BTS3701B User Guide

Product Version

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

Product Name	Product Version
BTS3701B	V300R003

Change History

Version	Change History
01 (2010-03-30)	First commercial release

Organization

- **Hardware Description**
  This document describes the components, functions, specifications, cable classifications, cable specifications, and cable connections of the BTS3701B.

Hardware Description

This document describes the components, functions, specifications, cable classifications, cable specifications, and cable connections of the BTS3701B.

- **BTS3701B System**
  The BTS3701B system is composed of the BTS3701B and the power adapter.
- **Cables of the pBTS3701**
  The BTS3701B cables consist of a power cable and Ethernet cables.

Parent topic: BTS3701B User Guide

BTS3701B System

The BTS3701B system is composed of the BTS3701B and the power adapter.

- **BTS3701B**
  This section describes the exterior of the BTS3701B and meanings of ports, buttons, and indicators on the panels.
- **Power Adapter**
  The power adapter converts the 100 V AC/220 V AC to 12 V DC and leads power to the

BTS3701B.
- **PSE**
  The power sourcing equipment (PSE) provides power for the BTS3701B over an Ethernet cable in the power over Ethernet (POE) mode.
- **PD**
  The powered device (PD) obtains the power from the Ethernet cable and converts it to 12 V DC to provide power for the BTS3701B.

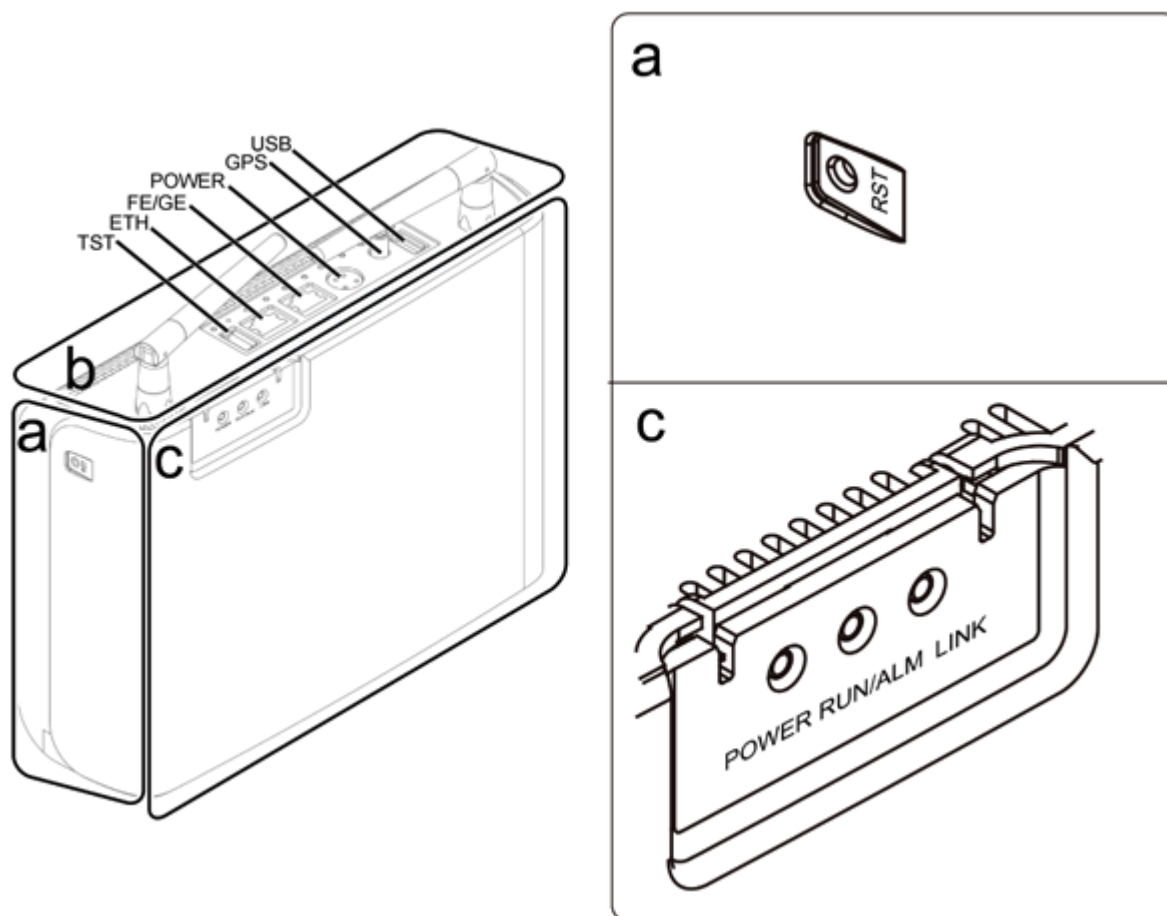**Parent topic:** Hardware Description

BTS3701B

This section describes the exterior of the BTS3701B and meanings of ports, buttons, and indicators on the panels.

Exterior

The dimensions of the BTS3701B are (width x depth x height): 230 mm (9.06 in.) x 430 mm (16.93 in.) x 610 mm (24.02 in.). Figure 1 shows the exterior of the BTS3701B.

Figure 1 Exterior of the BTS3701B

Panels

Table 1 describes the panels of the BTS3701B.

Table 1 Panels of the BTS3701B

Item	Label	Description
Side panel (a)	RST	Reset button. It is used for the reset of the base station (BS).
Top panel (b)	TST	Test port. It uses a USB connector to connect the test instrument. It provides 10 MHz clock signals and frame synchronization signals.
	ETH	Commissioning port. It uses an RJ45 connector and provides a bandwidth of 10/100 Mbps.
	FE/GE	Ethernet port for services. It uses an RJ45 connector and provides a bandwidth of 100/1,000 Mbps. It is used for the transmission of service data.
	POWER	Power input port. It uses a 4-pin socket connector and provides 12 V DC for the BTS3701B.
	GPS	Port for GPS antenna. It uses an SMA connector.
	USB	Standard USB port reserved.
Indicators	See table 2.	

Indicators

The BTS3701B has three indicators which indicate the running status of the BTS3701B. Table 2 describes the indicators on the BTS3701B.

Table 2 Indicators on the BTS3701B

Indicator	Color	Status	Description
POWER	Green	On	The power supply is normal.
		Off	There is no power supply or the equipment is faulty.
		Blinking (green) (on for 1s and off for 1s)	The equipment is running normally.
		Blinking (green) (on for	The equipment is being loaded or the

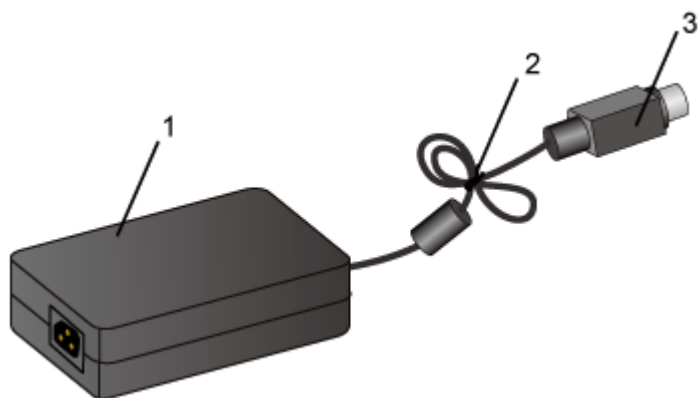|		0.125s and off for 0.125s)	equipment is not started.
RUN/ALM	Red and green	On (red)	An alarm is generated and the BTS3701B needs to be replaced.
		Blinking (red) (on for 1s and off for 1s)	An alarm is generated and the fault should be rectified based on the reported alarm.
LINK	Green	On	The FE port is securely connected.
		Blinking (green) (on for 0.125s and off for 0.125s)	Data is being transmitted and received over the FE port.
		Off	The FE port is not connected.

Parent topic: BTS3701B System

Power Adapter

The power adapter converts the 100 V AC/220 V AC to 12 V DC and leads power to the BTS3701B.

Figure 1 shows the exterior of the power adapter.

Figure 1 Exterior of the power adapter

📖 NOTE:
In the previous figure, 1 indicates the power conversion unit, 2 indicates the DC output cable, and 3 indicates the 4-pin connector. The DC output cable is 1.5 m (4.92 ft). It is terminated with a 4-pin power adapter at one end and is connected to the POWER port on the BTS3701B.
Parent topic: BTS3701B System

PSE

The power sourcing equipment (PSE) provides power for the BTS3701B over an Ethernet cable in the power over Ethernet (POE) mode.

Exterior

Figure 1 shows the exterior of the PSE.

Figure 1 Exterior of the PSE

Ports

Table 1 describes the ports on the PSE.

Table 1 Ports on the PSE

Port	Port Silkscreen	Description
Power port	-	Used for the power input
POE port	DATA&POWER OUT	Used for the output of hybrid signals of the PSE
Ethernet port	DATA IN	Used for the input of data signals

Parent topic: BTS3701B System

PD

The powered device (PD) obtains the power from the Ethernet cable and converts it to 12 V DC to provide power for the BTS3701B.

Exterior

Figure 1 shows the exterior of the PD.

Figure 1 Exterior of the PD

Ports

Table 1 describes the ports on the PD.

Table 1 Ports on the PD

Port	Port Silkscreen	Description
POE port	POWER&DATA IN	Used for the data and power input of the PD
Ethernet port	DATA OUT	Used for the output of data signals of the PD and connected to the Ethernet port on the BTS3701B
Power port	PWR OUT	Connected to the POWER port on the BTS3701B
Output selection	DC OUT	Output selection (12 V/24 V), 12 V for the BTS3701B

Parent topic: BTS3701B System

Cables of the pBTS3701

The BTS3701B cables consist of a power cable and Ethernet cables.

- **Power Cable**
  The power cable is used for connecting the AC power wiring bar and provides power for the power adapter.
- **Ethernet Cable**
  The Ethernet cable connects the BTS3701B and the transmission equipment of an operator.

Parent topic: Hardware Description

Power Cable

The power cable is used for connecting the AC power wiring bar and provides power for the power adapter.

Exterior

Figure 1 shows the exterior of the power cable.

Figure 1 Exterior of the power cable

📖 **NOTE:**

In the previous figure, 1 indicates the male connector and 2 indicates the C7 female connector.

Different countries have different power supply standards. The exterior of the cables depends on actual requirements.

Installation Position

Table 1 describes the connections of the power cable.

Table 1 Connections of the power cable

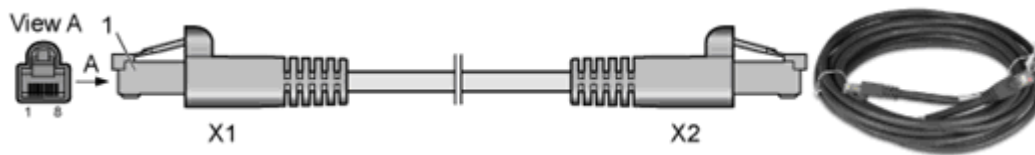| One End (PA Male Connector) Is Connected to...	The Other End (C7 Female Connector) Is Connected to...
AC power wiring bar	Power adapter

Parent topic: Cables of the pBTS3701

Ethernet Cable

The Ethernet cable connects the BTS3701B and the transmission equipment of an operator.

Exterior

Both ends of the Ethernet cable are terminated with RJ45 connectors, as shown in Figure 1.

Figure 1 Exterior of the Ethernet cable

Pin Assignment

Table 1 Pin assignments of the Ethernet cable

X1 End	Color	Type	X2 End
X1.2	Orange	Twisted pair wire	X2.2
X1.1	White/Orange		X2.1
X1.6	Green	Twisted pair wire	X2.6
X1.3	White/Green		X2.3
X1.4	Blue	Twisted pair wire	X2.4
X1.5	White/Blue		X2.5
X1.8	Brown	Twisted pair wire	X2.8
X1.7	White/Brown		X2.7

Installation Position

Table 2 describes the connections of the Ethernet cable.

Table 2 Connections of the Ethernet cable

One End Is Connected to...	The Other End Is Connected to...	
Transmission equipment of an operator	FE/GE port on the BTS3701B	

Parent topic: Cables of the pBTS3701