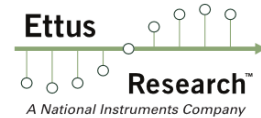




USRP E310 - Embedded Software Defined Radio

Philip Balister, Moritz Fischer, Jonathon Pendlum



What is demonstrated

Temp Sensor, Altimeter, 3-axis Gyro,
3-axis Accelerometer, 3-axis Magnetometer

1GB DDR3 RAM

GPS

GigE

2 x USB 2.0

USB-UART

Xilinx Zynq Z7020
Dual Core Cortex A9 + FPGA

JTAG

GPIO

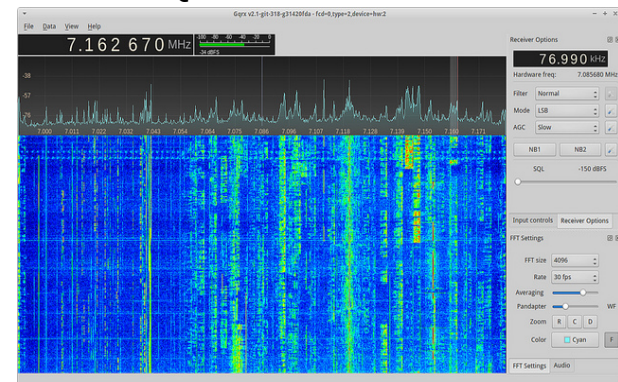
Pocket sized, stand-alone software defined radio for mobile and embedded applications with limited size, weight, and power requirements

- Xilinx Zynq Z7020, ARM + FPGA, 667 MHz
- Linux 3.14 via OpenEmbedded
- Radio hardware:
 - 70 MHz - 6 GHz tunable range
 - 56 MHz bandwidth
 - 12-bit ADC/DAC, 2x2 MIMO



What was improved

- Open source software architecture and schematic designs
- File system built with OpenEmbedded
 - New layers: meta-ettus, meta-sdr
- Planned / in progress upstream of kernel drivers
- GNU Radio porting and ARM support
 - Open Source SDR Toolkit
 - Cross compile with OE SDK
- Demo: gqrx – SDR receiver app powered by GNU Radio & QT



Source code or detail technical information availability

<http://ettus.com>

Source - <http://github.com/EttusResearch>

Schematics - <http://files.ettus.com/schematics/e310/>