

FEATURES

- 8 channel wideband digital tuner
- 20 MHz to 6000 MHz frequency coverage
- Independent and phase coherent tuning
 - 8 independent channels, 8 phase coherent channels, two sets of 4 phase coherent channels or 4 independent channels and 4 phase coherent channels
- 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 with 102.4 Msps sample rate
- Internal 20 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

NDR308

8 Channel Digital Tuner with 10 Gigabit Ethernet

DESCRIPTION

The NDR308 is an affordable standalone 8-channel wideband digital tuner that converts the VHF/UHF spectrum to digital IF (I/Q or Real) data over 10 Gigabit Ethernet interfaces. The NDR308 includes 8 independent tuners that each cover the 20 to 6000 MHz frequency range with 40 MHz bandwidth. Each channel can tune independently or phase coherently for applications such as beam forming or direction finding. The NDR308 supports 4 phase coherent modes of operation: 8 independent channels, 8 phase coherent channels, two sets of 4 phase coherent channels or 4 independent channels and 4 phase coherent channels. To enable Geolocation applications, the NDR308 includes an embedded GPS receiver, an external 1PPS input, and precision time-tagged digital IF data formatted based on the VITA-49 standard. The NDR308 can be grouped together with additional units to support 16, 24, or 32 channel low SWaP phase coherent systems.

The NDR308 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.

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