

# System Architecture:

2.5GHz CPE consists of a 3 way switch, a RF section, a IF section, and a modulator/demodulator. Figure 1 depicts the major function blocks. Operational frequency 2500MHz to 2596MHz.

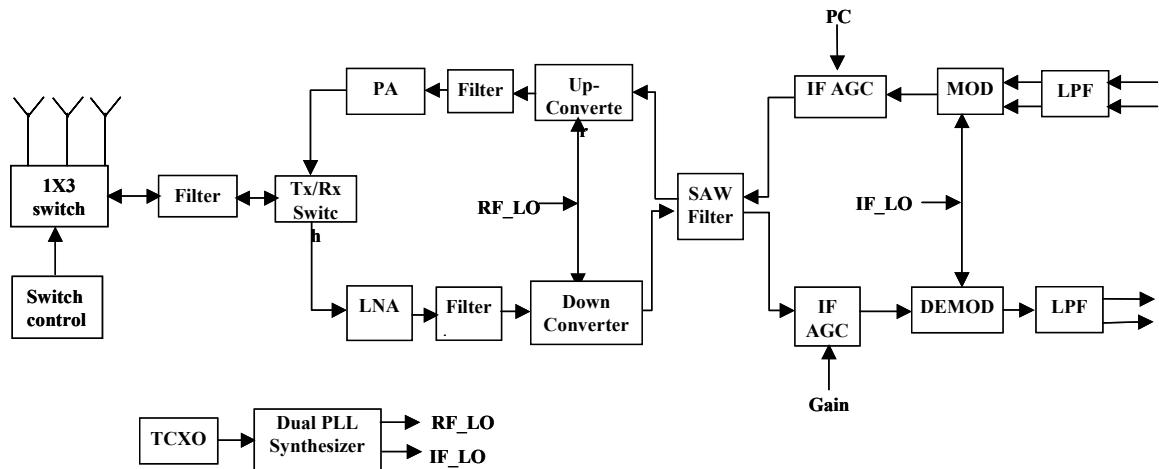


Fig.1. CPE function blocks

## Function Description

- 1.1.1 Each transceiver consists of two separated transmit and receive paths and works in TDD mode. During transmit period, the input base band signal from DAC is first quadrature modulated into IF signal. The IF signal is then filtered and sent to RF section where it is converted into RF signal and sent out through one of the antennas. The antenna selection is based on the optimized signal transmission/receptions and controlled by DSP. During receive period, the input RF signal is received from one of the three antennas and then amplified and converted into IF signal. The IF signal is then filtered and quadrature demodulated into base band signal and sent to ADC. Both transmitter and receiver chains implement AGC to accommodate the variation of transmitted and received signal strengths.