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

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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

The Fraunhofer Heinrich Hertz Institute is a world leading research institute in the areas of video compression and processing, 3D systems, wireless communications as well as photonic components and networks.

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