

WiMAX IEEE802.16e Transceiver

Overview

The transceiver is designed to be used together with an RF tuner, and ADC/DAC converters. The system has internal state machine to control the operation, and can be externally configured via the SPI interface.

Description

This design is a Mobile WiMAX baseband transceiver core for both Base station and Mobile station, supplied as a portable and synthesizable Verilog-2001 IP. The system was designed to be used in conjunction with a standard RF tuner. The operation of the transceiver is automated by a master finite state machine.

Features

- WiMAX IEEE 802.16e compliant
- OFDMA 128, 512, 1024, 2048 FFT sizes
- Supports BPSK, QPSK, QAM16, QAM64
- Error Correction: Convolutional Code (CC)
- Efficient and customizable FFT/IFFT Core
- Synchronization system capable of all forms of synchronization (time and frequency)
- Efficient and customizable Robust Channel Estimation algorithm
- Supports IF input
- SPI port interface
- Can be tailored to customer needs

Applications

- MAN (Metropolitan Area Network)

Deliverables

- Synthesizable Verilog
- System Model (Matlab)
- Verilog Test Benches
- Documentation
- FPGA testing environment

A comprehensive WiMAX IEEE802.16e Transceiver datasheet can be provided under an NDA, please contact info@global-ipc.com.