FEATURES

- 8-channel wideband digital tuner
- 20 MHz to 6 GHz frequency coverage
- 80 MHz BW
- 50 microsecond tuning speed
- 16-bit internal ADC, 256 Msps
- Full bandwidth Digital IF Output over 10 GigE (x4)
- Internal FPGA-based signal processing with variable rate DDCs
- Ethernet command and control
- Time-tagged VITA-49 Digital IF output (based on 1PPS input)
- Independent and Phase Coherent tuning

FEATURES (continued)

- Dedicated Fast Scan Control Interface
- 7 User-selectable DSP modes of operation
  - Receiver Mode
  - Coherent Scan Mode
  - Fast Scan Mode
  - Resampler Mode
  - Alternative Receiver Mode
  - Recorder Mode

NDR358
20 MHz to 6 GHz
Wideband Digital Tuner

DESCRIPTION

The NDR358 digital tuner is a 8-channel, super-heterodyne downconverter that covers RF signals from 20 MHz to 6 GHz and suports both independent and phase coherent tuning. It is housed in a 1U, 19 inch equipment frame with 19" x 18" x 1.75" overall dimensions. Integrated high dynamic range 16-bit Analog-to-Digital converters (ADC's) are utilized to digitize an 80 MHz wide IF at 256 Msps sample rate. Command and control of the digital tuner are via an Ethernet interface and power is derived from a 115 VAC external power supply input. Total power consumption is approximately 145 Watts. An on-board Xilinx Kintex UltraScale FPGA is used for the channelizer, the VITA-49 formatter, data multiplexer and the four 10 Gigabit Ethernet Digital IF data interface.

The 10 Gigabit Ethernet Digital IF output simultaneously provides both full bandwidth Digital IF data along with multiple narrow bandwidth DDC outputs. NDR358 includes a dedicated Fast Scan control interface as well as 7 user-selectable DSP modes of operation: Receiver mode, Coherent Mode, Fast Scan Mode, Resampler Mode, Alternative Receiver Mode and Recorder Mode. An ARM A8 microprocessor running embedded LINUX is used for command/control of the unit. The unit is packaged in a rugged aluminum chassis that provides RF shielding, thermal management, and protection suitable for harsh environments.

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