



## **RD2020 Operation Description**

The RD-2020 CDMA AWS bandwidth adjustable repeater is designed for operation in the CDMA network for AWS band. Band specific linear amplifier and filtering effectively amplifies the desired Node B carrier and provides superior out-of-band rejection. Typical units with adjustable bandwidth are programmed to specific requirements of the network. The RD-2020 comes in a sealed well-ventilated cast aluminum enclosure, suitable for all weather conditions..

In the downlink, the BTS signals are received by donor antenna of the equipment. After the duplexer, the signals are sent to the LNA module for pre-amplification, followed by band selection using the Frequency Selection (FS) modules. The power amplifiers (PA) can amplify all carriers within the passband to the maximum output power permitted. The duplexer permits combining with the uplink signals to share a single service antenna.

In the uplink, the mobile signals are received by the service antenna. After the duplexer, the signals are sent to the LNA, FS and PA modules before duplexing with the downlink signals. The uplink signals are sent to the donor antenna for transmission back to the BTS.

A schematic diagram and a description of all circuitry and devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power.

The repeater's downlink modulation method is **QPSK and uplink is BPSK**.