

SDR RADIO FRONT-END MIMO – 2X2 / 4X4

AT A GLANCE

- Flexible Software Defined Radio platform consisting of stacked digital interface card and radio frequency front-end
- 2 or 4 transceivers
- Optical baseband interface
- AMC form factor

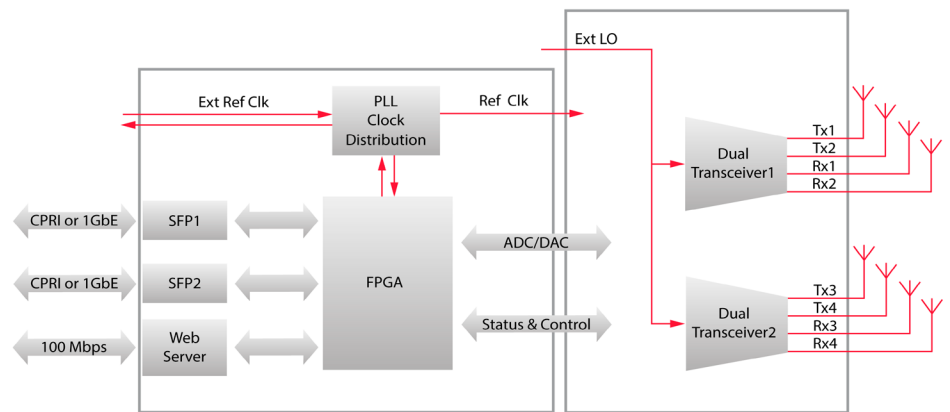


Features

- 2x2 or 4x4 MIMO duplex operation
- Wide carrier frequency range from 70 MHz up to 6 GHz
- Supporting all LTE bands
- Different reference clock sources
- FDD and TDD operation
- Variable bandpass RF filter
- CPRI 4.1 support

Applications

- SDR platform supporting different-communications standards with variable signal bandwidths, carrier frequencies and transmit power
- Multiband, MIMO and beamforming operation using several radio units connected and synchronized via optical fiber
- 5G prototyping - arbitrary waveform & active multi-antenna setups



Block Diagram of the SDR Transceiver

Specifications

- 2 or 4 - antenna duplex operation with variable RF signal bandwidth
- Xilinx Spartan-6 FPGA with 64 MB DDR SDRAM
- Baseband CPRI data rate of 2457.6 Mbit/s
- CPRI clock or external clock reference
- Configurability via
 - CPRI C&M channel
 - RS232 or web interface
- Power consumption < 30 Watts
- MicroTCA compliant
- Analog design with AD9361 SoCs
 - 12-bit ADC / DAC
 - 70 MHz-6 GHz carrier frequency
 - < 200 KHz .. 56 MHz analog bandwidth
 - Noise figure < 2.5 dB
- External power amplifiers depending on carrier frequency
- Duplex components
 - SAW filters, diplexers and/or TDD switches
 - External or plug-on modules

The Fraunhofer HHI

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