

FEATURES

- 4-channel 3U OpenVPX wideband digital tuner
- Aligned with the SOSA™ Technical Standard
- 2 MHz to 8000 MHz frequency coverage
- 125 MHz BW/Ch
- 16-bit internal ADC, 368 Msps
- Full bandwidth Digital IF Output over P1 data plane
- Internal FPGA-based signal processing with variable rate DDCs
- 1G/10G Ethernet command and control

FEATURES (continued)

- Time-tagged Digital IF output (based on 1PPS input)
- Command set based on existing NDR358 command set
- Fast Scan Control Interface
- Supports multiple existing NDR358 DSP-based modes of operation:
 - Receiver Mode
 - Coherent Scan Mode
 - Fast Scan Mode
 - Resampler Mode
- Designed for harsh environments

NDR374

4-Channel 3U VPX Digital Tuner

DESCRIPTION

The NDR374 digital tuner is an 4-channel, superheterodyne downconverter that covers RF signals from 2 MHz to 8 GHz. It is a rugged 3U conduction cooled VPX module, per VITA 46/48/65/67. The NDR374 is designed as a 3U open architecture version of the existing NDR358 tuner to include RF performance, command set and multiple DSP-based modes of operation (the NDR374 enables efficient system integration for existing NDR358 users). The tuner supports both independent and phase coherent tuning and two units can support 8-Channel coherent operation. Integrated high dynamic range 16-bit Analog-to-Digital converters (ADC's) are utilized to digitize an 125 MHz wide IF at 368 Msps sample rate.



Command and control of the digital tuner are via a 1G/10G Ethernet interface and power is derived from the P0 12V power supply input (60W power consumption). An on-board Xilinx MPSoC UltraScale FPGA is used for the channelizer, the VITA-49 formatter, data multiplexer and the Digital IF data interface. The Data Plane Digital IF output simultaneously provides both full bandwidth Digital IF data along with multiple narrow bandwidth DDC outputs.

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