EXI 02 LAN 205500006

KATHREIN
Digital Systems GmbH

G.hn modem for the Kathrein Ethernet over Coax System “K-LAN 2.4”

About these instructions

This document is part of the product.

- ► Do not install and use the device until you have read and understood this document.
- ► Always perform the actions described in this document in the sequence listed.
- ► Keep this document for reference throughout the life of the device. Pass this document on to any subsequent owners and users.

The current version of this document can be found at www.kathrein-ds.com.

You can download an English version of this user manual from our homepage www.kathrein-ds.com.

Features

- G.hn modem for the Kathrein Ethernet over Coax System **“K-LAN 2.4”**
- Using the existing coax terrestrial distribution system to create a home network. No need to lay network cables
- Improved data throughput of up to 2 Gbit/s
- 16 modems can be connected concurrently within the network
- Integral high selectivity diplexer to prevent interference between DVB-T and SAT signals
- Integral switch for connection of 2 network devices
- Coax range up to 700 m
- Supports both IPv6 and IPv4
- Not compatible with series EXI 01 modems

Scope of supply

- EXI 02 LAN
- Efficient plug-in power supply unit
- CAT 6 network cables
- Operating instructions

Accessories

EXI 258 high-pass filter for suppression within the G.hn operating range. The high-pass filter is screwed into the input for the terrestrial distribution system. By this means
for instance the following multi-switches and splitters can be isolated from G.hn, and the emissions by a terrestrial antenna can be prevented (see **“System examples” on page 4**).

Intended use

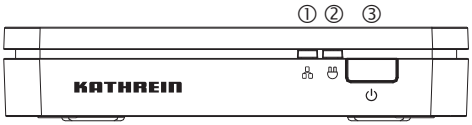
The EXI 02 LAN modem is designed exclusively for use with the Kathrein Ethernet over Coax System **“K-LAN 2.4”**.

Any other use, or failure to comply with these instructions and the documentation and instructions supplied with the devices will result in voiding of the warranty cover.

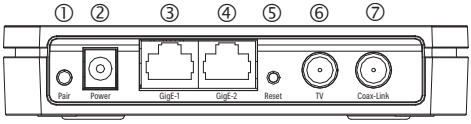
Installation and safety instructions

- ► Failure to comply with these instructions will result in voiding of the warranty cover.
- ► The equipment may be installed and operated only in dry indoor areas. Use the drilling template (see **“Dimensions and drilling template for wall mounting” on page 5**) for wall mounting.
- ► Make sure that the ventilation slots on the device are not covered in any way.
- ► Connection plugs for coaxial cables: 75 Ohm HF plugs (series F)
- ► If the port is not used for connection of a TV set or a similar device, an EMK 03 terminating resistor must be screwed into the port.

Connections and LEDs



① Ethernet LED
② G.hn link LED
③ Power LED



① Pairing button
② Power socket
③ Network port 1
④ Network port 2
⑤ Reset button
⑥ TV port
⑦ Antenna outlet

Interpretation of the LED statuses

Power LED (network security)

Continuous orange		Operation, also “insecure mode” and readiness for “pairing” with other modems for “secure mode”
Flashing orange/green		Pairing procedure with other modems for “secure mode”
Continuous green		Operation and “secure mode” with other modems in the same network
Off		No operating voltage present

G.hn link LED (coax connection of the modem)

Flashing green		Effective data rate is > 300 Mbps
Flashing orange		Effective data rate is ≤ 300 Mbps
Flashing red		Effective data rate is ≤ 100 Mbps
Continuous red/green/orange		Effective data rate is the same as for the flashing LED, but no data traffic over the coax connection
Off		No link available over the coax. Either the attenuation or distance is too great or the modem is solitary in its logical network

Ethernet LED

Continuous red		Ethernet port 1 connected
Continuous green		Ethernet port 2 connected
Flashing red/green		Data traffic over the respective port

Commissioning

1. Plug the power supply unit supplied into the power socket and into the mains socket (the power LED will light up orange).
2. Connect the modem to the antenna socket using a coaxial cable (with F plugs).
3. Using the Ethernet cable supplied, connect the network device such as a router, TV, PC etc.
4. Further modems can be connected as described in steps 1 to 3.

Pairing

A secure G.hn network connection can be created by pressing the pairing button on the modem and proceeding as follows:

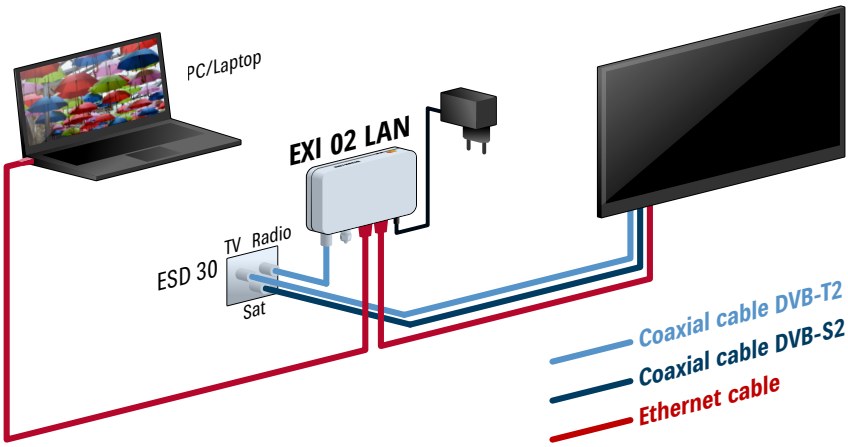
1. Check that power LEDs of the modems are lit up continuously orange (ex factory status or after a reset: “insecure mode”).
2. Depress the pairing button on the first modem for about 3 seconds. The power LED will start to flash orange/green.
3. Depress the pairing button on the next modem for about 3 seconds. The power LED will start to flash orange/green.
4. On completion of the procedure, the power LED of the second modem will light up continuously green. The power LED of the first modem will continue to flash orange/green for about 2 minutes, to allow you to add further modems to the network.
5. To add further modems to the network, repeat step 3.
6. Once all modems are attached to the network, all the power LEDs will light up continuously green. The network connection is now in “secure mode”.

Removing a modem

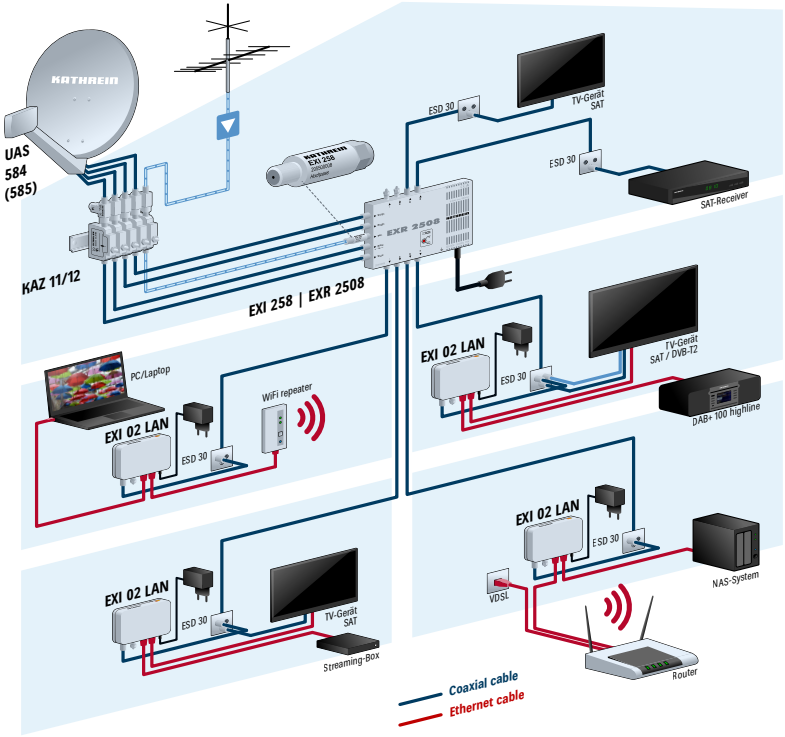
To remove a modem from the secure network, or to perform a reset, proceed as follows:

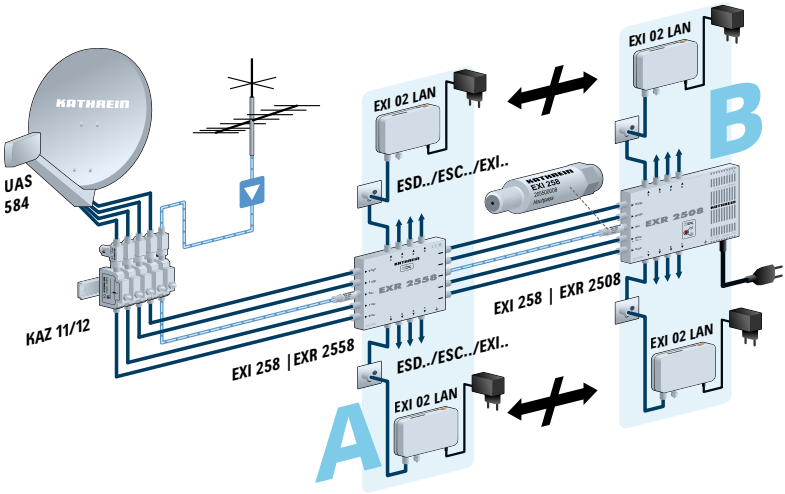
1. Using a pointed object, depress the reset button for about 15 seconds. All the LEDs will go dark briefly.
2. After a short time the power LED will light up continuously orange. The modem is now once again in “insecure mode” and by pressing the pairing button can be attached to a secure network.

Installation example



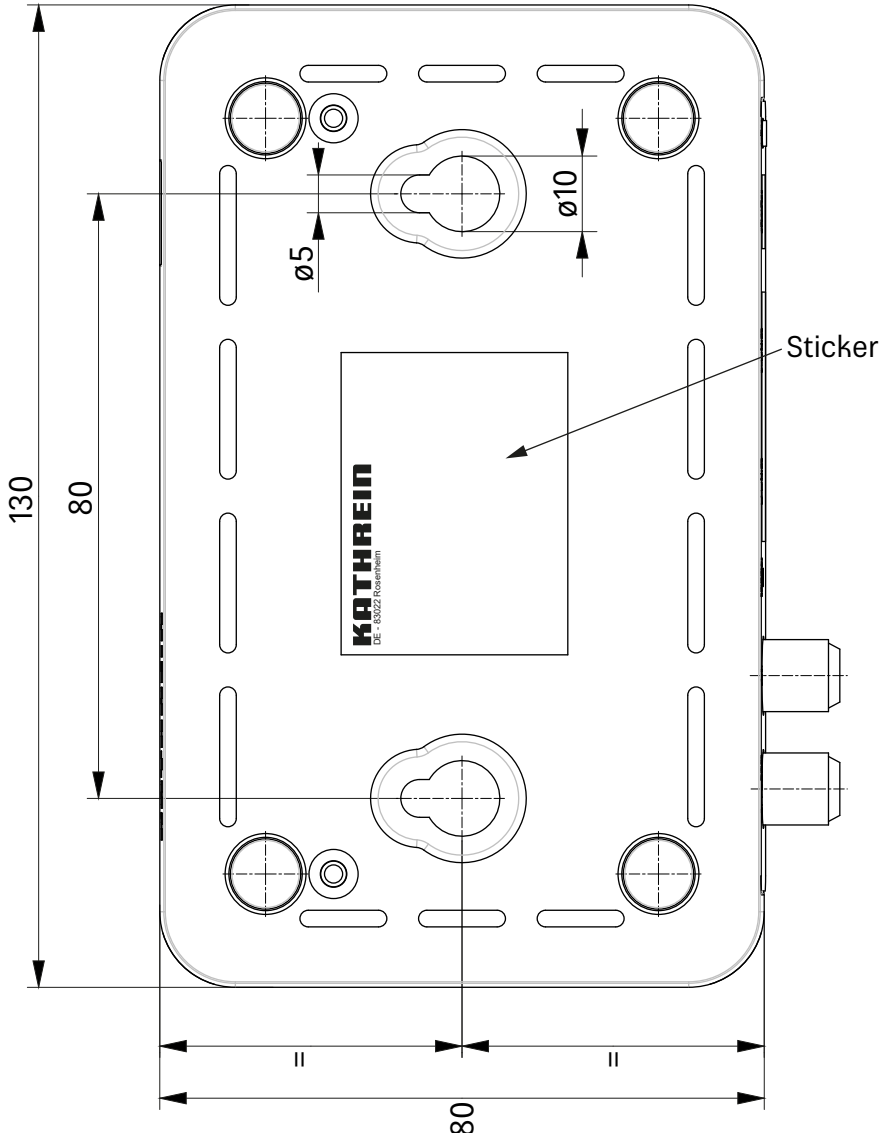
System examples





Dimensions and drilling template for wall mounting

Diagram showing the rear of the EXI 02 LAN. Here you will find the adhesive label with the identifications.



Installation instructions

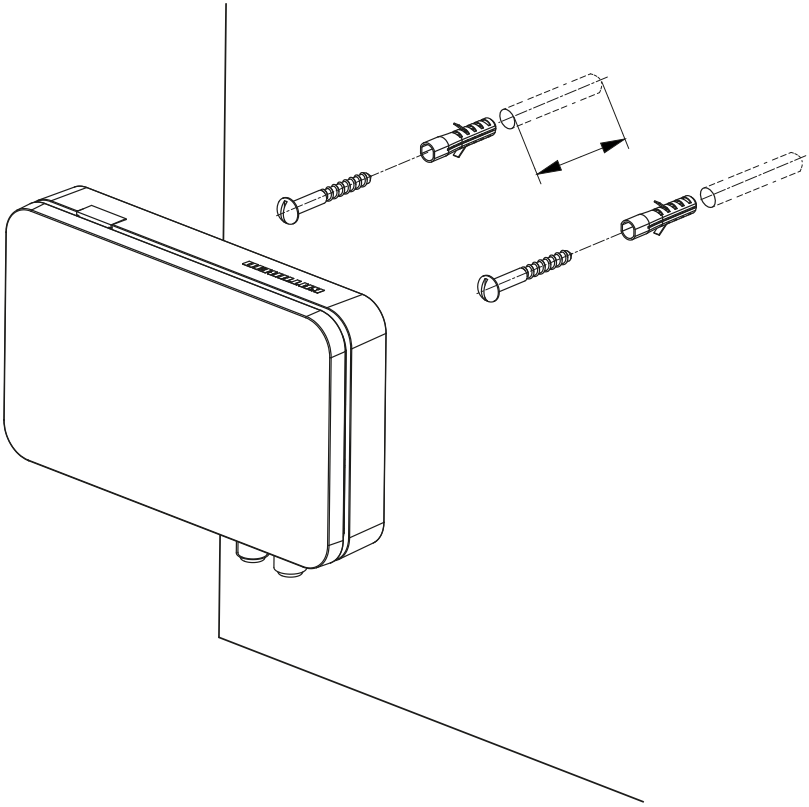
To mount the EXI 02 LAN on the wall you will need fastenings such as 2 round head wood screws (size 4 x 16 mm) and suitable wall plugs. Make sure that the diameter of the screw heads doe not exceed 9 mm (see **"Dimensions and drilling template for wall mounting" on page 5**).

The fastening materials are not included in the scope of supply.

Select screws and wall plugs suitable for the wall to which the modem is to be fastened, so as to achieve optimum security of attachment.

To attach the modem, proceed as follows:

1. Drill holes to suit the sizes of the wall plugs
2. Insert the wall plugs flush into the drilled holes
3. Screw the screws into the wall plugs until their heads are projecting approx. 3 mm, so that the modem can be located over them
4. Place the modem on the screws and push it downwards so that it is located in position



Information about the coaxial distribution system

In principle, any coaxial distribution system in the house can be used. The requirement is that a frequency range of 200 MHz is available and is not being used for other purposes, because otherwise interference can occur. G.hn is robust can be expected to achieve a connection even under very adverse conditions. Do not use the modems in cable network environments in which the same frequency range is used. Only appropriately trained personnel may undertake a secure installation.

Technical data

Type | Order no.		EXI 02 LAN | 205500006
Frequency range IP + TV	MHz	2 – 1218
Frequency range IP	MHz	2 – 200
Frequency range TV	MHz	258 – 1218
Through loss, TV	dB	2
Modem current consumption	mA	250
Phy rate	Gbit/s	2
Data rate TCP (gross) max.	Mbit/s	900
Ports		F connectors, RJ45, DC socket 5.5 x 2.5 mm
Standards supported		G.hn G.9960 1-4
Permissible ambient temperature	°C	0 to +40
Dimensions (W x L x H)	mm	92 x 130 x 29
Weight	kg	0.125
Power supply unit		
Nominal input voltage	V	230
Voltage secondary	V	12
Output current max.	A	1
Nominal input power (250 mA load)	W	3

Disposal

Electronic equipment
Electronic equipment must not be disposed of in domestic waste. According to directive 2012/19/EU OF THE EUROPEAN PARLIAMENT AND COUNCIL of 4 July 2012 on waste electrical and electronic equipment, it must be disposed of professionally. At the end of its service life, take this unit to a designated public collection point for disposal.

For your notes

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