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Ettus Research™ USRP™ E100 Series Embedded Software Defined Radio

The Ettus Research USRP E100 series software radio is an embedded stand alone system powered by the combination of a TI OMAP™3 processor and a Xilinx® Spartan® 3A-DSP FPGA. The USRP E1x0 runs a full distribution of Linux enabling both development and deployment without the need for a separate host computer.



Ettus Research USRP E100

The USRP E1x0 enables engineers to rapidly design and implement powerful, flexible stand-alone software radio systems. Paired with the appropriate RF daughterboard, it can address software radio applications from DC to 6 GHz. The analog baseband is powered by two 64 MS/s 12-bit ADCs, and two 128 MS/s 14-bit DACs. Auxiliary analog and digital I/O facilitates integration into a larger system.

Features

- 720 MHz OMAP™3 (ARM® Cortex™ A8 processor & TI C64x+ DSP)
- E100: Xilinx® Spartan® 3A-DSP1800 FPGA
- E110: Xilinx® Spartan® 3A-DSP3400 FPGA
- 512MB RAM
- 4GB microSD Card
- Two 64 MS/s 12-bit ADCs
- Two 128 MS/s 14-bit DACs
- Digital downconverters with programmable decimation rates
- Digital upconverters with programmable interpolation rates
- 100 Mbit Ethernet Interface
- Modular architecture supports a wide variety of RF daughterboards
- Auxiliary analog and digital I/O support complex radio controls such as RSSI and AGC
- TCXO Frequency Reference

Ports

- HDMI Video Out
- Audio Line In & Out
- 100 Mbit Ethernet
- RF1 & RF2 (SMA) for daughterboard
- Console (USB)
- USB On-The-Go
- USB Host
- Power (6V 3A)



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USRP E1x0 Block Diagram

