


NEW PRODUCT	 <small>A National Instruments Company</small>	Release Year	Released Quarter
		2021	Q4
Diligent Part Number 6002-410-022 / 471-044		Category Software Defined Radio	

OVERVIEW

Product Name: Ettus USRP B200mini: 1x1, 70MHz-6GHz SDR/Cognitive Radio

Product Subtitle: Delivers a 1x1 SDR/cognitive radio in the size of a business card

Product Description: With a wide frequency range from 70 MHz to 6 GHz and a user-programmable Xilinx Spartan-6 XC6SLX75 FPGA, Ettus USRP B200mini is ideal for both hobbyist and OEM applications. Experiment with the USRP B200mini across a wide range of applications including: FM and TV broadcast, cellular, GPS, WiFi, ISM, and more. Users can immediately begin prototyping in GNU Radio and participate in the open-source SDR community.

The RF front end uses the Analog Devices AD9364 RFIC transceiver with 56 MHz of instantaneous bandwidth. The board is bus-powered by a high-speed USB 3.0 connection for streaming data to the host computer. The USRP B200mini also includes connectors for GPIO, JTAG, and synchronization with a 10 MHz clock reference or PPS time reference input signal.

Full support by the [USRP Hardware Driver™ \(UHD\)](#) software allows seamless code reuse from existing designs, compatibility with open-source applications like HDSDR and OpenBTS, and an upgrade path to industry-ready USRP systems to meet application requirements. 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 Radio, LabVIEW and Matlab/Simulink. And to ensure you have no restrictions on how you use UHD, it is available on Linux, Windows, and Mac OS.

Key Search Terms: USRP, Ettus Research, Software-Defined Radio, Transceiver, GHz, FPGA, Spartan 6, Xilinx, Radio Frequency, Analog Devices, C,C++, Python, GNU Radio, Linux, Windows, signal processing, Simulink, LabVIEW

Video Link: N/A

Datasheet:

https://www.ettus.com/wp-content/uploads/2019/01/USRP_B200mini_Data_Sheet.pdf

Demo / Project Links:

1. [Getting Started Guide with USRP B200 Mini](#)
2. [UHD Python API](#)
3. https://kb.ettus.com/Using_B200/B210/B200mini/B205mini_X/macOS_with_UHD

Features

- Xilinx Spartan-6 XC6SLX75 FPGA
- Analog Devices AD9364 RFIC transceiver
- RF Specifications
 - Channels: 1 TX, 1 RX
 - Frequency range: 70 MHz to 6 GHz
 - Instantaneous Bandwidth: Up to 56 MHz
 - IIP3 (at typical NF): -20 dBm
 - Power Output: >10 dBm
 - Receive Noise Figure: <8 dB
- Conversion Performance and Clocks
 - ADC Sample Rate (Max.): 61.44 MS/s
 - ADC Resolution: 12 bits
 - DAC Sample Rate (Max.): 61.44 MS/s
 - DAC Resolution: 12 bits
 - Host Sample Rate (16b): 61.44 MS/s
 - Frequency Accuracy: +/-2.0 ppm
- Synchronization
 - 10 MHz clock reference
 - PPS time reference
- USB Power: 5V
- Operating Temp. Range: 0 - 45 °C
- Software
 - USRP Hardware Driver 3.9.2 (or later)
 - GNU Radio
- Include USB 3.0 cable

Product Image



Image Links:

- <https://drive.google.com/file/d/1W532hNJT4AJ5Vq0Lr8S1wXNktFz2gKet/view?usp=sharing>
- <https://www.flickr.com/photos/127815101@N07/51402201768/>

Applications:

- AM/FM
- Cellular Communication / GPS / WiFi
- TV Broadcast
- Industrial, Scientific, and Medical (ISM)

Related Products:

- Ettus USRP B200 (6002-410-023)
- Ettus USRP B205 mini-i (6002-410-021)