NI Ettus USRP B310

Entry-Level Software Defined Radio for Next-Gen Wireless Research, Prototyping, and Development

The NI Ettus USRP B310 is an entry-level software defined radio designed for research, prototyping, and deployment for next-generation wireless technologies. It has two transmit and two receive channels, each with up to 100 MHz bandwidth and 2 LOs for independent frequency tuning between 350 MHz and 7.2 GHz. Multi-device synchronization supports up to four B310 devices without external hardware. The B310 is available with Thunderbolt™ 3 bus for lab use and as a PCI Express plug-in card for easy system integration or native GPU coprocessing.

Why Choose USRP B310?

- Entry-level, USRP for next-gen wireless applications
- Flexible choice of connection options for use in a lab or integrated into a system
- Multi-device synchronization for MIMO, beamforming research, and C-UAS deployments with accurate timing for scalable SDR systems
- Low-latency data transfer and native GPU coprocessing support for AI research
- Open-source UHD driver lets you choose the software that works best for you

Technical Specifications

Parameters	USRP B310
Frequency Range	350 MHz to 7.2 GHz
Bandwidth	Up to 100 MHz
Transmit/Receive	2 TX, 2 RX
FPGA	Kintex™ 7 325T
Interface	PCIe or Thunderbolt (TM) 3
Compact Design	192.4 x 21.59 x 126.31 mm (PCIe) 187.85 x 122.37 x 43.94 mm (board in enclosure)
Synchronization	10 MHz or PPS reference, GPSDO, multi-device direct sync
Control	GPIO, JTAG

Software Specifications

Parameters	Details
Development Tools	UHD, GNU Radio, Python, C/C++, NI LabVIEW
Software Compatibility	UHD Driver (open source)

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