

# LMS6001 LimeOwl™

## Multi-band Multi-standard Transceiver

### PRODUCT OVERVIEW

LMS6001 is a fully integrated, multi-band multi-standard RF transceiver for WiMax and 3G applications. It combines LNA, PA driver, RX/TX mixer, RX/TX filters, VCO, Synthesizer, RX Gain control, and TX Power control with very few external components.

### PRODUCT FEATURES

#### General Specifications

- Frequency range from 375MHz to 4GHz
- Programmable channel bandwidth from 1.5MHz to 28MHz
- Reference Clock 40MHz
- Fully Differential baseband signals
- Reduced external components count compared to conventional transceivers
- OFDM modulation up to 64 QAM
- Fast multi-synthesiser architecture
- Supports both FDD and TDD full duplex
- LO leakage calibration
- IQ gain imbalance calibration
- Transmit/receive power and envelope detection
- S/W selectable power down modes
- Serial interface

#### Transmit Path

- EVM: -36dB @ Pout = -10dBm (3GHz)
- Tx RF output: -10dBm (modulated)
- Noise floor: -130dBm/Hz

#### Receive Path

- EVM: -36dB (3GHz)
- Noise figure: 7dB (3GHz)
- Adjacent channel rejection: 30dB
- Next to adjacent channel rejection: 50dB
- Sensitivity: -65dBm @ 64 QAM, 20MHz Bandwidth

### DEVICE INFORMATION

- Low voltage operation: 1.8v and 3.3v
- Operating current 300mA, FDD
- Industrial temperature range: -40 to +85 °C
- 68 pin QFN - 9 mm x 9 mm

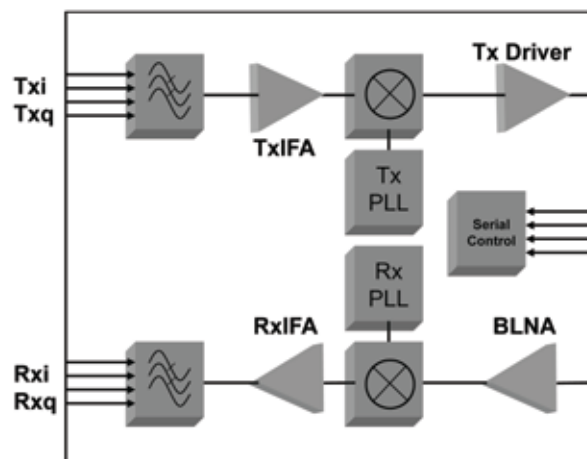
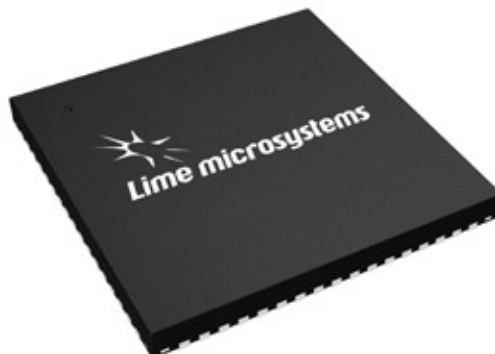


Figure 1: Functional block diagram

### APPLICATIONS

- Broad band wireless communication devices IEEE® 802.16x, W-CDMA (including HSPA) and LTE radios
- Small cell base stations
- Customer premise equipment
- Software radio

Full data sheet of the device available on request

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