FEATURES

- 8-Channel Wideband Digital Tuner
- 2 MHz to 6000 MHz frequency coverage
- Phase coherent or independent tuning
- 40 MHz bandwidth, per channel
- Dual 10 Gigabit Ethernet data outputs
  - Supports full bandwidth (8 x 40 MHz) data streaming
  - Dual SFP+ connectors support 10GBASE-SR, 10GBASE-LR, or Direct Attach
- Internal Xilinx Kintex 7 FPGA-based signal processing with variable rate DDCs:
  - Nominal 32 independent DDCs with variable bandwidths

- Geolocation enabled
  - Embedded GPS receiver with 1PPS disciplined 10 MHz reference
  - VRT (VITA-49) formatted data with time-stamp
- 16-bit ADCs
- Internal 25 to 6000 MHz calibration signal generator
- 10/100 Ethernet Control with internal ARM processor
- 8"W x 1.9"H x 12"D, 6.5 lbs., 47 W
- Software tools and API for easy integration

NDR318
8-Channel Digital Tuner
with 10 Gigabit Ethernet

DESCRIPTION

The NDR318 is an affordable standalone 8-Channel wideband digital tuner that converts the HF/VHF/UHF spectrum to digital IF (I/Q or Real) data over 10 Gigabit Ethernet interfaces. The NDR318 includes 8 independent tuners that each cover the 2 MHz to 6000 MHz frequency range with a 40 MHz instantaneous bandwidth. Each channel can tune independently or the tuners can operate phase coherently for applications such as beam forming or direction finding (the unit supports both 4 channel and 8 channel phase coherent operation). To enable Geolocation applications, the NDR318 includes an on-board GPS receiver, an external 1PPS input, precision time-tagged digital IF data formatted based on the VITA-49 standard and a tunable calibration signal that covers 25 MHz to 6000 MHz.

The NDR318 is packaged in a rugged aluminum chassis that provides RF shielding, thermal management, and protection suitable for harsh environments.

The unit includes an FPGA-based digital processor board that receives 8 channels of wideband ADC data, performs narrowband filter and decimation, forms time-stamped digital IF data packets, and transmits streaming data over the two 10 Gigabit Ethernet output ports. The dual 10 Gigabit Ethernet output ports support full bandwidth (8 x 40 MHz) data streaming. The unit is powered via an external +12 VDC power supply and controlled via a 10/100 Ethernet interface. Multiple lower Digital IF bandwidths are also supported for applications that don't require the full 40 MHz.

APPLICATIONS

- Wideband signal collection and monitoring
- N-Channel beamforming
- Wideband signal recording
- Airborne Multi-int systems
- Networked Sensor systems
- Spectrum Monitoring systems
- Test and Training systems

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