

Operational Description

General Description

BroadOne LS110 Residential Femtocell is LTE small Femtocell to deploy single unit in Home, clusters for Small Business. It supports 8 simultaneous session capacity, 2 x 2 MIMO, 100mW RF output power and advanced Interference Mitigation features.

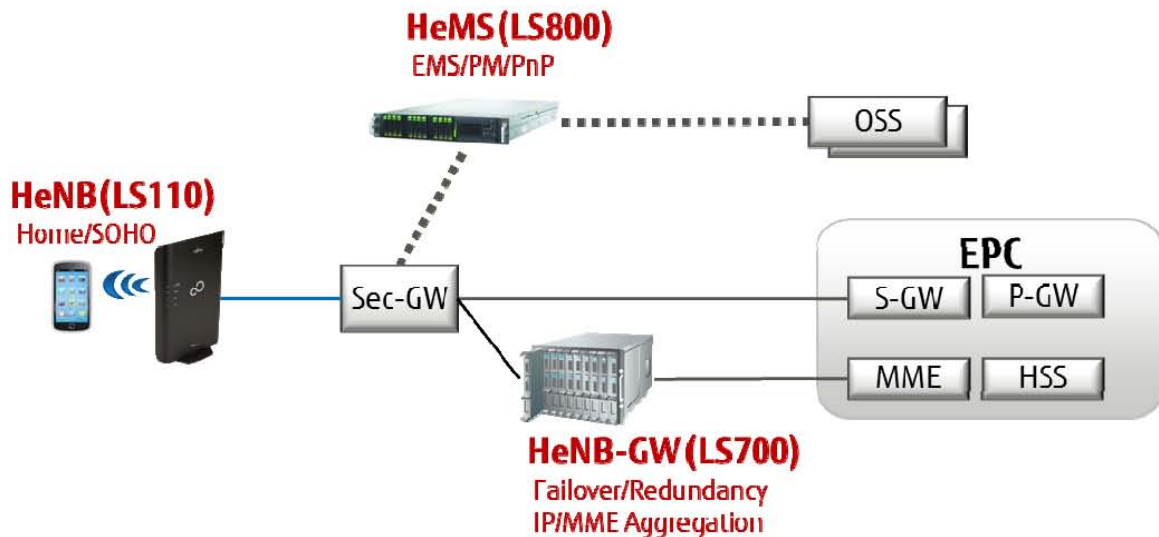


Figure1: System Overview

Application

- LTE Network extension for Residential area, Small Business, and Retailer Shops
- LTE Network throughput improvement for Residential area, Small Business, and Retailer Shops

RF Description

BroadOne LS110 Residential Femtocell RF portion consists of RFIC, Amplifier, Duplexer, RF Switch and VCTCXO oscillator.

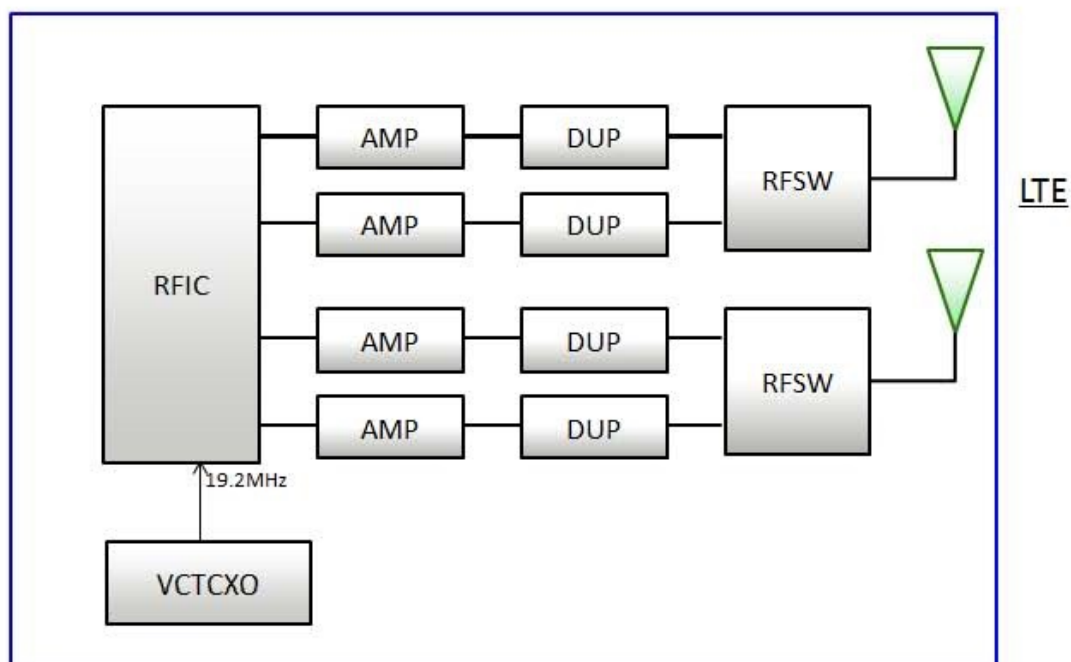


Figure2: RF Block Diagram

Object Short Text		Description	Note
LTE Standard		FDD-LTE Release 9	
Frequency	Band 4/13 model	Band 4 (AWS 2110-2155MHz downlink) Band 13 (700M Upper C 746-756MHz downlink)	Selectable
Bandwidth		5 / 10 / 15 MHz	(15 MHz only available in Band 4)
Transmit Power (EIRP)		50 mW x 2 Br	EIRP: Equivalent Isotropic Radiated Power
Frequency Tolerance		+/- 0.25 ppm	
Antenna Configuration		2TX / 2RX - DL: 2x2 MIMO - UL: Diversity only	
Antenna Type		Monopole Antenna	
Antenna Gain		0 dBi	
Number of Sector / Carrier		1 Sector / 1 Carrier	

Radio Access Technology	DL : OFDMA UL : SC-OFDMA(DFT-Spread OFDM)	
Modulation type	DL : QPSK, 16QAM, 64QAM UL : QPSK, 16QAM	
User capability	8 Users	

Chart1: RF Specification

Circuit Description

BroadOne LS110 Residential Femtocell Circuit consists of the above RF portion, SoC, CPU, PLD, Memory, Flash, PHY, GPS, and connectors.

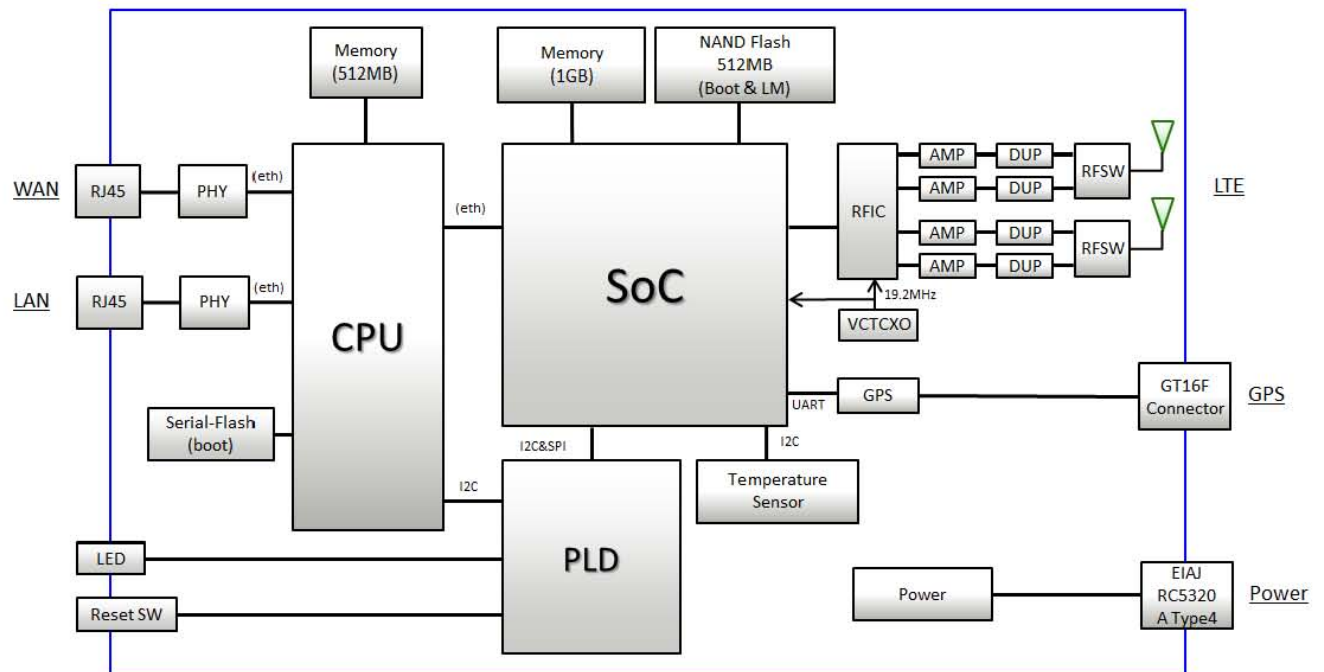


Figure3: Overall Block Diagram