



Overview

This high-performance FPGA development platform is engineered for developing advanced digital systems and customized hardware solutions. Suitable for real-time applications, it supports both software and hardware co-design using industry-standard tools and programming languages such as **VHDL** and **Verilog**.

System Architecture

- **Application Processing Unit (APU):** Quad-core Cortex-A53
- **Real-time Processing Unit (RPU):** Dual-core Cortex-R5
- **Graphics Processing Unit (GPU):** ARM Mali-400
- **Video Codec Support:** H.264 / H.265 hardware acceleration

FPGA Fabric Resources

- **Logic Cells:** 154K standard (up to 256K in higher variants)
- **Block RAM:** 7.6 Mb (or 5.1 Mb depending on variant)
- **UltraRAM:** 18.0 Mb available
- **DSP Slices:** 360 standard (scalable to 1248 in extended configurations)
- **Clock Management:** Multiple onboard clock sources

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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Connectivity Options

- **USB Ports:** Dual USB 2.0 Type-A host interfaces
- **Ethernet:** 1 Gigabit Ethernet with IEEE 1588 support
- **High-Speed Networking:** SFP+ 10G Ethernet (optional or included as per variant)

Memory Specifications

- **Main System Memory:** 4GB DDR4 RAM
- **Non-Volatile Storage:**
 - 256 Mib ISSI Serial NOR Flash or equivalent QSPI flash
 - SD Card Interface available
 - SSD Expansion: mSATA or M.2 supported (depending on configuration)

Multimedia Support

- **Display Output:**
 - DisplayPort 1.2a (Dual-Lane or via DP AUX MIO)
 - HDMI Output (Source)
 - HDMI Input (Sink) – Mandatory for video applications

Expansion & I/O Interfaces

- **Expansion Headers:**
 - Pmod: Multiple headers for peripheral expansion
 - FMC: 1 standard FMC slot + 1 FMC Gigabit-capable slot
- **User I/O:**
 - LEDs, push-buttons, DIP switches for manual interaction and debugging

Included Accessories & Optional Add-ons

- High-speed USB/JTAG programming cable
- Power supply adapter

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- Expansion modules (optional):
 - Additional DDR memory modules
 - Ethernet interface extensions
 - HDMI connectivity modules

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