1 pBTS3701 User Guide

About This Chapter

Purpose

This guide describes the hardware, installation, commissioning, and maintenance of the pBTS3701.

Related Versions

The following table lists the product versions related to this document.

Product Name	Version
pBTS3701	V100R002

Intended Audience

The intended audiences of this document are:

- BS installer
- Administration engineer
- System maintenance engineer
- Field maintenance engineer
- Data configuration engineer

Update History

Version	Update History
01(2008-09-24)	Initial release.

Organization

The pBTS3701 is a compact integrated indoor BTS. It receives and transmits radio signals to enable communications between the WiMAX network and the MS/SS.

1.1 Introduction to the pBTS3701

The pBTS3701 is a compact integrated indoor BTS. It receives and transmits radio signals to enable communications between the WiMAX network and the MS/SS.

1.1.1 Components of the pBTS3701

This describes the console, GPS antenna, and power adapter of the pBTS3701.

The hardware of the pBTS3701 consists of following parts:

- Console
- GPS antenna
- Power adapter

Console

Figure 1-1 shows the console of the pBTS3701.

Figure 1-1 Console of the pBTS3701

The console of the pBTS3701 is integrated with the clock module, baseband module, IRF module, OM module, transmission module, and power module.

GPS Antenna

Figure 1-2 shows the GPS antenna of the pBTS3701.

Figure 1-2 GPS antenna of the pBTS3701

The GPS antenna of the pBTS3701 is used to receive GPS clock signals, which are used as the guarantee the synchronization of the pBTS3701.

Power Adapter

Figure 1-3 shows the power adapter of the pBTS3701.

Figure 1-3 Power adapter of the pBTS3701

The power adapter is used to convert 110 or 220 V AC into +12 V DC to supply power to the pBTS3701.

1.1.2 Physical Structure

The pBTS3701 is a compact integrated indoor BTS, and it is small and exquisite.

Appearance

Figure 1-4 shows the appearance of the pBTS3701.

Figure 1-4 Appearance of the pBTS3701

Button

At the top left of the pBTS3701, there is a RST button used to reset the pBTS3701.

Ports

The **Figure 1-5** shows the ports of the pBTS3701.

Figure 1-5 Ports of the pBTS3701

Table 1-1 lists the ports of the pBTS3701.

Table 1-1 Ports of the pBTS3701

Label	Type	Number	Description
GPS	SMA	1	The GPS port is used to receive GPS signals.
ETH	RJ45	1	The ETH port is used for maintenance and commissioning. FE: 10 Mbit/s or 100 Mbit/s
TRAN	RJ45	1	The TRAN port is a service port which connects to connect the transmission equipment or gateway equipment. FE/GE: 10 Mbit/s or 100 Mbit/s or 1000 Mbit/s
PWR	4Pin socket	1	The PWR port is a power input port. It supports a +12 Vdc power input.
TST	USB	1	Clock test port

LEDs

Figure 1-6 shows the LEDs of the pBTS3701.

Figure 1-6 LEDs of the pBTS3701

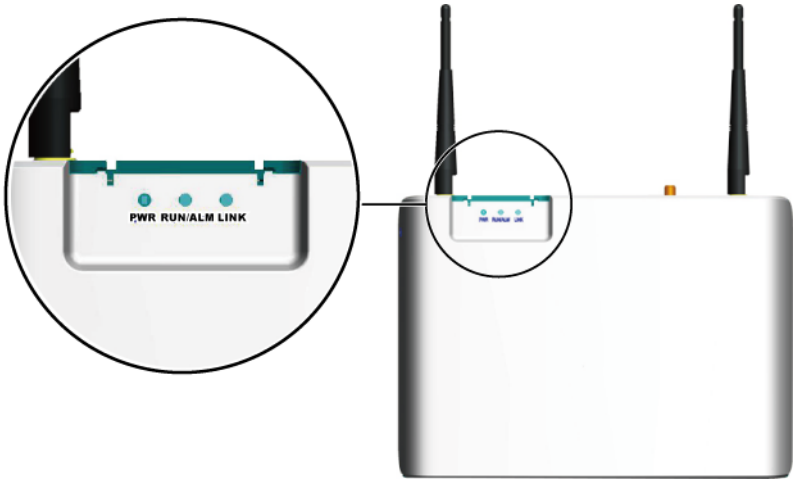


Table 1-2 lists the LEDs of the pBTS3701.

Table 1-2 LEDs of the pBTS3701

Label	Status	Description
RUN/ALM	ON (red)	An alarm is generated, indicating that the board is running in the faulty status.
	Blinks once every 0.25 seconds (Green, ON for 0.125s , OFF for 0.125s)	The board is being loaded.
	Blinks once every 2 seconds (Green, ON for 1s , OFF for 1s)	The board is running normally.
	OFF	There is no power input, or the board is faulty.
LINK	ON (Green)	The pBTS3701 is connected to the network normally.
	Blinking (Green)	The pBTS3701 is in IP packets transmission.
	OFF	The pBTS3701 is not connected to the network.
PWR	ON (green)	Power supply to the pBTS3701 is functional.
	OFF	No power is supplied to the pBTS3701.

1.1.3 Cables of the pBTS3701

This describes the cables of the pBTS3701. The pBTS3701 requires two kinds of cables: the power cable and the Ethernet cable.

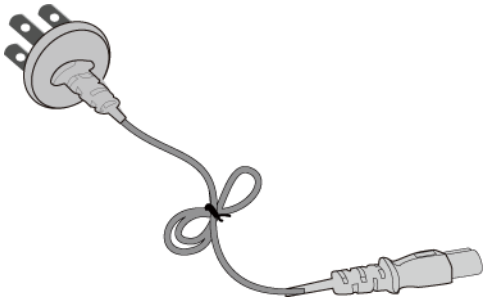
Power Cable of the pBTS3701

This describes the power cable of the pBTS3701.

Appearance

As shown in **Figure 1-7**, one end of the power cable of the pBTS3701 is a three PIN plug, and the other end is a three PIN female connector.

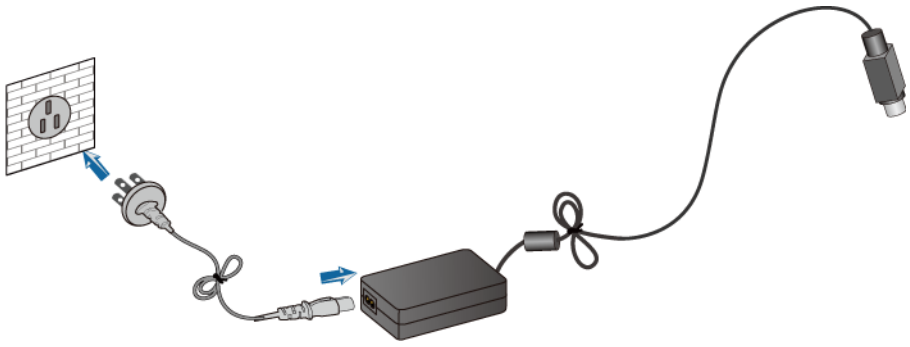
Figure 1-7 Power cable



Installation Position

The three-PIN plug of the power cable is connected to the socket of mains power supply, and the other end is connected to the adapter, as shown in **Figure 1-8**.

Figure 1-8 Connection of the power cable



Ethernet Cable of the pBTS3701

This describes the Ethernet cable of the pBTS3701. The Ethernet cable is used to connect the pBTS3701 with a LAN switch, through which the connection with the ASN-GW is realized. The use of Ethernet cable is optional.

Appearance

Both ends of the pBTS3701 Ethernet cable are RJ45 connectors, as shown in **Figure 1-9**.

Figure 1-9 Ethernet cable of the pBTS3701

Pin Assignment

Table 1-3 describes the pin assignment for the wires comprising the pBTS3701 Ethernet cable.

Table 1-3 Pin assignments for the wires of the pBTS3701 Ethernet cable

X1 End	Wire Color	Wire Type	X1 End
X1.2	Orange	Twisted pair cable	X2.2
X1.1	White/orange		X2.1
X1.6	Green	Twisted pair cable	X2.6
X1.3	White/green		X2.3
X1.4	Blue	Twisted pair cable	X2.4
X1.5	White/blue		X2.5
X1.8	Brown	Twisted pair cable	X2.8
X1.7	White/brown		X2.7

Installation Position

For the Ethernet cable used to transmit user traffic, one end is connected to the TRAN port on the pBTS3701, and the other end to the LAN switch. For the one used to perform local maintenance is connected to the ETH port, and the other end to the computer for local maintenance.