## **BSel Repeater**



Figure A-3 BSel Repeater Blook Diagram

Figure A-3 illustrates a block diagram of a BSel repeater. This diagram is applicable to repeaters for e.g. GSM, TACS, ETACS, AMPS, DAMPS, CDMA and WCDMA systems. The signal from the base station is received via the repeater donor antenna and is then forwarded through a DC, used as antenna port only if an RF modem is used. The signal passes a DPX, is amplified in a LNA, and enters the BSA.

The first mixer stage on the BSA, which is controlled by a synthesizer, converts the received frequency down to the IF frequency. The signal is then filtered by SAW bandpass filters and amplified before it is fed to the second mixer stage for conversion back to the original frequency. The BSA has adjustable bandwidth and the SAW filter combination can be software changed from OM-Online (or OMS).

The following PA is controlled by the CU. The amplifier gain will be reduced to avoid instability due to poor antenna isolation. A detector on the PA measures the output level continuously. The signal from this detector is used by the automatic gain control (AGC) to supervise and, if necessary, reduce the output power to keep it under a maximum level. The AGC also affects other amplification stages.

The output signal from the PA at P5 passes a DPX before it is fed to the repeater service antenna.

