

3.1.1 CPIB (Channel Processor and IF Interface Board)

The CPIB is the main control board in the OneRAN. It controls and processes packet data, CDMA Voice and Data Calls. It also transmits and receives voice and data signaling using the CDMA air interface.

The CPIB can be configured to support either 1FA / 3 sector or 3FA omni operations.

The CPIB is equipped with three Qualcomm CSM-5000 CDMA modem processors which provide up to 96 individual CDMA channel elements. All base-band Channel Processing functions and BTS management functions are provided on this board which is supervised by a single Power PC processor.

The CPIB Board's major functions include:

- Managing the digital signal and call processing based on IS-95, IS-95A or CDMA2000 standards.
- Provide the BTS function interface to the BSC
- Supporting configurations up to 96CE/3Sector/1FA or omni/3FA
- Softer handoff and channel pooling functions within the BTS
- CDMA rake receiver & call processing
- Control of the transceivers and power amplifiers, if equipped
- Site timing functions including GPS interface clock distribution
- Ethernet interface support
- Alarm monitoring including fan rotation alarms
- Local serial man-machine interface (MMI)

3.1.2 PCPM (Primary Call Processor Module)

The PCPM is a processor board that supports the BSC functions. The PCPM provides Ethernet interfaces for connection to the Softswitch, Media Gateway (MG), Signaling Gateway (SG), PDSN and BSM via the IP packet backhaul network. The PCPM communicates with the BTS through the Ethernet interface. The PCPM is equipped with a Power PC main processor.

The PCPM enables inter-BTS communications for the purposes of managing soft handoff.

The PCPM supports 100 Base-T Ethernet interfaces for backhaul.



3.1.3 XCVB (RF Transceiver Board)

The transceiver board contains the primary radio functions. It contains a 2 path diversity receiver and a transmitter that supports I & Q modulation.

The OneRAN is normally equipped with a low power transmit function that is designed to interface with the external RU power amplifier. An alternate version is also available with an internal 50mW amplifier and integrated duplexer function that can be used for pico cell systems.