

Product Brief

Product Summary

The PC805 RU Demonstrator Board is a flexible 5G NR/LTE Radio Unit (RU) board used to demonstrate the PC805 SoC with on-board RF transceiver, front-end and associated support circuitry.

The PC805 RU Demonstrator Board is available in two variants

- ◆ PC805RDB-41, configured for band n41
- ◆ PC805RDB-78, configured for band n78

The PC805 RU Demonstrator Board integrates a TI AFE7769D 4T4R RFIC complete with an RF front end, based on a iCana demonstrator design.

The board is preloaded to boot with a Linux operating system and is used to demonstrate the Picocom 5G NR RU software and M-plane software.

The PC805 RU Demonstrator Board is available with a 3 month evaluation license.

The PC805 RU Demonstrator Board supports the following RU architecture configurations as defined by O-RAN Alliance and 3GPP, as detailed on page 3:

- ◆ Split 7.2 Radio Unit (O-RU - Cat A)
- ◆ Split 8 Radio Unit (RU)

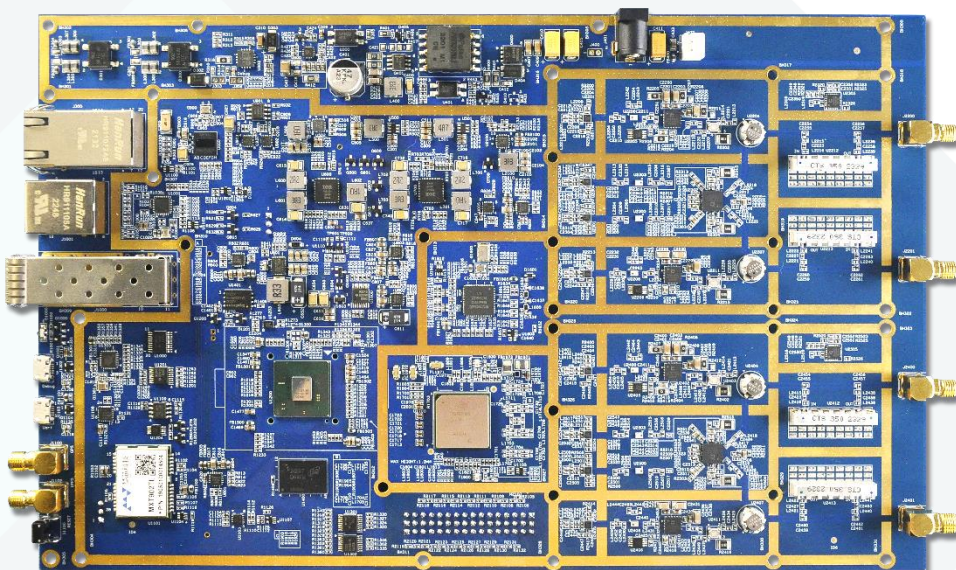
The PC805 RU Demonstrator Board kit includes a 12V power supply and USB cables, heatsink and standoff posts.

Key Features

- ◆ PC805 SoC Silicon subsystem
- ◆ 4Gb 16-bit interface LPDDR4 SDRAM per PC805
- ◆ TI AFE7769D 4T4R RFIC subsystem
- ◆ RFFE for 5G NR FR1 bands n41 or n78 (iCana)
- ◆ Chip integrated temperature sensors
- ◆ Two boot modes: Normal and Debug
- ◆ Synchronisation and clocking functions using on-board GNSS receiver or IEEE 1588
- ◆ Ability to boot and operate via PoE

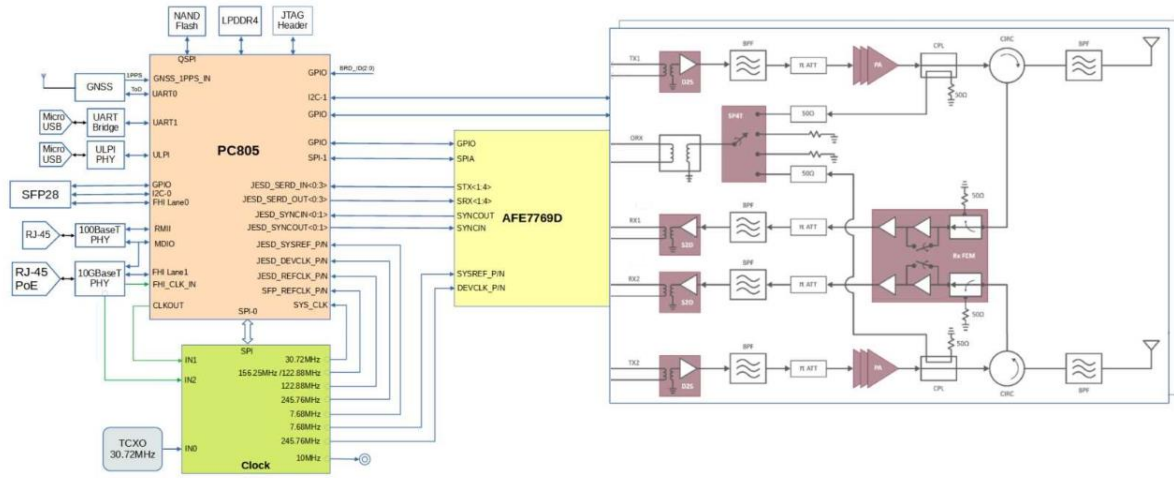
Key Interfaces and Connectors

- ◆ SFP28 cage for optical LC 10/25GE interface for O-RAN open fronthaul eCPRI/CPRI.
- ◆ 10Gbase-T RJ45 copper interface
- ◆ GNSS Antenna port
- ◆ Auxiliary 12V power supply port (cable provided) or PoE interface.
- ◆ Test and Debug ports including
 - ◆ 1G Ethernet NPU debug port (RJ45)
 - ◆ Micro USB debug port (cable provided)
 - ◆ Micro USB console ports via UART interface
- ◆ Additional debug, clock and test connectors

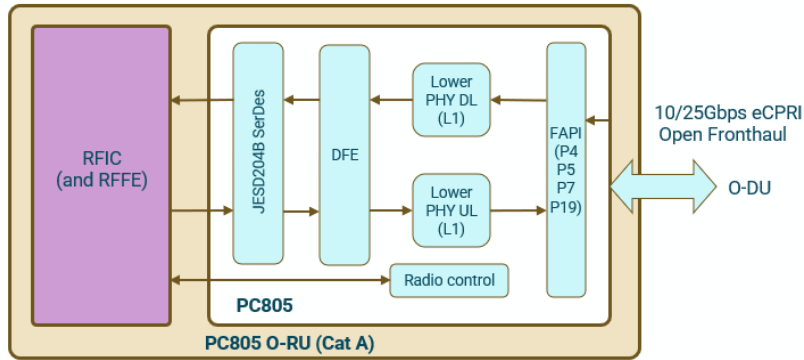




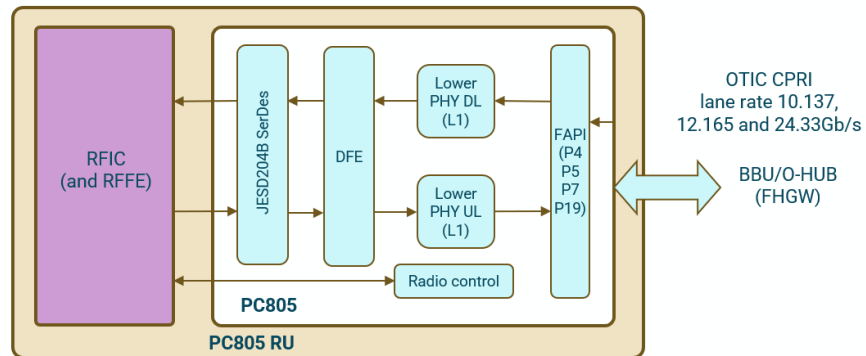
PC805 RU Architecture



Use Case Diagrams



O-RU use case (Split 7.2)



RU use case (Split 8)



Further Information

The following documentation is part of the product release, additional design documentation such as schematics and .brd design files are available.

- ◆ PC805 RU Demonstrator Board Manual
- ◆ PC805 RU Demonstrator Board User Guide

Please contact your local PicoCom representative or info@picocom.com for any additional information on the PC805 silicon, platforms, tools or software products.

Ordering Information

Part number	Product Name	Details
PC805RDB-41	PC805 RU Demonstrator Board	Configured for Band n41 operation.
PC805RDB-78	PC805 RU Demonstrator Board	Configured for Band n78 operation.
PC805-Eval-Pack	PC805 Evaluation Pack	Software support package (on first board ordered)

The Export Control Classification Number (ECCN) is 5A991.b.4

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