Instant-DevKit
Arria 10 SoC FMC IDK

The Arria 10 SoC FMC Instant-Development Kit provides developers the best Out-Of-The box experience, combining the Best-In Class compact hardware platform and the most efficient intuitive software environment.

Dual-core ARM® Cortex™-A9 MPCore™ hard processor system (HPS).

Target markets:
- Video capture and processing
- Industrial
- Test & Measurement
- Medical

Its unique install and GUI interface allows an immediate start, and its reference designs enable fast turn-around designs, shortening and securing the developments.

DevKitInvasion

**ATTILA**
Arria 10 FPGA FMC IDK

**ALARIC**
Arria 10 SoC FMC IDK

**ACHILLES**
Arria 10 SoC SoM IDK

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### Featured Device
- Board based on Altera Arria 10 SoC 660 KLEs, speed grade -2 by default
- PCIe end point edge connector for Gen3 x4 (32Gb/s)
- PCIe root Complex edge connector for Gen3 x4 (32Gb/s)
- FMC High Pin Count fully compliant:
  - 168 LVCMOS (1.8V) or 84 LVDS (1.8V, 2.5V)
  - 10 XCVR (Typical 10Gb/s)
- One serial over USB High speed link (through USB Hub)
- 2 x Rj45 copper connector 10/100/1000Base-T Ethernet connected to the FPGA core fabric part
- 1 x Rj45 copper connector 10/100/1000Base-T Ethernet connected to the HPS part of the FPGA
- On board DDR3 for HPS (2GB) speed up to 2133 MT/s*
  * Depends on FPGA speed grade

### Board Programming
- JTAG : On-board USB-Blaster II MAX V (reachable by USB Hub)
- Fast passive parallel (FPP) configuration via MAX®10 device and flash memory
- AS configuration supported with NOR FLASH EPCQL512
- Boot selection for HPS thorough user dipswitch

### Board Size
- Length : 240 mm (9.45 inches)
- Height : 111.15 mm (4.38 inches) / Standard Height PCIe
- PCB thickness: 1.57 mm (0.062 inches) / Standard Thickness PCIe

### Kit Ordering information
- Development Kit (FPGA Arria 10 SX 660) / RXCA10S666PF34-IDK00A (Production version)

### Power & Environmental
- Power : 75W max/ 40W typical
- Environmental : 0°C/-40°C

### Clock Circuitry
- 3 x SMA connectors (1 main input clock + 1 diff. output programmable clock)
- 9 x FPGA XCVR programmable inputs Clocks (up to 800 MHz to reach different communication protocol)

### Kit Content
- Power adapter (US, UK, EU, JP) and cables (USB, Ethernet, DisplayPort, SMA)
- FMC and PCIe Loop back boards
- LCD (2 lines x 16 characters, 12C, 5V)
- Starter Guide
- ReFLEX CES innovative software interface (GUI) on USB Key/Windows64 with Test Designs
- OpenCL BSP HPC (Host-In-x86)
- Schematics and assembly documentation

### Partners
- ALARIC
- Instant-DevKit

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