

4 BTS3012 Double-Transceiver Subsystem

About This Chapter

The BTS3012 double-transceiver subsystem performs the functions associated with baseband signals, such as modulation, demodulation, power amplification, and combination output.

[4.1 Components of the BTS3012/BTS3012AE Double-Transceiver Subsystem](#)

The functions of the BTS3012/BTS3012AE double-transceiver subsystem are performed by the DTRUs, which are located in the DTRU subrack.

[4.2 Functions of the BTS3012/BTS3012AE Double-Transceiver Subsystem](#)

The BTS3012/BTS3012AE double-transceiver subsystem performs the following functions: transmitting RF signals, receiving RF signals, and processing baseband signals.

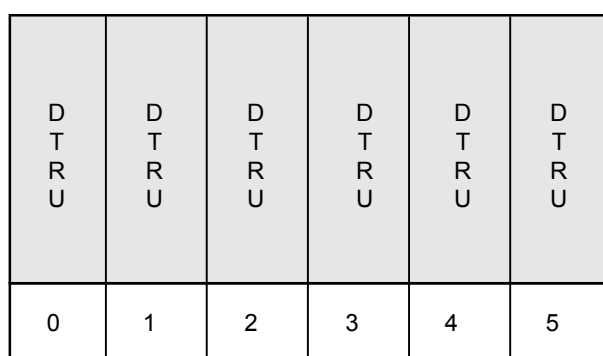
4.1 Components of the BTS3012/BTS3012AE Double-Transceiver Subsystem

The functions of the BTS3012/BTS3012AE double-transceiver subsystem are performed by the DTRUs, which are located in the DTRU subrack.

Internal Composition

Figure 4-1 shows a fully configured BTS3012/BTS3012AE DTRU subrack.

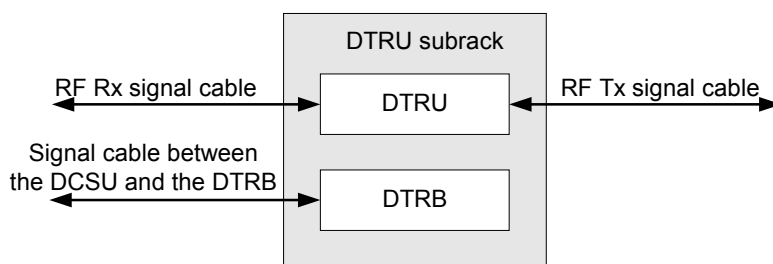
Figure 4-1 Fully configured DTRU subrack



External Cabling

Figure 4-2 shows the external cabling of the BTS3012/BTS3012AE DTRU subrack.

Figure 4-2 External cabling of the BTS3012/BTS3012AE DTRU subrack



NOTE

The DTRB is the backplane in the DTRU subrack.

4.2 Functions of the BTS3012/BTS3012AE Double-Transceiver Subsystem

The BTS3012/BTS3012AE double-transceiver subsystem performs the following functions: transmitting RF signals, receiving RF signals, and processing baseband signals.

The RF signals transmitting part performs the following operations:

- Converting baseband signals into RF signals through the modulation, up-conversion of frequency, filtering, and RF frequency hopping
- Amplifying signals and outputting combined signals

The RF signals receiving part performs the following operations:

- Demodulating RF signals and performing frequency hopping of RF signals
- Dividing received RF signals and performing receive diversity

The baseband processing part performs the following operations:

- Signaling processing , such as encoding, decoding, interleaving, de-interleaving, modulating, and demodulating channels
- Supporting voice and fax services
- Supporting Phase II data services, GPRS services, and EDGE services
- Supporting RF loop test and switchover upon phase-lock loop failure

