



NDR358

8 Channel High Performance RF SDR

A 1U RACKMOUNT SUPER-HETERODYNE DOWNCONVERTER

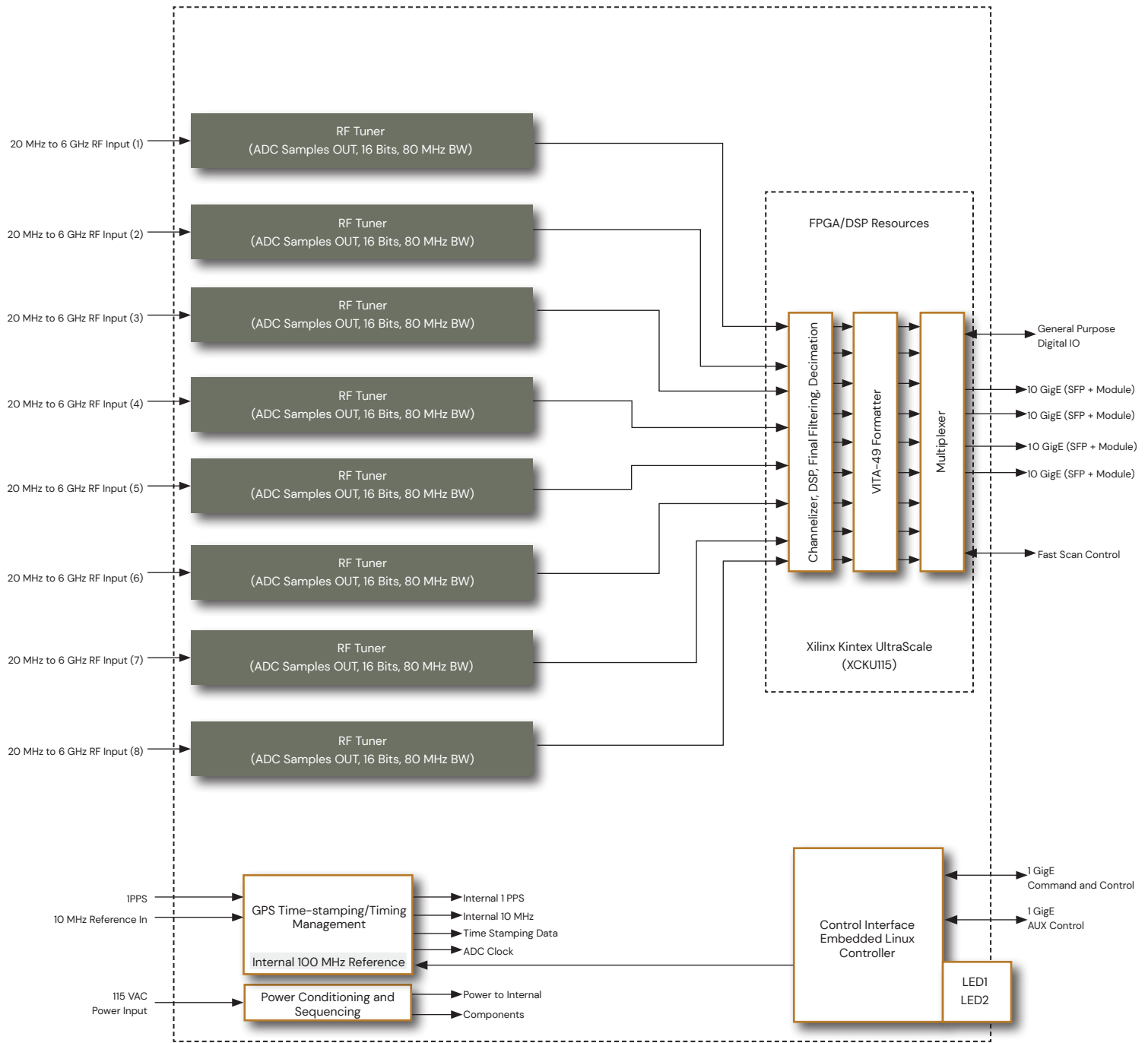
The NDR358 high performance RF SDR is an 8 channel, super-heterodyne downconverter that covers RF signals from 20 MHz to 6 GHz and supports both independent and phase coherent tuning. The NDR358 is housed in a 1U, 19 inch equipment frame. Integrated high dynamic range 16-bit Analog-to-Digital converters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

KEY HIGHLIGHTS

- 8 Channel High Performance RF SDR
- 20 MHz to 6 GHz RF Coverage
- 80 MHz Bandwidth
- Independent and Phase Coherent Tuning
- 16-bit Internal ADC, 256 Msps
- Internal FPGA-based Signal Processing with Variable Rate DDCs
- Time-tagged VITA-49 Digital IF Output (based on 1PPS input)
- Seven DSP Modes of Operation
- Ethernet Command and Control
- Dedicated Fast Scan Control Interface
- 145W Power Consumption

BLOCK DIAGRAM



Specifications subject to change without notice.

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