

Technical Description

The PCS Cell Booster was specifically designed to integrate with compact GSM base stations without any need for retrofitting the original equipment. The system consists of a 5U 19" rack mount tray, which can accommodate up to five individual modules. The modules include a Dual Amplifier-Booster Module, a Dual Amplifier-Combiner Module, a Triple Duplexer Module, and a Power Supply Unit (PSU). The Cell Booster system can be configured with any combination of the above modules in order to achieve the desired performance results.

The Dual Amplifier-Booster Module (DAB) consists of two linear power amplifiers with intermodulation level control circuitry, each capable of generating a 55 Watt GSM signal. The Dual Amplifier-Combiner Module (DAC) is identical to the DAB Module with the exception of a power hybrid combiner at the output which combines both signals to provide two 25 Watt GSM signals on a common output. The Triple Duplexer Module (TDM) consists of three duplexers, which combine the transmit (TX) and receive (Rx) signals on a common antenna (ANT) port. A Splitter-Bias-Tee and Low Noise Amplifier (LNA) option is available to provide DC pass-thru and receive diversity for particular BTS equipment such as the Ericsson RBS 2102 configured with CDUA's. The Power Supply Unit (PSU) consists of a AC to DC Converter which is capable of powering up to four DAB or DAC Modules. An optional battery back-up circuit is available that can tap into the existing BTS battery bank during the loss of AC power. All of the modules contain alarm and monitoring circuits and provide relay contact closures that can be tied into the BTS alarm circuit.