

12 Configuration of the BTS3012/ BTS3012AE

About This Chapter

This part describes the principles for configuring the BTS3012/BTS3012AE. It also describes the principles for configuring a single cabinet, combined cabinets, and cabinet groups.

[12.1 Configuration Principles for the BTS3012/BTS3012AE](#)

The BTS3012/BTS3012AE features flexible configuration and supports hybrid networking over multiple frequency bands. One BTS3012/BTS3012AE cabinet supports up to six cells.

[12.2 Typical Configuration of One BTS3012/BTS3012AE Cabinet](#)

This part describes the typical configuration of one BTS3012/BTS3012AE cabinet.

[12.3 Typical Configuration of BTS3012/BTS3012AE Combined Cabinets and Cabinet Groups](#)

This part describes the typical configuration of the combined cabinets and cabinet groups of the BTS3012/BTS3012AE .

12.1 Configuration Principles for the BTS3012/BTS3012AE

The BTS3012/BTS3012AE features flexible configuration and supports hybrid networking over multiple frequency bands. One BTS3012/BTS3012AE cabinet supports up to six cells.

Configuration Principles

When configuring the BTS3012/BTS3012AE, adhere to the following principles:

- Use as less antennas as possible.
- Use as less cabinets as possible.
- Configure all the TRXs that belong to one synchronized cell in one cabinet group.

Adhere to the following principles while configuring the BTS3012/BTS3012AE cabinets:

- If less than 12 TRXs are required in the synchronized cells of a site, use one cabinet to configure the site.
- If 12-24 TRXs are required in the synchronized cells of a site, use two combined cabinets to configure the site.
- If more than 24 TRXs are required in the synchronized cells of a site, use cabinet groups to configure the site.

Configuration Features

The BTS3012/BTS3012AE has the following configuration features:

- Supporting omnidirectional cell coverage and directional cell coverage
- Supporting the configuration of two combined cabinets and three cabinet groups
- The RF Tx mode supports wideband combining, PBT, transmit diversity, and non-combining. Note that the DTRU connected to the DFCU does not support wideband combining mechanism.
- The RF Rx mode supports receive division, independent receive, and four-way receive diversity.

12.2 Typical Configuration of One BTS3012/BTS3012AE Cabinet

This part describes the typical configuration of one BTS3012/BTS3012AE cabinet.

Configuration of the DTMU

The DTMU works as a main controller. Generally, one DTMU is configured in a cabinet.

Configuration of the DATU

The DATU is the antenna and TMA control board. It is configured only when the TMA is configured.

Configuration of the PSU and DPMU

NOTE

Only the BTS3012AE uses the PSU and the DPMU.

The minimum configuration of the PSU is 1+1. Generally, three PSUs are configured.

- If two PSUs are configured, insert the PSUs into slots 5 and 7.
- If three PSUs are configured, insert the PSUs into slots 5, 6, and 7.

The DPMU manages the power system. One DPMU is configured in a cabinet.

Configuration of the DEMU and DMLC

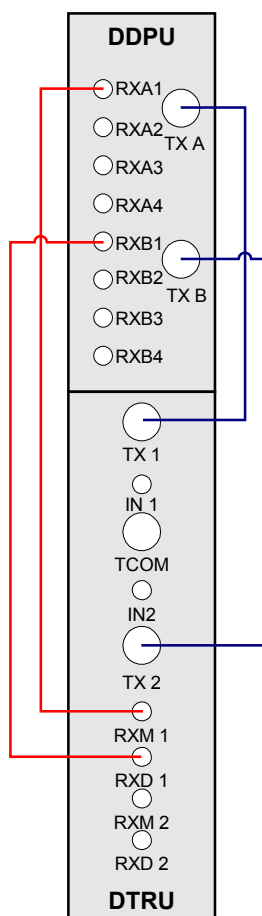
The DEMU and DMLC is configured only there are six Boolean value inputs or analog alarm inputs in the BTS3012.

Configuration of the DTRU/DDPU/DCOM/DFCU/DFCB

- To fully use the DTRU, configure an even number of TRXs in a cabinet.
- Generally, the DDPU/DCOM is configured in the DAFU subrack.
- The DFCU/DFCB is configured in the DAFU subrack when a site requires high traffic volume and wide coverage.

Configuration of S2/2/2

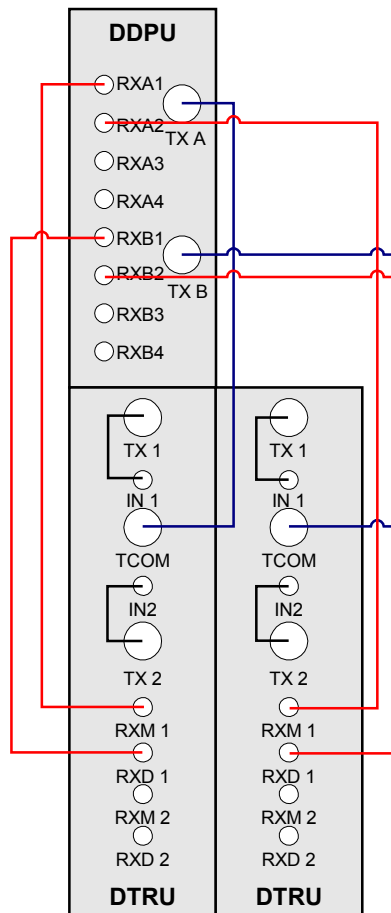
Figure 12-1 shows the cabling of RF cables in a S2/2/2 cell. The RF Tx cable is blue, the RF Rx cable is red, and the cable for the combiner on the DTRU is black.

Figure 12-1 Configuration of S2/2/2

Configuration of S4/4/4

Figure 12-2 shows the cabling of RF cables in a S4/4/4 cell.

Figure 12-2 Configuration of S4/4/4



NOTE

The DTRU uses independent Tx mode in S4/4/4 cell configuration. For details about other Tx modes, refer to [Working Principles of the DTRU](#).

12.3 Typical Configuration of BTS3012/BTS3012AE Combined Cabinets and Cabinet Groups

This part describes the typical configuration of the combined cabinets and cabinet groups of the BTS3012/BTS3012AE .

Configuration of the DTMU

- In combined cabinets, the main cabinet is configured with the DTMU while the extension cabinet is not configured with the DTMU.
- In cabinet groups, the main cabinets from the main and extension cabinet groups are configured with the DTMUs while the extension cabinets from the main and extension cabinet groups are not configured with the DTMUs.

Configuration of the DTRU/DDPU/DCOM/DFCU/DFCB

- In an S4 or smaller site, use the DDPU.

- In S5-S8 sites, use the DDPU+DCOM combination mode or the DFCU.
- In S9-S12 sites, use the DDPU+DCOM or the DFCU+DFCB combination mode.

Configuration of S6/6/6

Figure 12-3 shows the cabling of RF cables in one S6/6/6 cell. The RF Tx cable is blue, the RF Rx cable is red, and the cable for the combiner on the DTRU is black.

Figure 12-3 Configuration of S6/6/6

