Ettus Research™
A National Instruments Company

USRP1
BUS SERIES

FEATURES:

- Use with GNU Radio
- Modular Architecture: DC-6 GHz
- Connectivity for Two, Complete Tx/Rx chains
- Two Dual 64 MS/s, 12-bit ADC's
- Two Dual 128 MS/s, 14-bit DAC's
- DDC/DUC with 15 mHz Resolution
- Up to 16 MS/s USB Streaming
- USB 2.0 Interface to Host
- Auxiliary Digital and Analog I/O
- 25 ppm TCXO Frequency Reference

USRP1 PRODUCT OVERVIEW:

The Ettus Research™ USRP1 is the original 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 USRP1 provides an entry-level platform with built in MIMO expansion and a modular design allowing the hardware to operate from DC to 6 GHz. The architecture includes an Altera Cyclone FPGA, 64 MS/s dual ADC, 128 MS/s dual DAC and USB 2.0 connectivity to provide data-to-host processors.

The USRP1 includes connectivity for two daughtercards, enabling two complete transmit/receive chains. This feature makes the USRP1 ideal for applications that require high isolation between transmit and receive chains, or dual-band dual transmit/receive operation. The USRP1 can stream up to 16 MS/s to host applications. On-board DDCs and DUCs provide 15 mHz of tuning resolution and adjustable sample rates.

The USRP Hardware Driver™ is the official driver for all Ettus Research products, and supports rapid development in a comprehensive environment. The USRP Hardware Driver supports Linux, Mac OSX and Windows.

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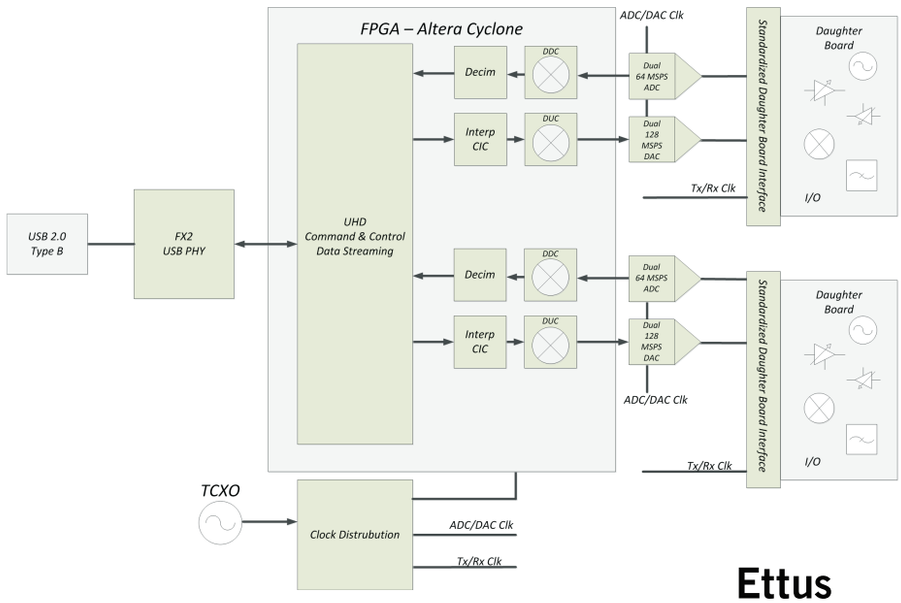
SPECIFICATIONS

Spec	Typ.	Unit
POWER		
DC Input	6	V
Current Consumption	0.7	A
w/ WBX Daughterboard	1.7	A
CONVERSION PERFORMANCE AND CLOCKS		
ADC Sample Rate	64	MS/s
ADC Resolution	12	bits
ADC Wideband SFDR	85	dBc
DAC Sample Rate	128	MS/s
DAC Resolution	14	bits
DAC Wideband SFDR	83	dBc
Host Sample Rate (8b/16b)	16/8	MS/s
Frequency Accuracy	25	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)	18 x 21 x 5.5	cm
Weight	0.7	kg

* All specifications are subject to change without notice.



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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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