EIB/KNX IP Interface
with Power over Ethernet (PoE)

IP Interface between LAN and EIB/KNX bus

(Quelle: © EIBMARKT GmbH, Reference No.: N000401)

Application area

The KNXnet/IP-Interface is used to connect a PC to the KNX/EIB network. The connection is made
through LAN (IP). The IP address can be obtained by a DHCP server or by manual
configuration (ETS) respectively. This device works according to the KNXnet/IP specification
using the core, the device management und the tunnelling part.

Client
(ETS)

LAN

KNX-IP
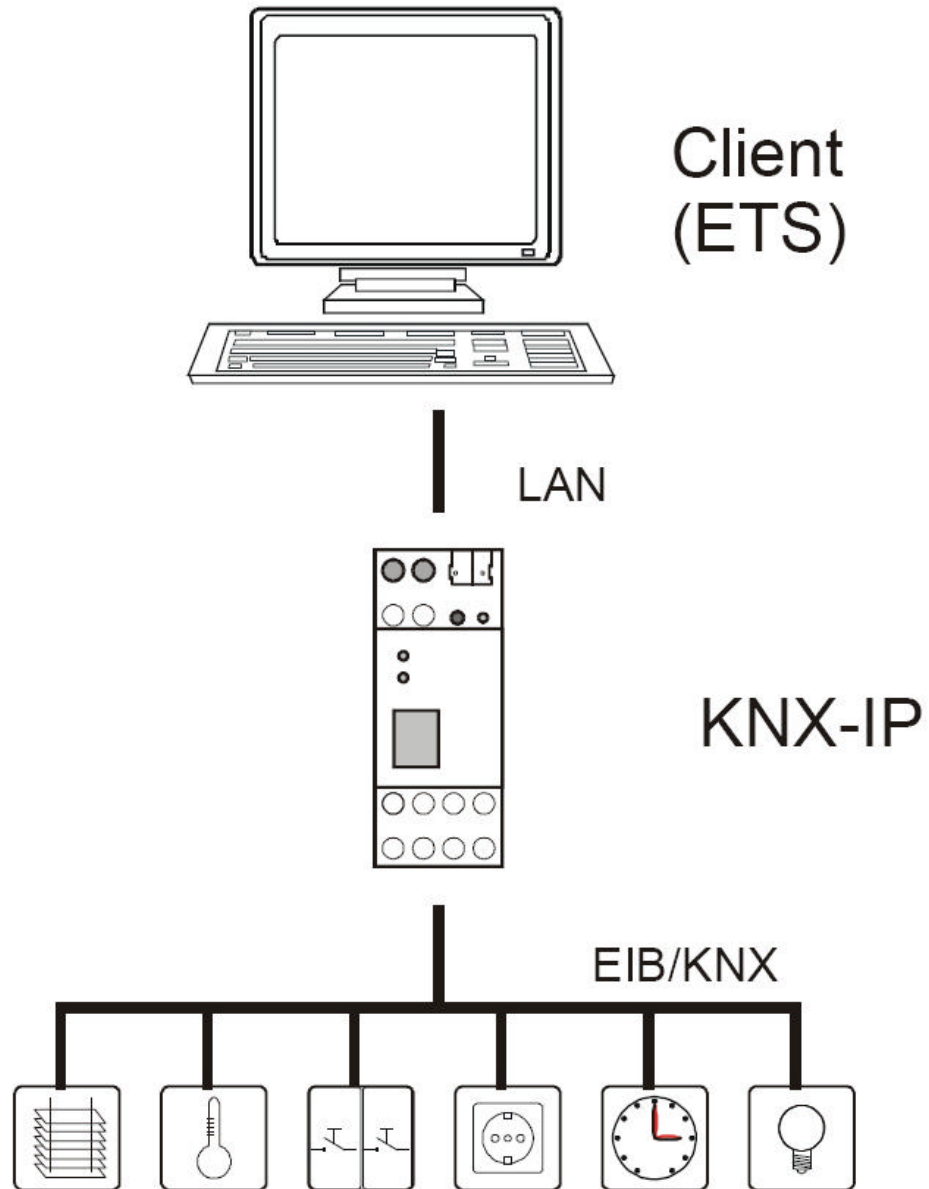
EIB/KNX

Item number: N000401

KNX EIB IP Interface (eibmarkt gmbh)

Data Interface with LAN connection
EIB/KNX programming via ETS
Visualization
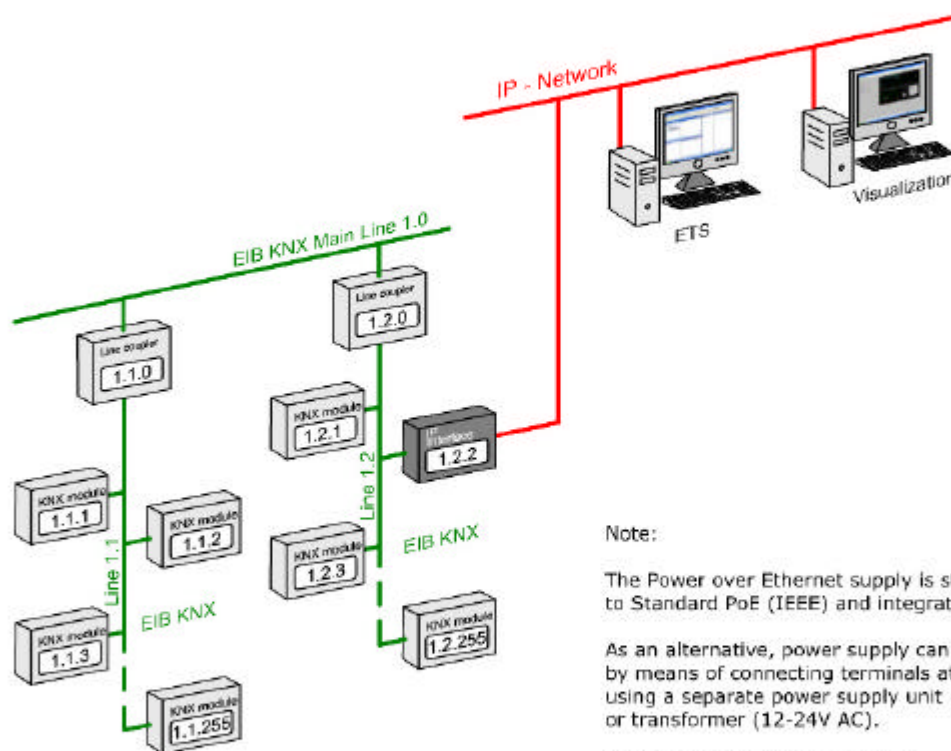
Note:

The Power over Ethernet supply is standardized acc. to Standard PoE (IEEE) and integrated via RJ45.

As an alternative, power supply can be provided by means of connecting terminals at the upper side using a separate power supply unit (12-24V DC) or transformer (12-24V AC).

Parallel power must be avoided!

Projektversion			Datum	Name	Bezeichnung: **LAN Interface**	
Datum	Name	gez.:		O. Schulz	Projekt: Anwendungen IP-Schnitttstellen	Blattzahl: 1
		gepr.:		M. Labahn		
		EIBMARKT GmbH Friedensstrasse 54 08523 Plauen			Zeichnungs-Nr.: ipschnittstellen_en.spl	Blatt-Nr.: 1

Note:

The Power over Ethernet supply is standardized acc. to Standard PoE (IEEE) and integrated via RJ45.As an alternative, power supply can be provided by means of screw connecting terminals at the upper side using a separate power supply unit (12-24V DC) or transformer (12-24V AC). Parallel power must be avoided!

Technical data

Electrical safety
- Protection (EN 60529): IP 20
- Safety extra low voltage SELV DC 24 V

EMC requirements
- Complies with EN 61000-6-2, EN 61000-6-3 and EN 50090-2-2

Environmental requirements
- Ambient temp. operating: - 5 … + 45 °C
- Ambient temp. Non-op.: - 25 … + 70 °C
- Rel. humidity (non-condensing): 5 % … 93 %

Certification
- EIB/KNX

CE norm
- Complies with the EMC regulations (residential and functional buildings) and low voltage directive

Physical specifications
- Housing: Plastic
- Rail mounted device
- Width: 36 mm
- Weight: approx. 100 g
- Fire load: approx. 1000 kJ

Operating controls
- Learning key for EIB/KNX

Indicators
- Learning-LED (red)
- Signal-LED (green) for EIB/KNX
- Signal-LED (green) for LAN

Ethernet
- 10BaseT (10Mbit/s)
- Supported internet protocols ARP, ICMP, IGMP, UDP/IP and DHCP

Power supply
- External supply 12-24V
- Alternative: Power-over-Ethernet
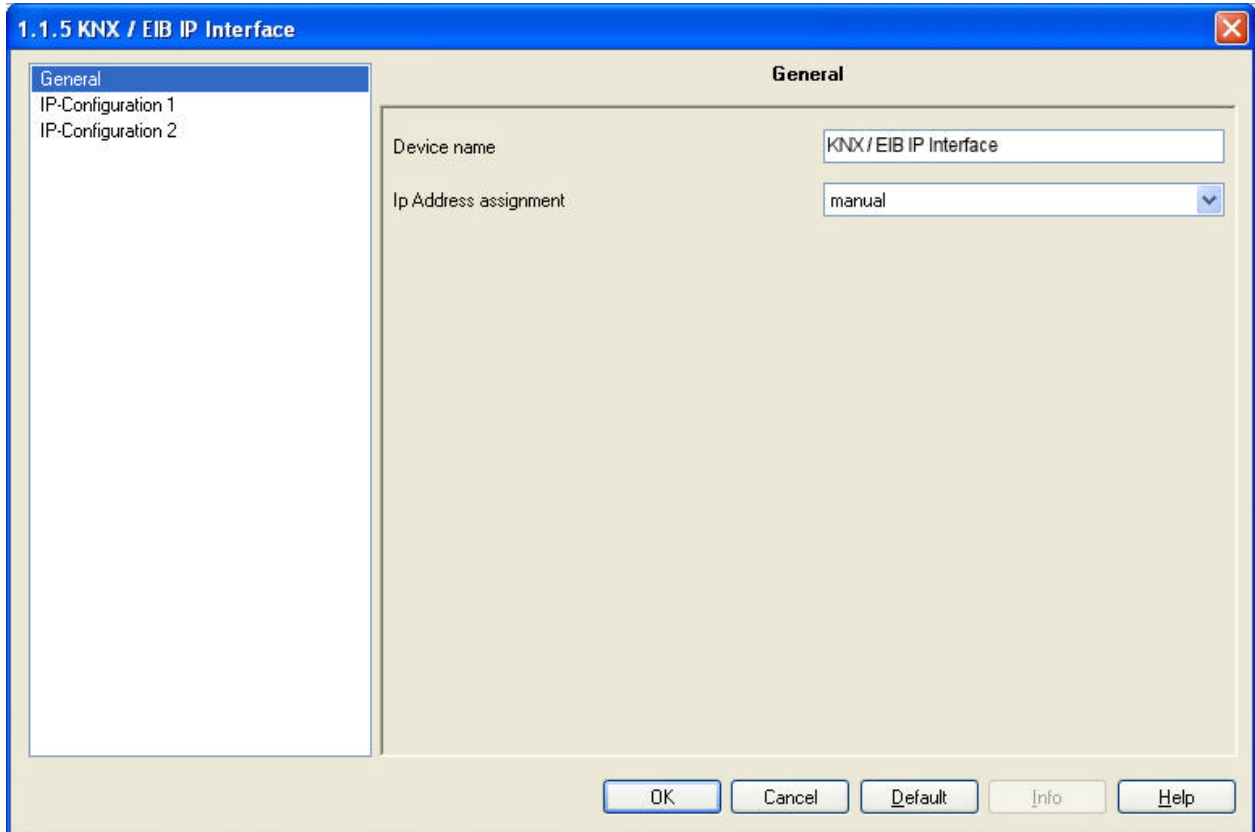- Power consumption: < 800 mW

Connectors
- EIB/KNX connection terminal
- LAN RJ-45 socket
- Screw connector for power supply

Operating and installation manual

ETS database
The following parameters can be set on the ETS:

General:

Device name:
The KNX IP Interface can be assigned a name of your choice. The device name should be descriptive (e.g. Line TF). It is used to search for and recognize a device.

IP address assignment:

Automatic (DHCP): The IP address is automatically assigned on the DHCP, i.e. additional settings are not required. To be able to use this function, there must be a DHCP server in the LAN (many DSL routers have an integrated DHCP server).

Manual: In this case, the IP address, the subnet and the gateway IP address must be entered manually.

IP configuration:

IP address:
This is the IP address of the EIB/KNX IP Interface.

IP subnet:
Enter the subnet mask here. The device uses the values entered in this mask to determine whether there is a communications partner in the local network. If there is no partner in the local network, the device will not send the telegrams directly to the partner but to the gateway that routes the telegram.

IP gateway address:
Enter the IP address of the gateway here.
Note: If the KNX IP Interface will only used in the local LAN, the entry of 0.0.0.0 can remain unchanged.

Example of assigning IP addresses:
A PC is to be used to access the EIB/KNX IP Interface.

> IP address of the PC: `192.168.1.30`
> Subnet of the PC: `255.255.255.0`

The EIB/KNX IP Interface is located in the same local LAN, i.e. it uses the same subnet. The subnet constrains the IP addresses that can be assigned. In this example, the IP address of the IP interface must be 192.168.1.xx, where xx can be a number from 1 to 254 (with the exception of 30, which is already in use). It must be ensured that no numbers are assigned twice.

> IP address of the IP interface: `192.168.1.31`
> Subnet of the IP interface: `255.255.255.0`

ETS Connection Manager

If the IP configuration of the EIB/KNX IP Interface is valid, the interface can be used as an interface to KNX/EIB. To use this function, select the Communication tab under Extras -> Options in the ETS (version 3.0c and higher):
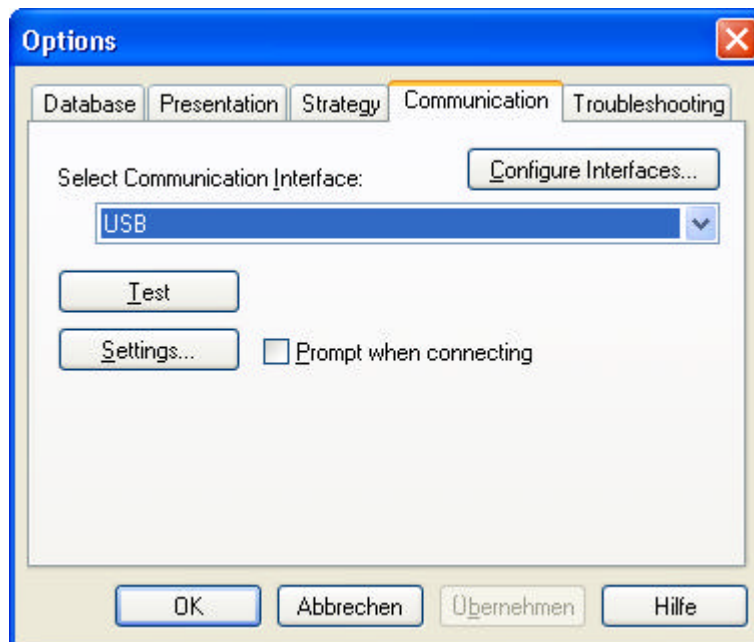

Click *Configure interfaces…* to open the ETS Connection Manager.

Create a new connection by selecting EIBnet/IP under Type. The ETS automatically begins searching for all KNXnet/IP devices. All devices found are displayed. Select the required device.
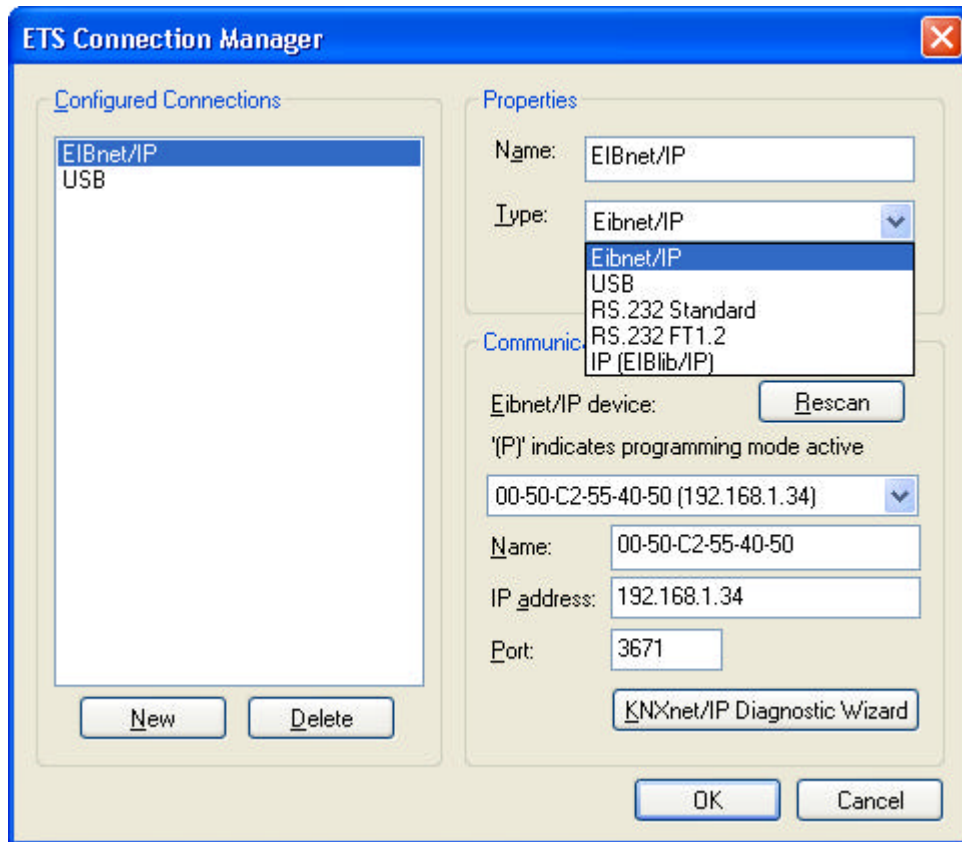
To be able to access KNX/EIB, the EIB/KNX IP Interface requires an additional physical address. This second physical address is only used for bus access and must be set up separately:

Select the Communication tab under Extras -> Options in the ETS. The communications interface is the connection that is currently configured. Click on *Settings…* to open the following window:
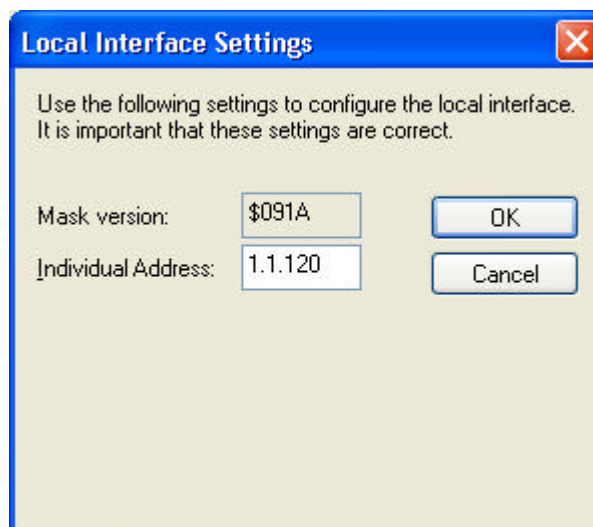

Enter a physical address of your choice. A dummy device may have to be added to the ETS project to reserve this address.

Installation and connection

The EIB/KNX IP Interface is designed for installation in a rack with a depth of 2 units. It contains the following display and control elements:

1: Connector for external power supply
   (12 V to 24 V AC/DC)

2: Connector for KNX/EIB with a bus terminal

3: Learn key

4: Learn LED (red)

5: LED (green):
   - Lights up to indicate bus voltage on KNX/EIB
   - Flashes to indicate telegram traffic

6: LED (green):
   - Lights up to indicate an Ethernet connection
   - Flashes to indicate telegram traffic

7: RJ 45 socket for connecting an Ethernet patch cable
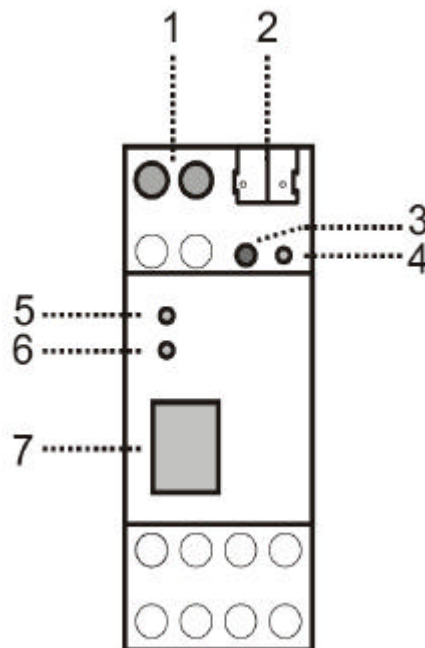
An external power supply only needs to be connected if the switch in use does not support Power-over-Ethernet.

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