

Knowledge Base

Welcome to the Ettus Research Knowledge Base (KB). The KB is continuously being updated and expanded. If you have any suggestions, or do not find what you are looking for, then please [Contact Us](#).

Motherboards

- B200/B210/B200mini/B205mini/B206mini
- E310/E312/E313
- E320
- N200/N210
- N300/N310/N320/N321
- X300/X310
- USRP-2974
- X410/X440

Daughterboards

- OBX
- BasicTX/BasicRX
- CBX
- LFTX/LFRX
- SBX
- TwinRX
- UBX
- WBX

Other

- RFNoC Development (UHD 4.x)
- RFNoC Migration Guide (UHD 3.x to UHD 4.x)
- RFNoC Development (UHD 3.x)
- Live SDR Environment
- OctoClock CDA-2990
- White Rabbit
- DPDK

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Daughterboards

- OBX
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Other

- OctoClock CDA-2990
- GPSDO
- Antennas

Ettus Products

- UHD
- UHD Python API
- RFNoC (UHD 4.x)
- RFNoC (UHD 3.x)

Third Party

- GNU Radio
- LabVIEW
- Matlab/Simulink
- OpenBTS
- Eurecom OpenAirInterface (OAI)
- srsLTE/srsUE
- Gqrx
- Fosphor

Reference Architectures

- Multichannel RF Reference Architecture

- [OAI Reference Architecture for 5G and 6G Research with USRP](#)
- [5G OAI Neural Receiver Testbed with USRP X410](#)
- [AI-Based Spectrum Sensing with Nvidia Jetson and USRP](#)
- [5G OAI End-to-End Reference Architecture with USRP](#)
- [5G srsRAN End-to-End Reference Architecture with USRP](#)

Software

- [UHD Manual \(master\)](#)
- [UHD Manual Archive \(previous releases\)](#)

Motherboards

- [B200/B210/B200mini/B205mini/B206mini](#)
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Daughterboards

- [BasicRX/LFRX](#)
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- [CBX](#)
- [SBX](#)
- [WBX](#)
- [UBX](#)
- [TwinRX](#)

Other

- [OctoClock](#)

Application Notes (AN) and technical articles written by engineers, for engineers. These articles offer experienced analysis, design ideas, reference designs, and tutorials?to make you productive and successful using USRP devices.

- [Workshop/Tutorial](#)
- [Suggested Reading](#)
- [Suggested Videos](#)
- [CGRAN](#)
- [SDR Events](#)
- [GNU Radio Conference](#)
- [NEWSDR](#)
- [FOSDEM](#)
- [Cyberspectrum](#)

- [Email](#)
- [Mailing Lists](#)
- [GNU Radio Matrix Chat Server](#)
- [SDR Boston Slack Chat Server](#)
- [StackExchange](#)
- [NI Service Request Manager \(SRM\)](#)

- [Technical](#)
- [Licensing](#)
- [RFNoC](#)

Motherboards

- [USRP1](#)
- [USRP2](#)
- [E100/E110](#)
- [B100](#)

Daughterboards

- [DBSRX2](#)
- [TVRX2](#)
- [XCVR2450](#)