

F-PU-5G

5G Development and Prototyping Platform

The 5G development platform combines Xilinx Ultrascale FPGA with embedded COMExpress processor boards and 100G Ethernet connectivity. The platform has been created for development and prototyping of 5G key technologies like 'Cloud RAN', 'Ethernet fronthaul', '100Gb Sync Ethernet' and 'Software Defined Base Station Development'.

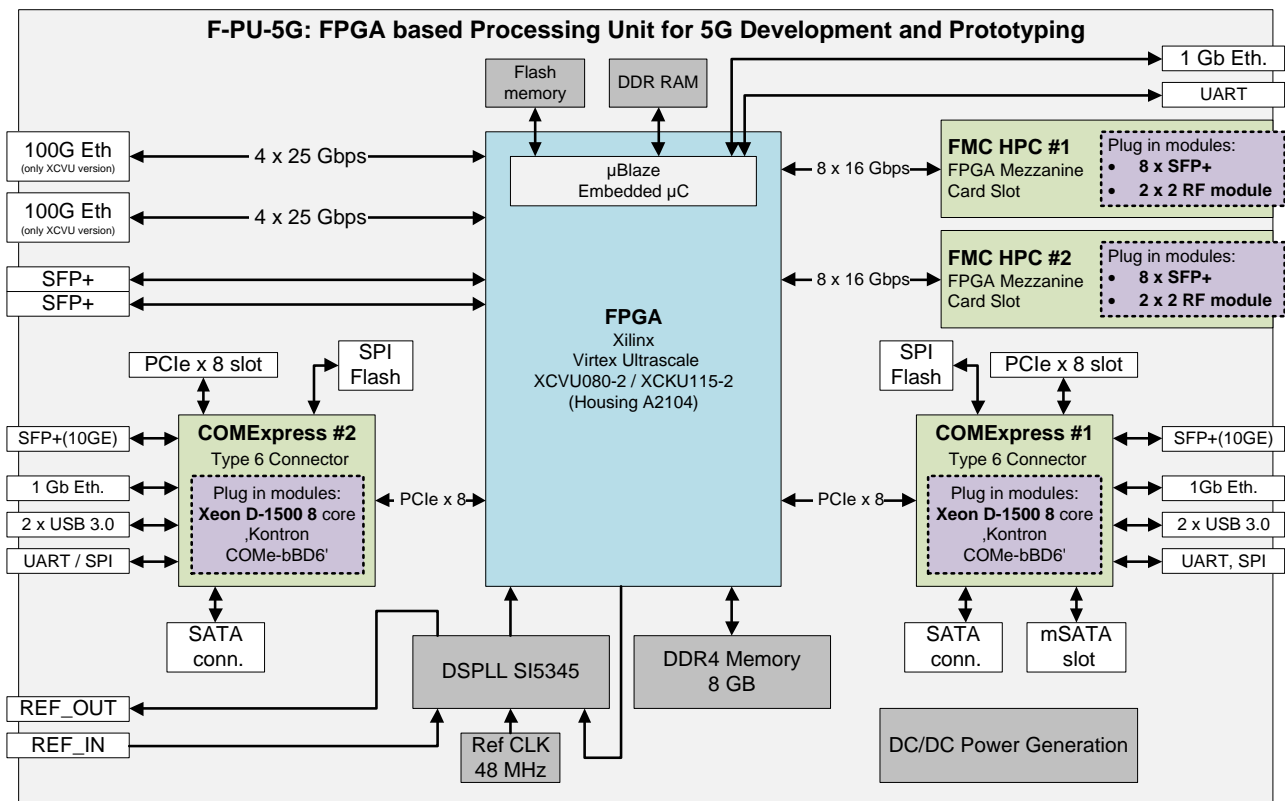


Figure 1: Hardware Architecture

The platform includes the following **main components and interfaces**:

- FPGA Xilinx Virtex / Kintex Ultrascale, two options available: XCVU080 with 100G Ethernet interface or XCKU115 with more logic and DSP resources
- Clock generation / clock recovery unit based on DSPLL SI5345
- 4 GByte DDR4 RAM
- 2 x COMExpress interfaces, type 6 connector
- 2 x FMC HPC extension slots
- 2 x 100 G Ethernet interfaces

Product Brief

5G Development Platform

- 2 x SFP+ interfaces connected to FPGA
- 2 x 10G Ethernet (SFP+) connected to COMExpress
- 1 Gb Ethernet interface
- UART interface

Applications:

- Software Defined Basestation for 5G mobile communication
- Software Defined Radio Head for 5G mobile communication
- Open air interface implementation with FPGA-driven hardware acceleration
- Cloud RAN
- CPRI Ethernet conversion with low latency and clock synchronisation
- Synchronized Ethernet, PtP
- 100 Gb Ethernet
- High Bandwidth Phy and MAC Signal Processing (60 GHz Radio Access)

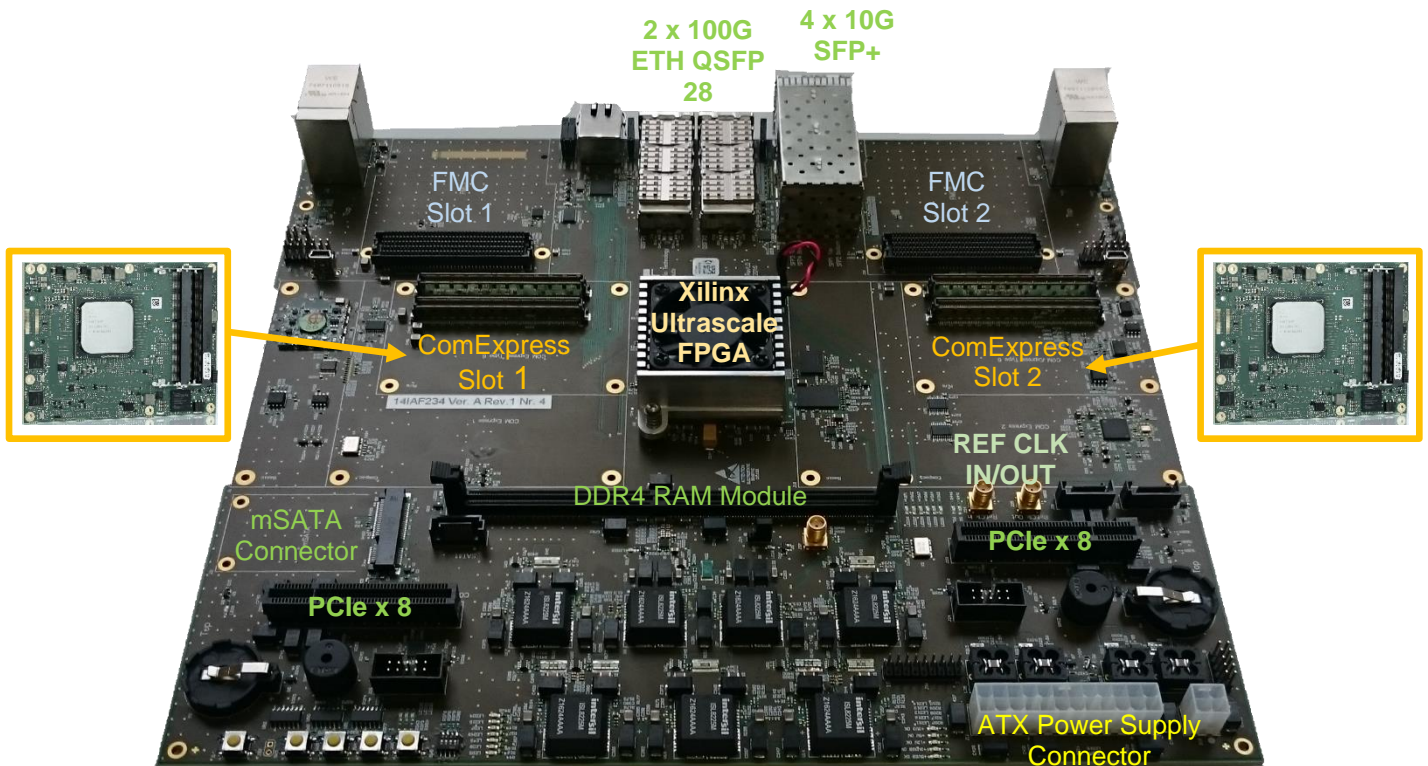
Extension Boards (Examples):

- COMExpress board 'Kontron COMe-bBD6 D-1548' with 8 core, 2 GHz Intel® Xeon® Processor
- FMC module with 8 x SFP+ interface
- FMC RF module with AD9371 / ADRV9371 FMC module

COMExpress Interfaces:

- SFP+ (10 GB Ethernet)
- 1 Gb Ethernet
- 2 x USB 3.0
- PCIE x 8
- SATA
- mSATA
- UART/SPI

Board Picture:



Board Dimensions: Width x Depth = 310 x 275 mm

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