

8 Installing the BTS3012 Boards and Modules

About This Chapter

This task describes how to install the boards and modules in the BTS3012 cabinet.

[8.1 List of the BTS3012 Boards and Modules](#)

The BTS3012 boards include DTMU, DEMU, DATU, DCSU, DCCU, DCMB, DELC, DMLC, DSAC, DCTB, and DTRB. The BTS3012 modules include DTRU, DCOM, DDPU, DFCU, DFCB, and fan box.

[8.2 Preparations for Installing the BTS3012/BTS3012AE Boards and Modules](#)

This part describes the preparations for installing the BTS3012/BTS3012AE boards and modules. Before installing the BTS3012/BTS3012AE boards and modules on site, you should make the following preparations.

[8.3 Installing the DTMU, DATU, and DEMU](#)

This task describes how to install the DTMU, DATU, and DEMU, which are placed in the common subrack.

[8.4 Installing the DTRU](#)

This task describes how to install the DTRU in the DTRU subrack.

[8.5 Installing the DDPU, DCOM, DFCU, and DFCB](#)

This task describes how to install the DDPU, DCOM, DFCU, and DFCB, which are placed in the DAFU subrack.

[8.6 Installing the DMLC, DELC, and DSAC](#)

This task describes how to install the DMLC, DELC, and DSAC, which are placed in the subrack on top of the cabinet.

8.1 List of the BTS3012 Boards and Modules

The BTS3012 boards include DTMU, DEMU, DATU, DCSU, DCCU, DCMB, DELC, DMLC, DSAC, DCTB, and DTRB. The BTS3012 modules include DTRU, DCOM, DDPU, DFCU, DFCB, and fan box.

Table 8-1 lists the boards and modules of the BTS3012.

Table 8-1 Boards and modules of the BTS3012

Subrack	Board/Module	Full Spelling	Configuration Quantity in One Cabinet	
			Full Configuration	Minimum Configuration
Common subrack	DTMU	Transmission/Timing/Management Unit for DTRU BTS	2	1
	DEMU	Environment Monitoring Unit for DTRU BTS	1	0
	DATU	Antenna and TMA Control Unit for DTRU BTS	2	0
	DCSU	Combined cabinet Signal connection Unit for DTRU BTS	1	1
	DCCU	Cable Connection Unit for DTRU BTS	1	1
	Performs RF signals dividing, diversity receiving, RF hopping, and demodulation of the two carriers.	Common Module Backplane for DTRU BTS	1	1
Set-on-top subrack	DELC	E1 Signal Lightning-Protection Card for DTRU BTS	3	1
	DMLC	Monitor Signal Lightning-Protection Card for DTRU BTS	1	0

Subrack	Board/Module	Full Spelling	Configuration Quantity in One Cabinet	
			Full Configuration	Minimum Configuration
	DSAC	Signal Access Card for DTRU BTS	1	1
	DCTB	Cabinet Top Backplane for DTRU BTS	1	1
DTRU subrack	DTRU	Double-Transceiver Unit	6	1
	DTRB	Double-Transceiver Unit Backplane	1	1
DAFU subrack	DCOM	Combining Unit for DTRU BTS	3	0
	DDPU	Dual-Duplexer Unit for DTRU BTS	6	0
	DFCU	Filter Combiner Unit for DTRU BTS	3	0
	DFCB	Filter Combiner Unit for DTRU BTS	1	0
Fan subrack	Fan Box	Fan Module	1	1

8.2 Preparations for Installing the BTS3012/BTS3012AE Boards and Modules

This part describes the preparations for installing the BTS3012/BTS3012AE boards and modules. Before installing the BTS3012/BTS3012AE boards and modules on site, you should make the following preparations.

Prerequisite

The PGND cables are installed.

Context



CAUTION

Take correct ESD prevention measures, such as wearing an ESD wrist strap or ESD gloves, to avoid static damage to boards, modules, and electronic components.

**CAUTION**

After the operation, remove the ESD wrist strap, arrange its line, and place it on the zig strap of the air filter inside the door of the cabinet. Confirm that the cables and parts are in position. The ESD wrist strap must not be connected to the ESD jack when you close the door. Otherwise, the door will get stuck by the ESD wrist strap and the ESD wrist strap or the cabinet door will be damaged.

Procedure

- Step 1** Clean the subracks.
- Step 2** Check whether there are any bent, missing, or broken pins on the backplane.
- If there is any bent pin, replace it. In case of an emergency, use a pair of nipper pliers to straighten the pin.
 - If any pin is missing or broken, replace the backplane.
- Step 3** Check whether the sockets on the backplanes and on the boards are deformed.
- If the deformation is not visible, adjust the socket using a pair of nipper pliers.
 - If the deformation is serious, replace the backplane or the board.
- Step 4** Use a #2 cross screwdriver whose diameter is 6 mm to tighten the M3 captive screws on the board panels.

----End

8.3 Installing the DTMU, DATU, and DEMU

This task describes how to install the DTMU, DATU, and DEMU, which are placed in the common subrack.

Prerequisite

The DIP switches on the DTMU and on the DEMU are set.

For the method of setting the DIP switches on the DTMU, refer to [DIP Switches on the DTMU](#).

For the method of setting the DIP switches on the DEMU, refer to [DIP Switches on the DEMU](#).

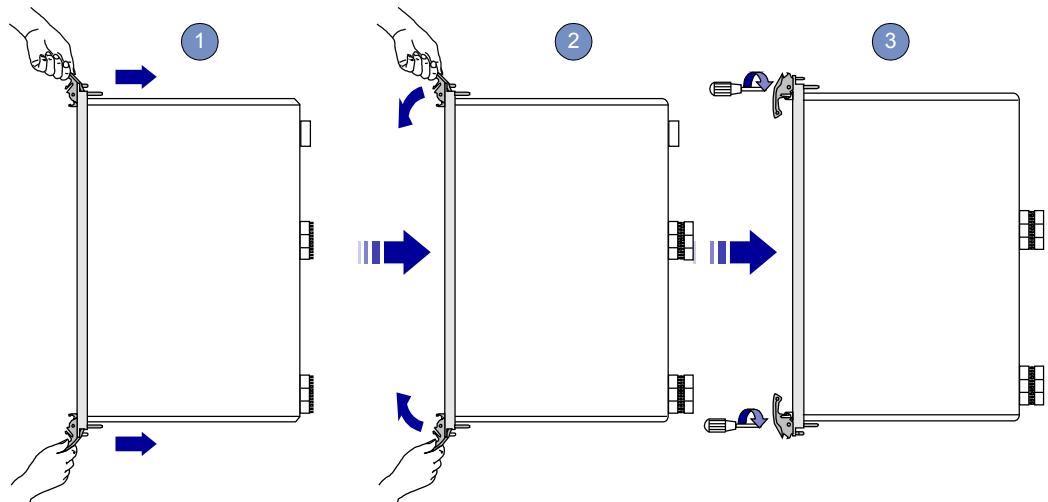
Context**CAUTION**

When installing a board, do not touch the printed circuit board (PCB) or other components except jumpers and DIP switches on the board.

Procedure

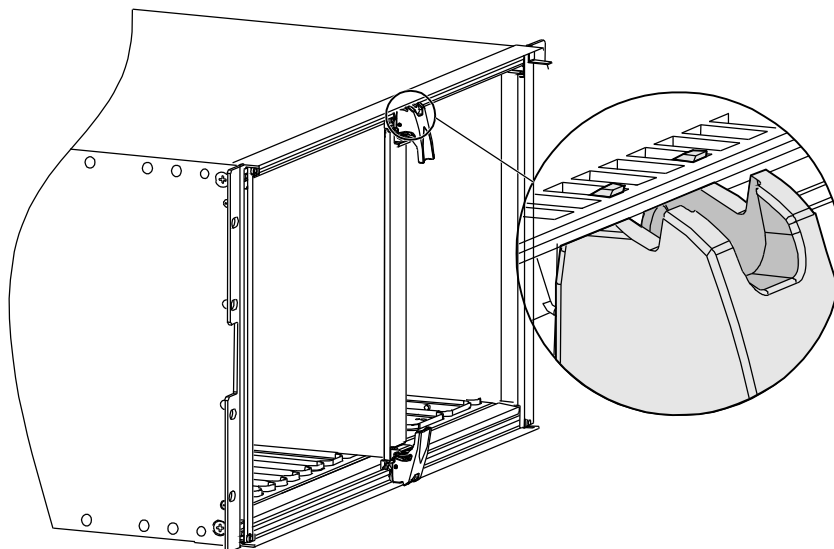
- Step 1** Use a #2 cross screwdriver to loosen the two captive screws on the top and bottom of the panel in the anticlockwise direction, as shown in (1) of [Figure 8-1](#).

Figure 8-1 Installing the boards



- Step 2** Hold the handle on the upper part of the front panel with one hand and support the board with the other hand. Position the board in the corresponding guide rail according to the nameplate.
- Step 3** Hold the two handles and push the board along the guide rail gently until they are in position.
- Step 4** When the board is in position, hold the two handles and turn them inward simultaneously, as shown in (2) of [Figure 8-1](#). The small hooks on the two handles clasp the upper and lower rectangular holes on the subrack, as shown in [Figure 8-2](#).

Figure 8-2 Handles on the front panel hooking into the subrack



- Step 5** Fasten the captive screws on the panel in the clockwise direction using a #2 cross screwdriver whose diameter is 6 mm, as shown in (3) of [Figure 8-1](#).

----End

8.4 Installing the DTRU

This task describes how to install the DTRU in the DTRU subrack.

Context



CAUTION

Use both hands to install the DTRU because it is heavy.

Procedure

- Step 1** Hold the handle with one hand and support the module with the other to place the module into the guide rail.
- Step 2** Push the module along the guide rail.
- Step 3** At the four corners of the panel, use four screws to fix the module in the subrack.

----End

8.5 Installing the DDPU, DCOM, DFCU, and DFCB

This task describes how to install the DDPU, DCOM, DFCU, and DFCB, which are placed in the DAFU subrack.

Context



NOTE

- The DDPU and the DFCU can be inserted into each other's slots in the same cabinet. The DFCU has two 2-in-1 combiners. Therefore, the combining of DCOMs is not required if the DFCU is configured.
- Each DDPU occupies one DAFU slot. Each DFCU occupies two DAFU slots.

Procedure

- Step 1** Hold the handle with one hand and support the module with the other to place the module into the guide rail.
- Step 2** Push the module along the guide rail.
- Step 3** At the four corners of the panel, use four screws to fix the module in the subrack.



WARNING

Ensure that the screws on the DDPU are fixed so that the DDPU can discharge current normally. If the DDPU does not discharge current normally, the DDPU cannot perform lightning protection properly and then the equipment may not run normally.

Step 4 Attach cell labels on the panels of the DDPU and DFCU.

Figure 8-3 shows the position for attaching a cell label on the panel of the DDPU.

Figure 8-3 Position for attaching a cell label on the panel of the DDPU

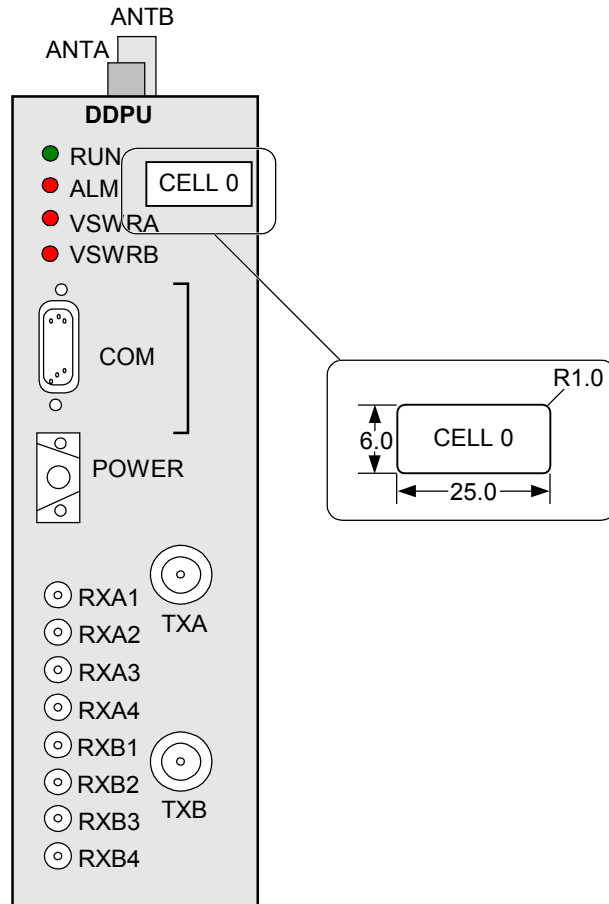
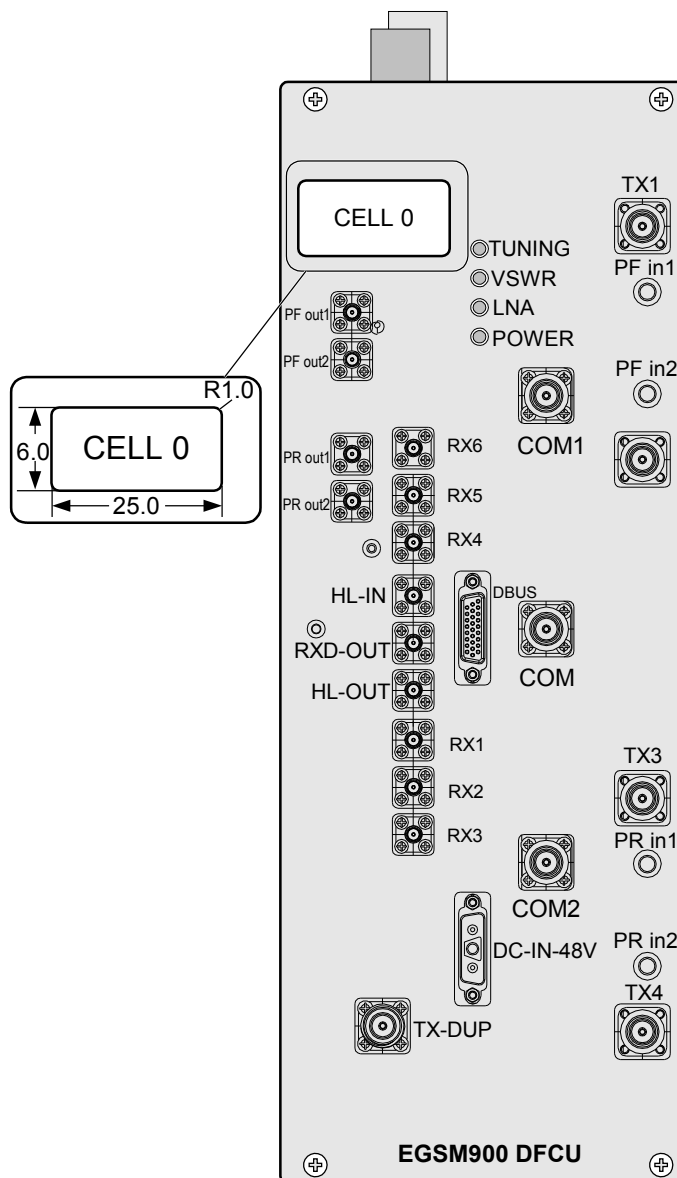


Figure 8-4 shows the position for attaching a cell label on the panel of the DFCU.

Figure 8-4 Position for attaching a cell label on the panel of the DFCU

----End

8.6 Installing the DMLC, DELC, and DSAC

This task describes how to install the DMLC, DELC, and DSAC, which are placed in the subrack on top of the cabinet.

Context



CAUTION

- When inserting boards into or removing boards from the subrack on top of the cabinet, handle them with care to avoid any damage to the pins.
 - The DMLC and the DELC can be inserted into each other's slots.
 - Do not place the DSAC and the DMLC&DELC in wrong slots.
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Procedure

Step 1 Place the board in the corresponding slot, as shown in [Figure 8-5](#).

Figure 8-5 Configurations of the subrack on top of the cabinet

D M L C	D E L C 1	D E L C 0	D S A C
0	1	2	3

Step 2 Push the module along the guide rail.

Step 3 At the four corners of the panel, use four screws to fix the module in the subrack.

----End