter at least one IP name server. The secured https protocol can also be used to access the web server. Enter https:// before the IP address in the web browser here.

If communication protocols that operate via the network are installed on the gateway, carry out a system restart. This is necessary because the drivers only assume the settings of such protocols when starting the system. For the exact IP settings, ask your network administrator. If the IP network is not required for gateway operation, leave the standard settings. This makes it easier to access the gateway later.

6.1.4 General | System time

The SYMPHOLIGHT Gateway BACnet has an integrated, battery-powered, real-time clock for time keeping within the system. Several protocols require the current time. The system time must therefore be synchronized. Automatic time synchronization is advisable. However, this is not possible for every system.

The network time protocol (NTP) is a standard for synchronizing clocks in Internet protocol communication networks. The time can be set manually and also via an NTP sever or BACnet time synchronization.

The time zone can be set in order to localize the system. Adjustments are made automatically for daylight saving time based on this time zone.

Configure the time zone for the SYMPHOLIGHT Gateway BACnet and the format for the time and date. A complete system restart is required to apply the settings.

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e:cue	General	System	BACnet	MQTT	Help	e:cue SYMPHOLIGHT Gateway ECUE BACnet Gateway User: admin 💱 🖨 🗬
General	System time Mod Manual ti		-	_	_	Last Refresh:
Over vew Ovew Over vew Over v	 NTP time 	synchronizati			mode 6 and 7 p	Tuesday, 13 th 48 tm 6 ts Constant C Set clock
	Timezone:	E	Europe Berlin			▼
	Time format:	2	4 hour	~		
	Date format:	L.	yyy/mm/dd	~		
						📓 Save

Manual time setting:

This is where you make the manual time setting using the input fields.

With the *[Refresh]* button, you copy the current PC time to the input fields for the time setting. *[Set Time]* saves the set time in the gateway.

NTP time synchronization

When using NTP time synchronization, the SYMPHOLIGHT Gateway BACnet takes its time from the specified NTP server.

Evaluating BACnet time synchronization:

The SYMPHOLIGHT Gateway BACnet listens for and evaluates sent BACnet messages for time synchronization.

- Time synchronization via BACnet can only be used if the BACnet driver is installed and if there is a time synchronization master in the BACnet network. Please clarify this with the BACnet network coordinator.
 - For time synchronization via NTP, it must be possible to access an NTP server from the IP network. Ask the system administrator about this.



6.1.5 General | Dropbox

The Dropbox function can be enabled as an option. Contact us or click [Request] to order this option by mail.

01010			е	cue SYMPHC	LIGHT Gateway	ECUE BACr	net Gateway
ecue	General	System	BACnet	MQTT	Help	User: admir	n 📭 🏶 🗕
	1						
General	S Dropb	ох			Last Refresh:		C
 Overview Details IP-Network System time Dropbox Web-Services E-Mail User Reschum/Destare 	You can s Therefore	tart a license r	equest here e informatio	n about this Un	Backup/Restore vay to dropbox acc iversal Gateway.	ounts.	
 Backup/Restore Update Restart 							

6.1.6 General | Web services

The gateway offers web services to read data point lists or change data points. To activate web services, tick the <u>Web services</u> box.

You can edit the configuration file for the data point lists (systems) directly.

070110			e:cu	ie SYMPHOLI	IGHT Gatewa	y ECUE BACn	et Gateway			
ecue	General	System	BACnet	MQTT	Help	User: admin	P 🏶 🗕			
General	Web-Servic	es			Last Refresh	:	C			
	Web-Services enabled									
O Overview			Content	of configurat	tion file					
 Details 										
O IP-Network										
O System time										
O Dropbox										
Web-Services										
○ E-Mail										
O User										
O Backup/Restore										
○ Update										
○ Restart										
							Save			

6.1.7 General | Email

Activate and configure the email service on this configuration page.

010110			e:c	ue SYMPHOLIC	GHT Gateway	ECUE BACnet Gateway
e:cue	General	System	BACnet	MQTT	Help	User: admin 📭 🏶 🛑
General	E-Mail				Last Refresh:	C
		🗆 E-Mai	service enable	əd		
O Overview	E-Mail orig	nator:				
○ Details		SM	TP-Server			
○ IP-Network	IP address					
O System time	IP port:	431				
O Dropbox	Connection	type: Unsecu	red	~		
O Web-Services	Authentifica	ation: None	~			
E-Mail	Username:					
 ○ User ○ Backup/Restore 	Password:					
O Update			Send mail	Save		
⊖ Restart						

6.1.8 General | User

The password for the user admin can be changed on this configuration page. For security reasons, you are required to enter the current password once and then the new password twice.

					e:cu	e SYN	IPHOLIG	HT Gateway	ECUE B	ACnet Gate
e:cue	G	Gener	al	System	BACnet	M	ΩTT	Help	User: a	dmin 📭 斜
General	Us	er						Last Refresh:		(REF
					Options					
Overview	F	assv	ord o	ptions	high complexity v	vith dict	ionary 🗸			
O Details								Save		
O IP-Network					Accounts					
 System time 			User	Description	Account type	Edit		nfo		
O Dropbox										
O Web-Services		1	w	default user	Admin		(default	-password)		
○ E-Mail		2 8	dmin	default user	Admin		(default	password)		
User								· · ·		
 Backup/Restore 						0	400			
○ Update										
O Restart										

6.1.9 General | Backup/Restore

You can back up and restore the entire gateway configuration. The backup consists of a tgz archive file.

			e:cu	le SYMPHOLI	GHT Gatewa	y ECUE BAC	Cnet Gateway
e:cue	General	System	BACnet	MQTT	Help	User: adm	in 📭 🏶 🗕
General	Backup / R	estore			Last Refresh		C
	Mode						
 Overview 							
○ Details	Backu	p gateway con	figuration				
○ IP-Network							
 System time 	 Restor 	re gateway cor	nfiguration				
 Dropbox 			Cho	ose File No file	chosen	×	
O Web-Services							
○ E-Mail	Options:						
⊖ User	Encryption	/ Decryption:	Off (On On			
Backup/Restore	Password:						
○ Update					LES .	Start	
○ Restart						Statt	

Create gateway data backup:

Use this option to generate a data back-up of the gateway configuration. Click *[Start]* and save the back-up file. The data back-up includes all the gateway's settings and is stored locally on your PC.

Restore gateway data backup:

When you select the **Restore gateway data back-up** option, the gateway reads an available data backup from your local data storage device and restores the configuration.

Use *[Choose File]* to load the backup file to the input field and then click *[Start]*. A dialogue box will show the archive contents.

Backup/Res	store
	Backup info
Created at:	
Name:	SYMPHOLIGHT Gateway
Location:	
IP address:	192.168.123.
Ellementer	/ugw/uploads/restore.tgz
the backu	N: If you restore p archive, the
ATTENTIC the backu current co lost. Do you rea	DN: If you restore p archive, the nfiguration will be ally want to restore
ATTENTIC the backu current co lost.	DN: If you restore p archive, the nfiguration will be ally want to restore
ATTENTIC the backu current co lost. Do you rea	DN: If you restore p archive, the nfiguration will be ally want to restore

Confirm the information dialogue with <u>[OK]</u>. After restoring the data back-up, the gateway has to be restarted to make the new configuration take effect.

It is only possible to restore data backups that are intended for the gateway. It may only be possible to restore parts of faulty data backups. $\mathbf{\Lambda}$

content

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6.1.10 General | Update

The SYMPHOLIGHT Gateway BACnet offers the following options for license and software updates:

- Request new license
- Upgrade license
- Update SYMPHOLIGHT Gateway BACnet system software
- Configure driver

License request

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The current license is displayed.

To request a license (= more data points), contact support@ ecue.com. Do not use the web interface.

e:cue	General	System	e:cue BACnet	SYMPHOL MQTT	.IGHT Gate Help	way∣ECUE BACnet Gateway User: admin ┞ क्व 🖣
General	Update	roquest	iconco unarodo	Coffwor	Last Refr	
 Overview Details IP-Network System time Dropbox Web-Services E-Mail User Backup/Restore Update Restart 	This Univ X-Serie The Dr The gate	ersal Gateway with a maxin opbox exchar way's data poi	num of 100 data nge is disabled. nt license can be necessary informa	points. upgraded.	re update	Driver configuration

License upgrade

You can load the new license with this tab.

ecue	General	System	e:cue BACnet	SYMPHOLIGH MQTT	HT Gatewa Help	ay ECUE BACne User: admin	_ `
General	Update				Last Refrest	h:	REFRESH
 Overview Details IP-Network System time Dropbox Web-Services E-Mail User Backup/Restore Update Restart 	This licen Please se The licen	point upgrade se is only valie	ransfered to the g	hardware. system of you	r PC and p	Driver configuration	

You will receive a license file from the manufacturer of the SYMPHOLIGHT Gateway BACnet. This license file must be located on your computer. The license file is only valid for the device the request was sent from. The license file cannot be transferred to other devices.

Load the license file in the input field with [Choose File]. Click [Start]. The license file is transmitted to the SYMPHOLIGHT Gateway BACnet and checked. The license has now been updated.

Software update

Software additions and fixes mean that it is sometimes necessary to update the SYMPHOLIGHT Gateway BACnet. You will receive an update file from the manufacturer. This must be stored on your computer and must be selected to update. Please only select files that you have received from the manufacturer for the update.

You can install the new firmware version on the gateway on this configuration page. These updates may contain bug fixes, improvements or new functions.

010110			e:cue	:cue SYMPHOLIGHT Gateway ECUE BACnet Gatewa						
ecue	General	System	BACnet	MQTT	Help	User: admin	P* 🟶 🗕			
General	Update				Last Refresh	c	C			
 Overview Details IP-Network System time Dropbox Web-Services E-Mail User Backup/Restore Update Restart 	Please up provided has to be restarting Current v	pload software by MBS ensur ".upd". The up the gateway.	License upgrade updates here. C e proper operatin ploaded update fr The gateway's cr W-2372-Osram-a hosen	on. The file ex le is activated onfiguration is	es ttension d after s not affected.	Driver configurati	on			

Load the firmware file in the input field with [Choose File]. Transfer the file to the device with [Start].

Driver configuration

Using this tab, you can configure the active drivers and specify the interfaces on which they run.

e:cue	General	System	e BACnet		MQTT		ateway lelp	ECUE BA User: add	
General	Update)(Refresh:		RE
Overview	Licens	e request	license upgra	ade	Softwa	re updat	e D	river config	uration
O Details	Ro	ute Na	me	Туре	Options	Serial	Data	point file	
○ IP-Network	0 17) Log. Verkn	uepfungen	aw			/ugw/co	nfig/gw1.txt	
O System time	94			bac				nfig/bac1.tx	
O Dropbox	94	DACHEL		Jac			/ugw/co	mig/bac i.tx	
Web-Services	16	30 MQTT	1	nqtt			/ugw/co	nfig/mqtt1.t	d 🗾
○ E-Mail ○ User ○ Backup/Restore ◉ Update ○ Restart		elete complete c	latapoint con	figurat	ion	0	Add		ave

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6.1.11 General | Restart

Changing the configuration, importing a data backup or adjusting any other settings requires you to restart the communication software of the gateway.

070110			e:cu		GHT Gateway	y ECUE BACn	et Gateway
e:cue	General	System	BACnet	MQTT	Help	User: admin	P* 🟶 🛑
General	Restart				Last Refresh.		C
	The new co	onfiguration is	active after rest	arting the gatev	av		
 Overview 		generation		annig the gater			
 Details 				U Restart			
○ IP-Network							
 System time 							
 Dropbox 							
O Web-Services							
○ E-Mail							
○ User							
 Backup/Restore 							
 Update 							
Restart							

If the system needs to be restarted, this will pop up below the upper menu bar as a <u>[Restart Required!]</u> button. Alternatively, you can also carry out a restart using the menu item <u>General | Restart</u>.

Click	[Restart]	
-------	-----------	--

Restart				×
Configuration check	Restart Gateway			
The current Universal Ga	ateway configuration v	vas checked.		
The configuration OK.				
0 Errors 0 Warnings				
			Next Cano	cel

Before restarting, the gateway will check the configuration and display the results of this check. If the configuration is faulty, detailed messages will be shown.

Click *[Next]* or the *<u>Restart Gateway</u>* tab.

Restart		×
Configuration check	Restart Gateway	
	Restart' you force the gateway to do a communication reset. st configuration changes.	
complete system r	estart	
delete trendlog dat	a	
restart like power down/u	ystem restart' you force the gateway to do a complete hardware up. You have to do the login again. le gateway will not transfer data for some minutes until the hard- and retained.	
	Restart	ancel

You can select two options (check boxes) for restarting:

- Complete system restart (takes approx. 1 minute):
 Automatically selected when changing certain system settings.
- Delete trendlog data
 Deletes all data collected up to this point, e.g. *BACnet Trendlog data*. This is necessary to conduct a smooth restart without collected test data during commissioning.

If neither of the two options is selected, a simple restart of the communication software is carried out (duration: approx. 10 seconds).

If a restart is carried out due to a software update, it can take up to 4 minutes.

Once the gateway is fully configured, we recommend carrying out a complete system restart, deleting all historical data. You should then check if everything was booted properly. This ensures that the gateway would restart properly even in the event of a power failure.

Click [Restart] again and confirm the information dialogue.

Restart	×
	A complete restart takes more than 1 minute. Do you really want to restart the gateway?
	Yes No

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6.2 General information on the driver menu areas

Every installed communication driver is listed as a separate menu item in the upper menu bar. The first submenu item on the left, **Status**, lists the current status of a driver's data points. Some selected drivers also have their own sub-menu, which you can use to adjust particular settings for that communication driver.

You can page through the data point list with the arrow key.

The **Page size** drop-down list allows you to define the maximum number of data points that can be displayed at the same time (10, 50, 100, 250 or 500).

The **Update** drop-down list enables you to determine the time intervals at which the data point list is updated automatically (---, 5, 10, 15, 30 or 60 sec).

Each data point has a unique address and name, as well as other properties such as current timestamp, flags, type and value.

The meanings of the data point flags are as follows:

- Valid value V
- Sensor fault F
- Incorrect data point E
- Local operator value L
- Set value / actual value automatic mode -
- Locked, cannot be changed at the moment O
- Upper limit warning W
- Upper limit alarm A

- Upper range of values S
- Lower limit warning w
- Lower limit alarm a
- Lower range of values s
- Historical value H
- Value has changed c
- New data point definition N
- Deleted data point definition D
- Changed data point definition C

Time stamps, types and values are self-explanatory.

Data points that can be changed have two values. The first value is the actual (current) value. The second value is the set (nominal) value, i.e. the last value assigned by the SYMPHOLIGHT Gateway BACnet driver.



The *[Info]* button shows the properties of the selected data point.

The *[Edit]* button shows the current set value. You can also input a new set value which will be sent to the driver as a command.

6.3 "System" menu

This communication driver is found on every gateway. This driver's data points provide information on the gateway's internal system status. Like all other data points, these data points can be edited via data point mappings and mapped onto BACnet for example.

6.3.1 System | Status

The current statuses of gateway data points are displayed and can be edited here if necessary.

e:cue	General	System	BACnet	MQTT	Help	MPHOLIGHT G		· · · · ·	lmin 📭
System	1 - Syster	n Status				Last I	Refresh:		
	+ +	Page size: 50	→ → u	pdate interval:	✓ seconds				
Status	Address		Name		Timestamp	Flags	Туре	Value	
○ Settings	_error	Driver error				cV	132	0	1
	_status	Driver state				cv	132	4	1
	info	'info' level en	rrors.				132	0	0
	warning	'warning' leve	l errors.			cv	132	1	1
	error	'normal' level	errors.			cv	132	0	0
	fatal	'fatal' level e	errors.			cv	132	0	0
	button	Digital input o	on the front pa	nel of gateway.		cv	132	0	1
	relay	Digital output	on the front p	anel of gateway.		cv		0	0 🗸
	led	Application LEG	D on the front	panel of gateway.		cV		0 0	1
	temp	Temperature in:	side gateway.			cV	DBL	41.521739	0
	freemem	Amount of free	system memory	in KB.		cV	132	17976	0
	cpuload	Load of CPU in	percents.			cV	132	13	0
	watchdog	Watchog datapo:	int				132	0	0
	runtime	Driver runtime	in seconds			cv	132	1560	0

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 \uparrow content Clicking the *[Info]* button will show the detailed properties of a data point.

Datapoint Address 1 system relay					
	1 system relay				
Name Digital output on the front panel of ga	Digital output on the front panel of gateway.				
Actual Value Nominal Va	alue				
Time					
Flags cv					
Value o o					

To edit the set value of a data point, click the [Edit] button.

Enter the new set value in the <u>New Value</u> dialogue and confirm with [OK].

Address:	relay
Timestamp:	
Current value:	0
New value:	0

6.3.2 System | Settings

You can make further driver settings on this configuration page.

01010					e:cue SYMPHC	LIGHT Gatew	ay ECUE BACne	t Gateway
e:cue	General	Syste	m BAC	net	MQTT	Help	User: admin	P* 🟶 🗧
System	1 - System	driver s	ettings			Last Refresh:		C
	Parame	eter	Value			Descriptio	n	
○ Status	IgnoreFailur	e:			Ignore the 'fa	ailure' datapoin	ts for LED state	
Settings	CheckMemo	oryLimit:			Enables free	memory chec	king	
	WatchdogTi	mer:			Enables Wat	chdog-Timer d	latapoint	
	RuntimeInte	erval:			Enables Driv	er-Runtime da	tapoint	
	Interval:		60	* *	s Update inter	val for Driver-F	Runtime datapoint	
							Save	

IgnoreFailure:

So-called **failure** data points exist for communication devices. These show whether communication with a device is working (value *0*) or if communication with a device is faulty (value *1*). The values of these data points are also represented in the gateway's status LED display. Activate the check box to deactivate this setting.

Confirm with [Save]. Then close the information dialogue and carry out a simple restart of the communication software to activate the function.

6.4 BACnet menu

BACnet is a widespread network protocol for building automation and stands for "Building Automation and Control network".

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6.4.1 BACnet | Status

This page displays the current statuses of all BACnet data points. These data points can be used for data point mapping. The *[Info]* button loads details on the data points. If necessary, you can change BACnet values using the *[Edit]* button.

e:cue	General	System BACne		Help	GHT Gatewa	ay ECUE BACr User: admir	-
BACnet	940 - BACne	et Status	Update interval:	- v seconds	Last Refresh:		CREFRESH
StatusSettings	Address	Name	Timestamp	Flags		lue	
 Device object Objects 	_status	Driver state		cV			
 Files Persistent data EDE file 	failure local AI-1100	Failure BACnet DALILightSensorLV		cV	DBL 0.00	0000	
	local BI-1110	0 DALIPresenceIsPresent				1	

6.4.2 BACnet | Settings

You can make general settings for the BACnet driver and for the BACnet data links on this configuration page. Confirm changes with *[Save]*. Then close the information dialogue and carry out a simple restart of the communication software.

010110	e:	cue SYMPHOLIGHT Gatewa	y ECUE BACnet Gatewa
e[cue	General System BACnet	MQTT Help	User: admin 📭 🛟
BACnet	940 - BACnet driver settings	Last Refresh:	C
	Startup delay: 60	seconds	
○ Status	Password DCC/RD: ugw		
 Settings Device object 	Default priority: 12	×	
 Objects 	Disable Default-NC-Object:		
○ Files	Datalinks: BACnet IP	~	
 Persistent data 	BACnet PTP:		
○ EDE file	BACnet IP		
	Parameter Value		
	Network number: 1	*	
	LAN name: LAN1 ~		
	UDP-Port: 47808	*	
	IP-Mode: Normal ~		
	1	Save	

Startup delay:

Here, you can set a start delay for BACnet failure detection.

When restarting the SYMPHOLIGHT Gateway BACnet, BACnet communication will only be switched on after this time has elapsed. This allows a remote station to recognize if the SYMPHOLIGHT Gateway BACnet has been restarted by the absence of BACnet requests. The value *O s* sends a *BACnet restart notification* message as an unconfirmed COV notification to the registered recipient when restarting.

Password DCC/RD:

You can set a password to protect *DCC* (Device Communication Control) and *RD* (Reinitialize Device) BACnet services. Pay attention to capitalization (maximum of 50 characters).

Default priority:

Enter the preset priority here.

Disable default NC object:

Deactivate specification of a notification class object (NC) using the check box.

Datalinks:

You can set which BACnet data links are to be used via the **Data links** drop-down list. The following are supported:

- BACnet IP (Ethernet)
- BACnet MS/TP (two-wire connection) via RS-485
- Simultaneous BACnet IP and BACnet MS/TP.

BACnet PTP:

By ticking this box, you can enable communication via the *point-to-point* BACnet half-router in addition to the BACnet data links. This is necessary for BACnet operation with a modem.

A) Gateway mode: Data links = BACnet IP

The following operating types are possible for BACnet IP connection: normally, BACnet BBMD (BACnet Broadcast Management Device) and BACnet Foreign Device. The BACnet BBMD and FD configuration is required for cross-IP-network operation. Ask the BACnet coordinator about the settings for your project.

Datalinks:	BACnet IP	~
BACnet PTP:		
BACnet IP		
Parameter	Value	
Network number:	1	
LAN name:	LAN1 ~	
UDP-Port:	47808	
IP-Mode:	Normal ~	
*		Save

a) IP mode = normal

Network number:

Defines the network number of the BACnet network for the datalink (value = 1 to 65,534).



The network numbers of the configured datalinks must be unique.

LAN name :

Name of the data link interface

UDP port

Defines the UDP port of the BACnet / IP network as a decimal number. The default value is 47808 ("0xBACO" – hexadecimal).

IP mode:

Defines the gateway's IP mode for this data link.

- Normal: Standard operating mode for a BACnet IP data link
- BBMD: Operating mode as "BACnet Broadcast Management Device".
- Foreign Device: Operating mode as "Foreign Device"

b) IP mode = BBMD

The gateway provides BBMD functionality for its own IP subnetwork and allows logins of external FD or BBMD devices.

Datalinks:	E	BACnet IP	~]	
BACnet PTP:	C				
BACnet IP					
Parameter		Value			
Network number:	1		*		
LAN name:	LAN1	~			
UDP-Port:	47808	5	*		
IP-Mode:	BBMD	Ý)		
	BBMI	D			
Direct broadcast	ts to owr	n ip networl	k (one-hop	o)	
Broadcast distribut	ion table	э:			
IP-Address	UDF	P-Port	Mask		
			Add		
					📕 Save

Direct broadcasts to own IP network (one hop):

This option enables the use of "one hop" mode for BBMD. This mode is seldom used in networks and should only be set if the network planner explicitly plans for this.

Broadcast distribution table:

The table lists all BBMDs which are queried in a broadcast in addition to the devices in the particular network in order to reach the devices from other networks.

With *[Add]*, you can create a new list entry.

c) IP Mode = Foreign device

The gateway is set as a foreign device subscriber to the BACnet network.

Datalinks:	BACnet IP		~		
BACnet PTP:					
BACnet IP					
Parameter		Va	alue		
Network number:	1			*	
LAN name:	LAN1 ~				
UDP-Port:	47808			*	
IP-Mode:	Foreign De	vice	~		
Foi	reign Device				
IP-Address BBMD-Server:		_			
UDP-Port BBMD-Server:	47808	÷			
Reregister interval:	300	*	Sec.		
					Save

IP address BBMD server:

The IP address of the BBMD which is to be used by the SYMPHOLIGHT Gateway BACnet for logging in as a foreign device.

UDP port BBMD server:

You can define the UDP port of the BBMD server as a decimal number (default value: 47808 dec. (0xBAC0 hex.)).

Re-register interval:

Time in seconds after which the gateway must newly register with the BBMD.

B) Gateway mode: Data links = BACnet MS/TP

BACnet MS/TP is the connection for BACnet devices via the RS-485 (two-wire) interface. The necessary settings can be made here. Ask the BACnet coordinator about the settings for your project.

)atalinks:	BACnet MS	/TP 🗸	
BACnet PTP:			
BACnet MS/TP			
Parameter	Value		
Network number:	2	*	
MS/TP address:	0	*	
Max. Master:	127	*	
Max. info frames:	1	*	
Serial interface:	COM1 🗸		
Baudrate:	38400 🗸		

Network number:

Defines the network number of the BACnet network for the datalink. The value is between 1 and 65,534.

MS/TP address:

Defines the MS/TP MAC address.

Max. master:

Defines the highest MAC address for master nodes in the MS/TP subnetwork. The possible value range is between 0 and 127; the default value is 127. If this value is not writable via BACnet services, it must be 127.

Max. info frames:

Defines the maximum number of telegrams that a master node may send before the token has to be forwarded. The possible value range is between 1 and 127; the default value is 1. If this property is not writable via BACnet, this value must be 1.

Serial interface:

Defines the serial interface of the datalink.

Baud rate:

Speed of the MS/TP network suitable for the other MS/TP components in use. The value is stated in bit(s); possible values are: 9600, 19200, 38400, 57600, 76800 and 115200 baud. The default value is 76800 baud.

C) Gateway mode: BACnet PTP = activated

BACnet point-to-point is designed for communication via null-modem. The SYMPHOLIGHT Gateway BACnet is a half-router in BACnet PTP mode. Together with the dial-up part, it constitutes a BACnet router for a complete BACnet network. The BACnet networks must be configured correspondingly. The network number helps identify a BACnet network and must be unique within the entire BACnet network. This mode is currently unavailable.

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BACnet PTP:									
BACnet IP	BACnet PTP								
Parame	ter				Va	lue			
Connect timeout:		60	÷	seconds					
Idle timeout:		60	* *	seconds					
Automatic dialup:		-			C=comfirmed,U=	unconfirm	ed		
Incoming passwore	d:	somese	cret1						
				External	networks				
Networknumber	Telephor	nnr. 1	Te	elephonnr. 2	Telepho	nnr. 3	Passw	ord	
5	10		11		12		somesecret		2
6	11		12		13		somesecret		1
							•	O Ad	ld
									Save

Connect timeout:

Timeout for the establishment of a modem connection. If no connection is established within this time, it counts as a connection attempt. There is a maximum number of APDU retries.

IDLE timeout:

If no relevant data are transferred within this time during a connection, the connection is terminated.

Automatic dial-up:

Determines which BACnet services are the subject of a connection attempt. This is a list of "confirmed" and "unconfirmed" items with the BACnet enumeration of services.

- C2 Confirmed Event Notification
- U3 Unconfirmed Event Notification
- C15 Confirmed Write Property (initiated by gateway)
- C16 Confirmed Write Property Multiple (initiated by gateway)

Incoming password:

BACnet PTP password for dialing up the SYMPHOLIGHT Gateway BACnet.

External networks:

The networks that can be accessed externally via BACnet PTP are configured here. The network number indicates the accessible BACnet network. You can specify up to three telephone numbers under which the BACnet counterpart station can be reached. These are dialed consecutively by a modem as part of the Connect timeout phase. The password is used to log into the counterpart station.

6.4.3 BACnet | Device object

The BACnet device object in the SYMPHOLIGHT Gateway BACnet has a specific function that the other BACnet objects don't have. APDU parameters for BACnet transmission are set here. The device instance and device name can also be set. These properties are for BACnet device identification and must be unique within the entire BACnet network. For the exact settings, please ask the BACnet planner / coordinator.

e:cue	General System	BACnet	MQTT	Help	User: admin 🎙	• 🛟
BACnet	940 – BACnet device	object		Last Refr	esh:	C
	Property			Value		
Status	Device instance:	2000				
Settings	Device name:	SYMPH	OLIGHT Gateway	/		
Device object Objects	Description:	SYMPH	IOLIGHT Gateway	/ Client/Server		
Files	Location:	in the ra	ack behind me			
Persistent data	Vendor-Identifier:					
EDE file	Vendor-Name:					
	Model-Name:					
	Firmware-Revision:	Revisi	on 1.2			
	APDU Max-Length-Acce	epted: 1476 -	IP,Ethernet	~		
	APDU Timeout:	3000	÷	millisec.		
	APDU Retries:	5	* *			
	APDU Segmentation-Su	pported: 0 - Both	1 🗸			
	APDU Max-Segments-A	Accepted: 5	*			
	APDU Segment-Timeou	ıt: 2000	*	millisec.		
				J	Save	

Device instance:

Defines the device instance number of the gateway, which has to be unique within the overall BACnet network. The value range of this property is between 0 and 4,194,302.

Device name:

Defines the SYMPHOLIGHT Gateway BACnet device name, which also must be unique.

Description:

Defines the BACnet description of the SYMPHOLIGHT Gateway BACnet. This is free descriptive text.

Location:

Defines the BACnet location of the SYMPHOLIGHT Gateway BACnet. This is free text for the installation location.

Vendor identifier:

Manufacturer ID for unique identification of the device manufacturer

Vendor name:

Manufacturer name as unique designation of the device manufacturer

Model name:

Model description of the SYMPHOLIGHT Gateway BACnet.

Firmware revision:

Firmware version of the SYMPHOLIGHT Gateway BACnet software

APDU max length accepted:

Maximum telegram size in bytes The following values are possible: 50, 206, 480, 1024 and 1476 bytes. ↑ content

APDU timeout:

This value in milliseconds defines the period of time after which a telegram that requires confirmation is deemed to have failed in the absence of confirmation. The default value is 3000 ms.

APDU retries:

This value defines how often a failed telegram is to be repeated (default = 5).

APDU segmentation supported:

Possible values: O-both, 1-transmit, 2-receive, 3-no

APDU max segments accepted:

Defines how many segments are accepted as a maximum.

APDU segment timeout:

This value defines the period of time after which an acknowledgment-dependent, segmented telegram is deemed to have failed in the absence of segment confirmation (default = 2,000 ms).

6.4.4 BACnet | Objects

The BACnet object configuration is displayed here. Data points can be filtered according to object type using the upper panel of buttons. The available BACnet objects are listed below.

The object name and description can be edited directly in the input fields in the object list.

The <u>[Edit]</u> button opens a dialogue with the object-specific properties of the data points. You can edit the properties here (see example below).

e:cue	General System	BACnet MQTT	Help		User: admin 📭 🤅
BACnet	940 – BACnet objects			Last Refre	sh:
	• All	C Analog-Input	C Analog-Output	C Analog-Value	C Binary-Input
Status	C Binary-Output	C Binary-Value	C Multistate-Input	C Multistate-Output	C Multistate-Value
Settings	C Trendlog	C Schedule	C Notification-Class	C Eventlog	C Event-Enrollment
Device object Objects	C File	C Group	C Loopt	Global-Group	C LifeSafety-Point
Files	C LifeSafety-Zone	C Accumulator	C Pulse-Converter	C Trendlog-Multiple	C Load-Control
Persistent data EDE file	C Structured-View	C Access-Door	C Timer	C Access-Point	C Access-Zone
	Credetial-Data-Input	C Bitstring-Value	C Characterstring-	O Date-Pattern-Value	C Date-Value
			Value	O Date-Time-Pattern-	O Date-Time-Value
				Value	C Integer-Value
	C Large-Analog-Value	C Octetstring-Value	C Positive-Integer- Value	C Time-Pattern-Value	C Timee-Value
			value	Notification-	C Alert-Enrollment
				Forwarder	C Channel
	C Lighting-Output	Binary-Lighting-	C Network-Port	C Elevator-Group	C Escalator
		Output	C Lift	C Staging	C Audit-Log
	C Audit-Reporter				
	Object-Id	Object-Name		Description	Trer
	AI-1100 DALILightSe	nsorLV	DALILightSensorLV		
	BI-1110 DALIPresent	celsPresent	DALIPresenceIsPrese	ent	Z
	NC-1 NOTIF-1		Default notification cla	ass object	

Information for Use

Dialogue example of BACnet binary value object

The dialogue for editing a BACnet binary value object is shown as a representative dialogue here:

Property	Value
Object-Identifier:	BV-100
Object-Name:	9999_Lifecheck
Description:	Bhf Lifecheck UGW
Inactive-Text:	inactive
Active-Text:	inactive
Change-Of-State-Counter:	
Elapsed-Active-Timer:	
	Intrinsic Reporting
Time-Delay:	0
Notification-Class:	2000.NC 1 V
Alarm-Value:	O Inactive Active
Event-Enable	Event-Message-Texts-Config
Offnormal:	
Fault:	
Normal:	V
Notify-Type:	O Alarm ● Event

The status texts for the values *O* and *1* can be edited in the **Inactive text** and **Active text** input fields. For this object type, BACnet allows a **Change-of-State-Counter** to be activated. The object is automatically extended to all object properties necessary for this purpose. This also applies for the **Elapsed-Active-Timer** (operating seconds counter). BACnet alarming is activated for this object with **Intrinsic Reporting**. The **Time Delay** property determines the report delay in seconds. All further information can be taken from the BACnet standard.

Using the *[Trend]* button, you can create a new Trendlog object with this object as the input reference in another dialogue.

Property					Value	
Object-Identifier:	TR-1001					
Object-Name:	DALIPrese	ncelsPre	sent-TR			
Description:	DALIPrese	ncelsPre	sent-TR			
Log_Device_Object_Property:	((BI,1110),8	5)	DALIPres	enc	elsPresent	
Logging-Type:	Polling ~					
Log-Interval:	360000			÷	(1/100) seconds	
Buffer-Size:	1000			÷		
Start-Time:	((?,?-?-?),(?	?:?:?.?))				
Stop-Time:	((?,?-?-?),(1	?:?:?.?))				
Enable:						
Stop-When-Full:						
Align-Intervals:						
Interval-Offset:	0	‡ sec	onds			
	Intrinsic I	Reporting)			
Notification-Class:	NOTIF-1 ¥					
Notification-Threshold:	100	÷				
Event-Enable	Event-M	essage-	Fexts-Cor	nfig		
Offnormal:						
Fault						
Normal:						
Notify-Type:	Alarm	Event				

6.4.5 BACnet | Files

The entire BACnet configuration is saved in three files:

bac1.cfg(driver); bac1.txt(data points); dispatch.txt(global dispatch file)

These files can be transferred between the computer and the SYMPHOLIGHT Gateway BACnet (download / upload) on this page. The *[Edit]* buttons open text windows in which you can edit the relevant files directly. No further file transfers are required for this.

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content

e:cue	General S	ystem BACnet			vay ECUE BACr User: admir	_ `
BACnet	940 – BACnet co	onfiguration files File	Gateway	Last Refresh:		REFRESH
 Status Settings Device object Objects Files Persistent data EDE file 	Driver: Datapoints: Global dispatch:	/ugw/config/bac /ugw/config/bac /ugw/config/dispa	I.cfg Start Do 1.txt Start Do	wnload Sta wnload Sta	irt Upload 🛛 <table-cell></table-cell>	-
Edit # UGW-WEB - setup # file: /ugw/config/bac1 # changed: # # BACnet driver configurati # Key			ult Descr	ription		
# # <u>DeviceID</u>	Integer [04194	302]/' <u>passiv</u> ' 4194	302 Insta	ince num		

BACnet driver configuration file # Key Type Default Description # DeviceID Integer [0..4194302]/'passiv' 4194302 Instance numi # DeviceName String [max. 200] DEVICE-XXXXXX Object name (# DeviceName String [max. 200] UNICE-XXXXXX Object name (* Description String [max. 200] UNICE-XXXXXX Object name (* Description String [max. 200] UNICE-XXXXXX Object name (* Description String [max. 200] UNICE-XXXXXX Object name (* Description String [max. 200] UNICE-XXXXXXX Object name (* Description String [max. 200] UNICE-XXXXXX Object name (* Description String [max. 200] UNICE-XXXXXX Object name (* Obje

Rows with a hash # at the beginning are comments. Rows without # at the beginning are activated settings.

Confirm changes with *[Save]*. Then close the information dialogue and carry out a simple restart of the communication software.

6.4.6 BACnet | Persistent data

e:cue	General	System	BACnet	e:cue SYMPH	OLIGHT Gatew Help	/ay ECUE BACnet Gateway User: admin II r ♣ ●
BACnet	940 - BACn	et Persister Il persistent data		ersistent data to co	Last Refresh:	REFRESH
 Status Settings Device object Objects Files Persistent data EDE file 	Object	BACnet v	value	Configured v	alue	

↑ content

6.4.7 BACnet | EDE file

The BACnet objects and functions configured in the gateway can be shared with other partner companies in projects in the form of a specified CSV file (EDE file, Engineering Data Exchange).

To generate the EDE file automatically on this configuration page and then download it from the SYMPHOLIGHT Gateway BACnet to your computer, click *[Start]*.

010110				e:cue SYMPH	OLIGHT Gatew	vay ECUE BACnet Gateway
ecue	General	System	BACnet	MQTT	Help	User: admin 📭 🏶 🛑
BACnet	940 – BAC n	et EDE file			Last Refresh:	C. BEFRESH
 Status Settings Device object Objects Files Persistent data EDE file 	companies by This EDE file (a special Exce EDE = Engine	el table file. ering Data Exc	hange) will be g	generated auto	anged with partner matically. ve file to your PC.

6.5 MQTT menu

MQTT is a lightweight publish/subscribe messaging protocol for the Internet of Things (IoT) that is ideal for connecting remote devices with a small code footprint and minimal network bandwidth.

6.5.1 MQTT | Status

This page displays the current statuses of all MQTT data points. These data points can be used for data point mapping. The *[Info]* button loads details on the data points. If necessary, you can change MQTT values using the *[Edit]* button.

e:cue					e:cu	ie SYMPHOLIGI	HT Gat	eway EC	CUE BACne
LLUL	General	System	BACnet	MQTT Help				Us	ser: admin
MQTT	1630 - MQ	TT Status				Le	ast Refre	sh:	
	1 🖛 🗧 🖡	Page size: 50	🗸 🔶 🔿 Updat	e interval: v secon	ds				
Status		Addres	s	Name	Timestamp	Flags	Туре	Value	
⊃ Settings ⊃ Files	_error			Driver error		cv	132	0	0
1 103	_status			Driver state		cV	132	4	0
	failure			Failure MQTT		cv	132	1	0
							STR		
	subscribe 1	lstfloor/presen	cesensor/ispresent	DALIPresenceIsPresent	111				0 🛛

6.5.2 MQTT | Settings

You can make general settings for the MQTT driver and for the MQTT data links on this configuration page. Confirm changes with [Save]. Then close the information dialogue and carry out a simple restart of the communication software.

		e	cue SYMPH	OLIGHT Gatew	ay ECUE BACnet Gatewa
ecue	General System	BACnet	MQTT	Help	User: admin 📭 🏶
	1630 – MQTT driver sett	inge		Last Refresh:	C
MQTT	1030 – Might unverseu	-		Last Reifesn.	C
_	Host	User setti			
○ Status		8883	00		
 Settings Files 	Port				
OFIles	Client-ID	Session1			
	User	admin			
	Password				
	Default QoS	0 ~			
	Default retain flag	Off 🗸			
	Clean session flag	Off 🗸			
	Keep alive	60		\$	
	Payload	Value '23.4'			~
	Encryption	TLSv1_2 ➤			
		Last wi	I		
	Last will flag	Off 🗸			_
		Internal set			
	Timeout	10000	r	ns	
	Timer	500	r	ns	
	Datapoint timer mode	Seconds ¥			
	Max pending messages	100			
	System pre topic	\$SYS			
		Payload	s		
	Placeholder begin	<			
	Placeholder end	>			
	Placeholder value	\$			
	Placeholder escape	1			
	Placeholder unknown valu	e null			
	Placeholder time format	%FT%T%z			
	Time stamp in milliseconds	G Off ♥			
	Add payload format	Choose File	No file chosen		
				📕 Save	

6.5.3 MQTT | Files

The entire MQTT configuration is saved in three files:

mqtt1.cfg(driver); mqtt1.txt(data points); dispatch.txt(global dispatch file)

These files can be transferred between the computer and the SYMPHOLIGHT Gateway BACnet (download / upload) on this page. The *[Edit]* buttons open text windows in which you can edit the relevant files directly. No further file transfers are required for this.

e:cue			e:cu	ue SYMPHOLIG	HT Gatev	vay ECUE	BACne	t Gateway
CLUC	General	System	BACnet	MQTT	Help	User:	admin	₽ ╬ ●
MQTT	1630 - MQTT	configurati	on files		Last Refre	sh:		C
	Configuratio	n	File	Gateway>	PC PC -	⇒ Gateway	Edit	
○ Status	Driver:	/ugw/c	:onfig/mqtt1.cfg	Start Downloa	ad St	art Upload	1	
 Settings Files 	Datapoints:	/ugw/o	config/mqtt1.txt	Start Downloa	ad St	art Upload	1	
Files	Global dispate	h: /ugw/co	onfig/dispatch.txt	Start Downloa	ad St	art Upload	1	

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# # Configuration file for <u>Drv.matt</u> # # Section: USER # Entries: # Name Type Range Description	
Host string [255] Host name or IP address (Default:'127.0.0.1') # Port int Port for TCP connection (Default:'137.15.888 # ClientID string [255] Client ID for connection (no Default))

Rows with a hash # at the beginning are comments. Rows without # at the beginning are activated settings.

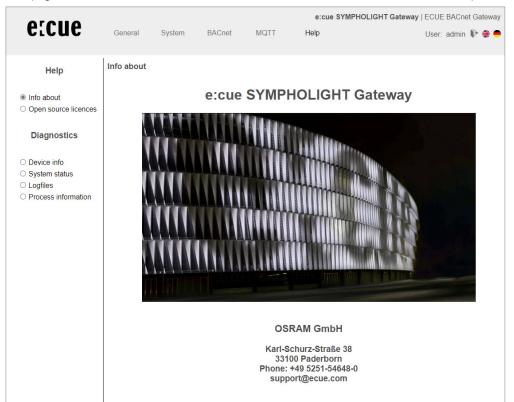
Confirm changes with *[Save]*. Then close the information dialogue and carry out a simple restart of the communication software.

6.6 Help menu

Contact information for the manufacturer and other system data are displayed in the <u>Help</u> menu.

6.6.1 Help | Info about

This page contains information about the manufacturer of the SYMPHOLIGHT Gateway BACnet.



CCUCC General System BACnet MQTT Help User: admin IP ♣ ● Help Open source licenses Open source License Information Start Download Start Download Figure 1 Figure 2 Diagnostics Device info System status Figure 3 Figure 3 Figure 3 Figure 3 Process information Figure 3 Figure 3 Figure 3 Figure 3 Figure 3						
Info about Image: Start Download Open source licences Start Download Diagnostics Image: Start Download Device info System status Logfiles Image: Start Download	e:cue	General	System	BACnet		
 Device info System status Logfiles 	◯ Info about		rce License In	formation		
	 Device info System status Logfiles 					

6.6.2 Help | Open source licenses

6.6.3 Help | Device info

This page displays general information about the SYMPHOLIGHT Gateway BACnet.

01010				e:cue SYM	PHOLIGHT Gateway ECUE BACnet Gatew
ecue	General Syste	em BACnet	MQTT	Help	User: admin 💵 🛟
Help	Device info				Last Refresh:
	Parameter			Value	
○ Info about	Type:				
O Open source licences	GW-Version:	UGW-2372-Osra	m-alphaKP-Strl	Mapping	
	OS-Version:	UGW-1998-gatev	vaykopplung-zu	u-baer-emt	
Diagnostics	Build-Info: ./build -t micro7 -o 116e1da7 -g 3e9d4a5d -i ugw				
	Datapoints:	2 / 100			
Device info	Licensed drivers:	3			
 System status 	System start:				
○ Logfiles	Free system memor	y: 17 / 26 MByte			
O Process information	Last update:	ок			

Type:

Manufacturer's internal hardware designation.

GW version:

Manufacturer's internal protocol ID.

OS version:

SYMPHOLIGHT Gateway BACnet software version.

Build info:

Information about the software build.

Data points:

Number of data points used / Number of licensed data points.

License drivers:

Information about the number of licensed bus protocol drivers.

System start:

Displays the last time the SYMPHOLIGHT Gateway BACnet was started.

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Free system memory:

Size of used RAM and total RAM in MB

Too little free space can lead to operational problems.

Last update:

Validity of the last firmware update

6.6.4 Help | System status

This page displays a detailed system map of the gateway. This also includes the driver status, data points and data point maps.

e:cue	General	System	BACnet	MQTT	e:cue SYN Help	IPHOLIGHT Gateway ECUE BACnet Gateway User: admin III* ♣ ●
Help	System sta	tus : DPmngr				Last Refresh:
 Info about Open source licences Diagnostics 	Versior Compileo Createo Dispatching	n: UGW-2372-Osi d: d: g of datapoint: pe: X-Serie	ram-alphaKP-Str/ s: licensed:10		active:2	
 Device info System status Logfiles Process information 	driver rout name: state: dpfile: < cfgfile: < cfgfile: < cmd: <	te 1 system System ONLINE sync: (/ugw/config/sy (/ugw/bin/Drv.sy (297>	/stem1.txt>)R>		• //

6.6.5 Help | Log files (System)

You can activate / deactivate a more detailed version of the log records for each communication driver using the buttons [ON] and [OFF]. Log records provide information on how the program is running and any communication problems. The previous (historical) log outputs can be displayed by clicking [Display Record]. Clicking [Start For 60 Sec.] provides the current log outputs for 60 seconds after pressing the button. This process can be ended by pressing [Stop] at any time.

e:cue	General	System	BACnet	MQTT	e:cue SYMI Help	PHOLIGHT Gateway ECUE BACnet Gateway User: admin 📭 🏶 👄
Help	Logfiles Routing	Type Name	Status Verbo	se		Last Refresh:
 Info about Open source licences 	940 1630	bac BACnet		IFF		
Diagnostics	Show his		60 sec. Stop			
 Device info System status Logfiles Process information 						
						•

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6.6.6 Help | Process information (System)

The statuses of all operating system processes are provided here. The **Mem** (memory usage) and **CPU** (processor utilization) columns provide important information on the status of a process.

01010					e:cue SYMPHOL	LIGHT Gateway ECUE BACnet Gateway
ecue	General	System	BACnet	MQTT	Help	User: admin 타 🏶 🗧
Help	Process info					Last Refresh:
 ○ Info about ○ Open source licences 	Tasks: 61 %Cpu(s): 0 MiB Mem :	total, 1 ru .0 us, 28.0 s	ning, 60 slee , 12.0 ni, 60. 2.2 free	, 8.0 used	ed, 0 zombie 0.0 hi, 0.0 si, 0.0 s	rt 🕺
Diagnostics	PID USER 400 nobod 2 root 1 root 4 root	20 0 20 0 0-20	VIRT RES 1740 1004 0 0 816 588 0 0 0 0	812 R 19.0 0 S 0.0 552 S 0.0 0 I 0.0	MEM TIME+ COMMAND 3.7 0:00.13 top 0.0 0:00.01 kthreadd 2.2 0:00.92 init 0.0 0:00.00 kworker/0	
 Device info System status Logfiles 	3 root 7 root 8 root 9 root 6 root	20 0 0 -20 20 0 -2 0 20 0	0 0 0 0 0 0	0 I 0.0 0 I 0.0 0 S 0.0 0 S 0.0 0 S 0.0	0.0 0:00.00 kworker/0 0.0 0:00.00 mm_percpu 0.0 0:00.04 ksoftirqd 0.0 0:02.51 ktimersof 0.0 0:00.00 kswork	!+ + :+
 Process information 	11 root 12 root 13 root 14 root 15 root	-2 0 -2 0 -2 0 20 0 rt 0	0 0 0 0 0 0 0 0	0 I 0.0 0 S 0.0 0 S 0.0 0 S 0.0 0 S 0.0	0.0 0:00.00 rcu_sched 0.0 0:00.00 rcu/0 0.0 0:00.00 rcu/0 0.0 0:00.00 rcu/0 0.0 0:00.00 kswork 0.0 0:00.00 posixruut	

7 Dismounting

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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 SYMPHOLIGHT Gateway BACnet from the rail by pulling down the handle of the DIN rail bracket at the back and unhitching the SYMPHOLIGHT Gateway BACnet. The dismounting is completed.

8 Certifications

9 FAQs

You want to access the gateway, but do not know the IP address

Solution 1:

If the computer is set as the DHCP client, address issuance occurs automatically (APIPA) if the DHCP server is not present. The computer therefore automatically receives an IP address from the range in which the gateway works with its (default) IP address, 192.168.123.1. This default address can be activated until the next restart by pressing the [*Reset*] button (between 5 and 10 seconds).

Solution 2: (computer skills and an installed BACnet protocol required)

When BACnet is installed on the gateway (see sticker on the casing of the device), it can be combined with the Wireshark program (freeware, available at: http://www.wireshark.org) to sniff the network traffic and read out based on the reports. Start by selecting the Wireshark program and then choose Capture Options. Check the settings in the next window and press <u>[Start]</u>. The Capture window will appear. Set the filter to bacnet. Then start the gateway and wait for the output shown in the figure.

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The IP is shown under:

Source:	192.168.123.1 (in this example)
Network protocol:	BACnet
Info:	I-Am-Router-To-Network

RS-485 connection problems

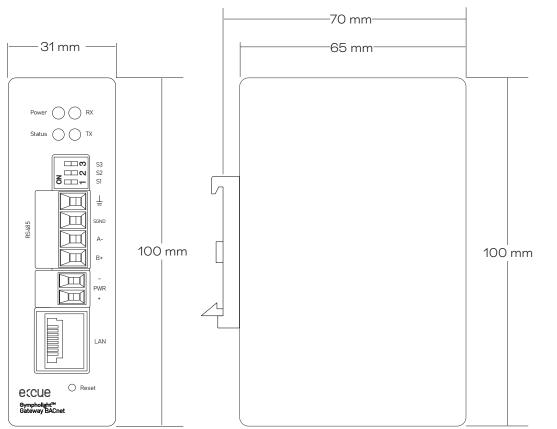
For RS485 connections, do not connect the GND, especially between switching cabinets with different GND potentials, if possible.

RS-485 A B wires reversed

With swapped A and B data lines, connection does not take place. The yellow LED then lights up constantly.

10 Dimensions

All dimensions in mm



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Please check for the latest updates and changes on the Traxon website.

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