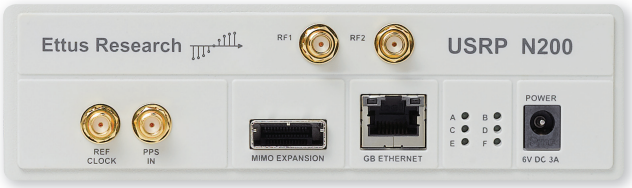
USRP™ N200/N210 NETWORKED SERIES



FEATURES:

- Use with GNU Radio, LabVIEW™ and Simulink™
- Modular Architecture: DC-6 GHz
- Dual 100 MSPS, 14-bit ADC
- Dual 400 MSPS, 16-bit DAC
- DDC/DUC with 25 mHz Resolution
- Up to 50 MHz GigE Streaming
- Fully-Coherent MIMO Capability
- Gigabit Ethernet Interface to Host
- 2 Gbps Expansion Interface
- Spartan 3A-DSP 1800 FPGA (N200)
- Spartan 3A-DSP 3400 FPGA (N210)
- 1 MB High-Speed SRAM
- Auxiliary Analog and Digital I/O
- 2.5 ppm TCXO Frequency Reference
- 0.01 ppm w/ GPSDO Option

N200/N210 PRODUCT OVERVIEW:

The Ettus Research™ USRP™ N200 and N210 are the highest performing class of hardware of the USRP (Universal Software Radio Peripheral) family of products, which enables engineers to rapidly design and implement powerful, flexible software radio systems. The N200 and N210 hardware is ideally suited for applications requiring demanding RF streaming performance including those covering advanced physical layer design and prototyping, dynamic spectrum access and cognitive radio, spectrum monitoring and signal intelligence, record and playback, and even network deployment.

The Networked Series products offer MIMO and high bandwidth/high dynamic range capabilities, in addition to higher speed and higher resolution ADCs/DACs, to meet the requirements for more demanding applications, enhance measurement sensitivity and dynamic range. The GigE interface serves as the connection between the N200/N210 and the host computer enables the user to realize real-time bandwidth 50 MHz in the receive and 25 MHz in the transmit directions simultaneously (full duplex).

The Networked Series MIMO connection is located on the front panel of each unit. Two Networked Series units may be connected to realize a complete 2x2 MIMO configuration using the optional MIMO cable. The N200 and N210 are largely the same, except that the N210 features a larger FPGA than the N200 for those customers wanting to extend the FPGA-based signal processing capabilities.

The USRP Hardware Driver™ is the official driver for all Ettus Research products. The USRP Hardware Driver supports Linux, Mac OSX, Windows, NetBSD and FreeBSD.

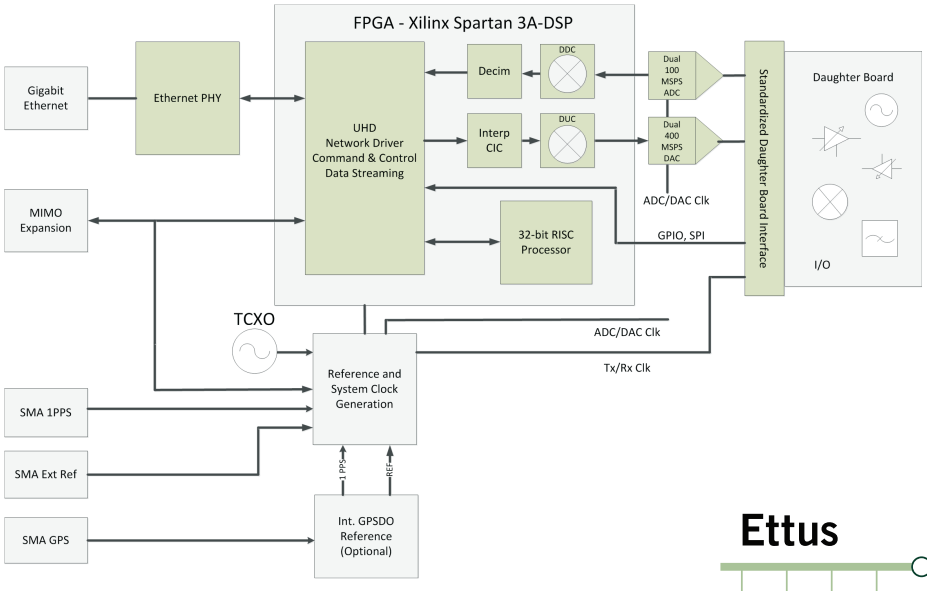
USRP™ N200/N210 NETWORKED SERIES

SPECIFICATIONS

Spec	Typ.	Unit
POWER		
DC Input	6	V
Current Consumption	1.3	A
w/ WBX Daughterboard	2.3	A
CONVERSION PERFORMANCE AND CLOCKS		
ADC Sample Rate	100	MSPS
ADC Resolution	14	bits
ADC Wideband SFDR	88	dBc
DAC Sample Rate	400	MSPS
DAC Resolution	16	bits
DAC Wideband SFDR	80	dBc
Sample Rate to/from Host (8b/16b)	50/25	MSPS
Frequency Accuracy	2.5	ppm
w/ GPSDO Reference	0.01	ppm

Spec	Typ.	Unit
RF PERFORMANCE (W/ WBX)		
SSB/LO Suppression	35/50	dBc
Phase Noise(1.8 Ghz)		
10 kHz	-80	dBc/Hz
100 kHz	-100	dBc/Hz
1 MHz	-137	dBc/Hz
Power Output	15	dBm
IIP3	0	dBm
Receive Noise Figure	5	dB
PHYSICAL		
Operating Temperature	0 to 55°	C
Dimensions (l x w x h)	22 x 16 x 5	cm
Weight	1.2	kg

* All specifications are subject to change without notice.



Ettus Research™

ABOUT ETTUS RESEARCH:

Ettus Research is an innovative provider of software defined radio hardware, including the original Universal Software Radio Peripheral (USRP) family of products. Ettus Research products maintain support from a variety of software frameworks, including GNU Radio. Ettus Research is a leader in the GNU Radio open-source community, and enables users worldwide to address a wide range of research, industry and defense applications. The company was founded in 2004 and is based in Mountain View, California. As of 2010, Ettus Research is a wholly owned subsidiary of National Instruments.

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