

Ettus USRP B205mini-i: Software-Defined Radio Platform

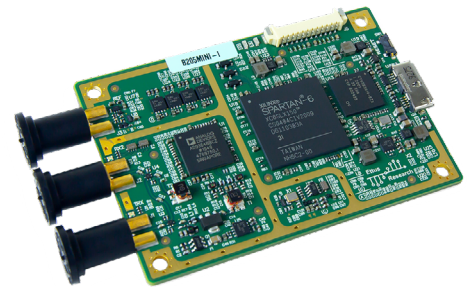
Product Overview

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For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

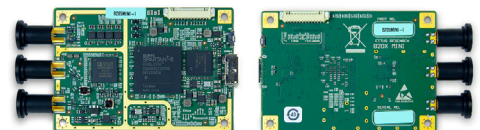
The Ettus USRP B205mini-i: 1x1 USB Software-Defined Radio Platform from Digilent is a flexible and compact platform that is ideal for both hobbyist and OEM applications. The board is designed by Ettus Research™ and provides a wide frequency range (70MHz to 6GHz) and a user-programmable, industrial-grade Xilinx Spartan-6 XC6SLX150 FPGA. This USRP is a transceiver, meaning that they can both transmit and receive RF signals. The RF front end uses the Analog Devices AD9364 RFIC transceiver with 56MHz of instantaneous bandwidth. The USRP B205mini-i board is bus-powered by a high-speed USB 3.0 connection for streaming data to the host computer. This board also includes connectors for GPIO, JTAG, and synchronization with a 10MHz clock reference or PPS time reference input signal.



The USRP B205mini-i board hardware is conveniently accessible through the USRP Hardware Driver (UHD). This UHD provides both a C/C++ and Python API and offers cross-platform support for multiple industry-standard development environments and frameworks, including RFNoC, GNU, LabVIEW, and Matlab. This hardware ensures no restrictions for the usage of UHD and is also available on Linux, Windows, and Mac OS. The UHD provides the necessary control used to transport user waveform samples to and from USRP hardware as well as control various parameters of the radio. Typical applications include AM/FM, cellular communication/GPS/WiFi, and TV broadcast.

Features

- Xilinx Spartan-6 XC6SLX150 FPGA
- Analog Devices AD9364 RFIC transceiver
- RF specifications:
- Channels: 1 TX and 1 RX
- 70MHz to 6GHz frequency range
- Up to 56MHz instantaneous bandwidth
- -20dBm IIP3 (@ typical NF)
- >10dBm power output
- <8dB receive noise figure



Features

- Conversion performance and clocks:
- 61.44MS/s ADC sample rate (max.)
- 12bits ADC resolution
- 61.44MS/s DAC sample rate (max.)
- 12bits DAC resolution
- 61.44MS/s host sample rate (16b)
- ± 2.0 ppm frequency accuracy
- 5V USB power
- Synchronization:
- 10MHz clock reference
- PPS time reference
- 83.3mm x 50.8mm x 8.4mm dimensions
- 24.0g weight
- 0°C to 45°C operating temperature range
- Software:
- USRP hardware driver 3.9.2 (or later)
- GNU radio

Applications

- AM/FM
- Cellular communication/GPS/Wi-Fi
- TV broadcast
- Industrial, Scientific, and Medical (ISM)

Kit Contents

- USRP B205mini-i
- USRP Enclosure Kit (available as a bundle option and can also be purchased separately)
- USB 3.0 cable

Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/digilent/digilent-usrp-b205mini-i-board/>