

# TECHNICAL DATA

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Bintec User's Guide - X2250  
Version 1.0

**Purpose** This document is part of the user's guide to the installation and configuration of Bintec gateways running software release 7.1.16 or later. For up-to-the-minute information and instructions concerning the latest software release, you should always read our **Release Notes**, especially when carrying out a software update to a later release level. The latest **Release Notes** can be found at [www.funkwerk-ec.com](http://www.funkwerk-ec.com).

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As multiprotocol gateways, Bintec gateways set up WAN connections in accordance with the system configuration. To prevent unintentional charges accumulating, the operation of the product should be carefully monitored. Funkwerk Enterprise Communications GmbH accepts no liability for loss of data, unintentional connection costs and damages resulting from unsupervised operation of the product.

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**Guidelines and standards** Bintec gateways comply with the following guidelines and standards:

R&TTE Directive 1999/5/EG

CE marking for all EU countries and Switzerland

You will find detailed information in the Declarations of Conformity at [www.funkwerk-ec.com](http://www.funkwerk-ec.com).

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# 1 X2250

## 1.1 Delivery size

Your gateway is supplied with the following parts:

- Cable sets/power supply:
  - Ethernet cable (RJ45, red) for Ethernet connection
  - ISDN cable (RJ 45, black) for ISDN connection
  - Serial cable (gray)
  - Power supply
- Bintec Companion CD
- Documentation:
  - **Quick Install Guide** (printed)
  - **User Manual** (on CD)
  - **Release Notes**, if required
  - Safety Instructions

## 1.2 General Product Features

**The general product features cover performance features and the technical requirements for installation and operation of your gateway.**

These features are outlined in the following table:

Feature	Data
Product name	<b>X2250</b>

Feature	Data
Dimensions/weight (B x H x D): Dimensions without cables Weight Transport weight (incl. documentation, cabling, packaging)	200 mm x 30 mm x 150 mm 850 g approx. 3,0 kg
Memory	32 MB DRAM, 8 MB Flash-ROM
LEDs	9 (1 power, 8 function)
Power consumption of equipment	10 W (with 230V)
Voltage supply	AC/DC adapter, Input: 230VAC / 50Hz, Output: 12VDC / 1A
Ambient requirements: Storage temperature Ambient temperature Relative humidity Room classification	-20° to +85°C 0 to 50 °C 20 to 90% non-condensing in operation 5 to 95% non-condensing in storage Operate only in dry rooms
MTBF	100 000 hours
Available interfaces: Serial interface V.24 2x Ethernet IEEE 802.3 LAN ISDN-WAN S <sub>0</sub> WLAN interface (antennas)	Built-in, supports the following baud rates: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bauds Built-in (twisted-pair only), 10/100 Mbps, auto sensing, MDIX Built-in 802.11b and 802.11g with Antenna Diversity Data Rates of 1-, 2-, 5.5-, 6-, 9-, 11-, 12-, 18-, 24-, 36-, 48-, 54 Mbps

Feature	Data
Plugs used: Serial interface Ethernet interface ISDN interface	8-pole miniDIN RJ45 RJ45
SAFERNET™ Security Technology	Community Passwords, PAP, CHAP, MS-CHAP, Callback, Access Control Lists, CLID, NAT, MPPE Encryption, VPN using PPTP or IPSec
Software includes	<b>BRICKware for Windows</b> <b>BRICKtools for Unix</b>
Printed documentation included	<b>Quick Install Guide</b>
Documentation in PDF format	<b>User Manual</b> <b>BRICKware for Windows</b> <b>Software Reference</b>

Table 1-1: General product features

**Note****Antenna Diversity**

The two antennas do not have equal function. The one named "Main", "Primary" or "1" (at **X2250** the antenna next to the power switch) is used for sending and receiving, the other one only for receiving. The AP (Access point) verifies, which of the two antennas receives the better signal, which is then used for decoding. As the antennas are positioned with a distance of approx. one wave length, the signal quality can differ enormously.

## 1.3 LEDs

The LEDs on your **X2250** Gateway indicate states and activity of the gateway.

They are arranged as follows:



Figure 1-1: LEDs on **X2250**

In operational mode the LEDs display the following status information:

LED	Status	Information
PWR	on	Power supply has been connected.
Status	on flashing	The gateway is booting. The gateway is active.
ETH 1	on flashing	The gateway is connected to the Ethernet. Data traffic via the Ethernet interface.
ETH 2	on flashing	The gateway is connected to the Ethernet. Data traffic via the Ethernet interface.
ISDN D	on	The ISDN D-channel is active.
ISDN B	on flashing	One ISDN B-channel is active. Both ISDN B-channels are active.
WLAN	on flashing	The WLAN module is active. Data traffic via the WLAN interface.

Table 1-2: LED status display in operational mode

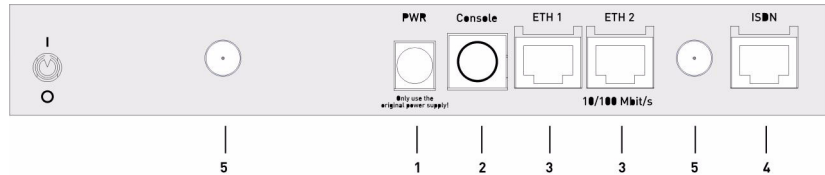
## 1.4 Connections

**All connections are located on the rear of the gateway. The gateway offers three Ethernet interfaces and no ISDN interface. The serial interface al-**



allows connecting a PC as well as connecting an analog or GSM modem for backup purposes.

The connections are arranged as follows:



1. PWR	Socket for power supply	4. ISDN	ISDN Basic Rate interface
2. Console	Serial interface	5.	RSMA connection
3. ETH 1 to 2	10/100 Base-T Ethernet interface		

Figure 1-2: X2250 rear

## 1.5 Pin Assignments

### 1.5.1 Serial Interface

For connecting a console the gateway provides a serial interface. Baud rates between 1200 and 115200 are supported.

The connection is lead through as a MiniDIN socket:

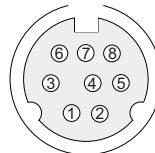


Figure 1-3: 8-pole MiniDIN socket

The pin assignment of the socket is as follows:

Pin	Function
1	For future applications.
2	For future applications.
3	T
4	GND
5	R
6	NC
7	NC
8	NC

Table 1-3: Pin assignment of the serial socket

## 1.5.2 Ethernet Interface

**LAN and WAN interfaces of the gateway are both implemented using Ethernet interfaces.**

A RJ45 socket is used for connecting:

1 . . . . . 8

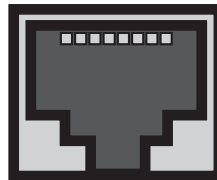


Figure 1-4: Ethernet 10/100Base-T interface (RJ45 socket)

The Ethernet interfaces (RJ45 socket) have the following pin assignment:

Pin	Function
1	TD +

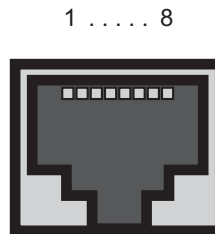
Pin	Function
2	TD -
3	RD +
4	Not used
5	Not used
6	RD -
7	Not used
8	Not used

Table 1-4: RJ45 socket for LAN und WAN connections

### 1.5.3 ISDN Basic Rate Interface

The gateway provides an ISDN  $S_0$  interface, which can be used, e.g., for backup purposes.

A RJ45 socket is used for connecting:

Figure 1-5: ISDN  $S_0$  interface (RJ45 socket)

The ISDN interface (RJ45 socket) has the following pin assignment:

Pin	Function
1	Not used
2	Not used
3	Send (+)

Pin	Function
4	Receive (+)
5	Receive (-)
6	Send (-)
7	Not used
8	Not used

Table 1-5: RJ45 socket for ISDN connection

## 2 Declarations of Conformity

