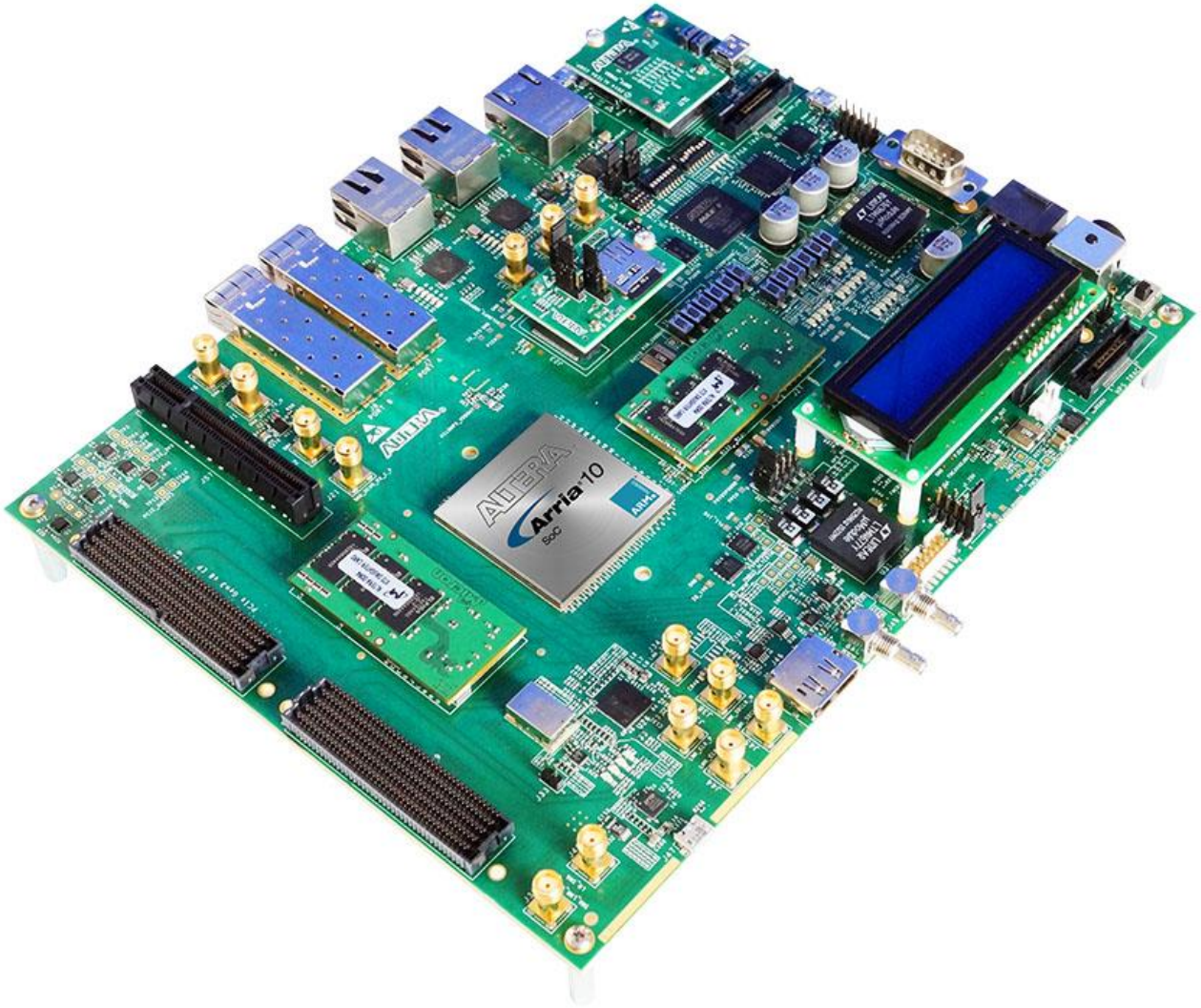


# Arria 10 SoC Development Kit

## 1. Overview



The Altera® Arria® 10 SoC Development Kit offers a quick and simple approach for developing custom ARM® processor-based SoC designs. Design productivity is one of the driving philosophies of the Arria 10 SoC architecture. The Arria 10 SoCs offers full software compatibility with previous generation SoCs, a broad ecosystem of ARM software and tools, and the enhanced FPGA and DSP hardware design flow.

With this kit, you can:

- Evaluate Arria 10 SoC device features and performance
- Begin development of your hardware and software design
- **Company: Terasic**
- **Tel: +886-3-5750880**
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- **Add: 9F., No.176, Sec.2, Gongdao 5th Rd, East Dist, Hsinchu City, 30070. Taiwan**

- Use as a platform for target reference designs, OS/BSP, and tools

## 2. Specification

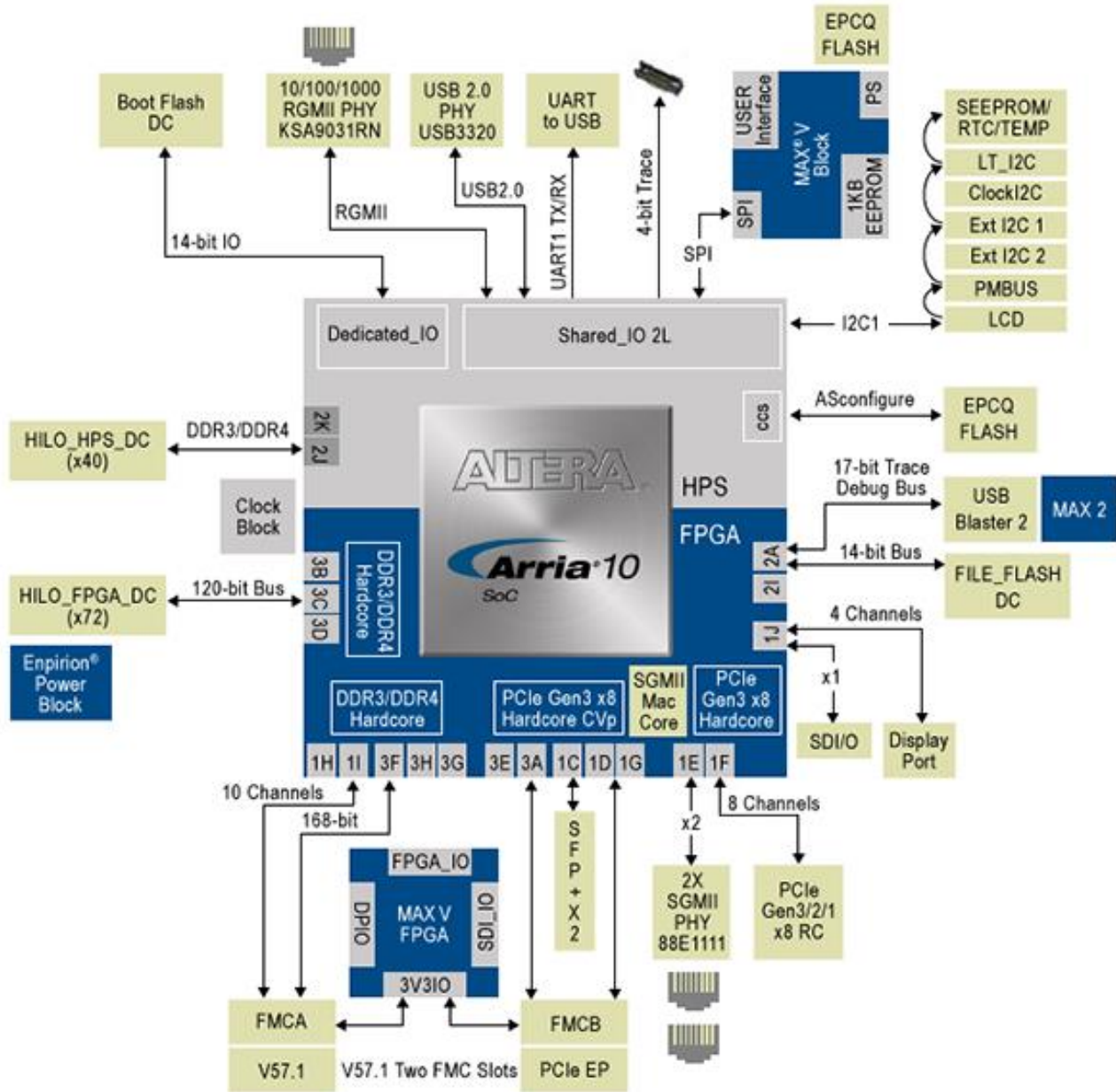
Altera's Arria 10 SoCs have been designed to meet the performance and power requirements for mid-range applications such as:

- Wireless infrastructure equipment including remote radio unit and mobile backhaul\*
- Compute and storage equipment including flash cache, cloud computing, and acceleration\*
- Broadcast studio and distribution equipment including professional A/V and video conferencing\*
- Military guidance, control, and intelligence equipment\*
- Wireline 100G line cards, bridges and aggregation, 40G GPON\*
- Test and measurement equipment\*
- Diagnostic medical imaging equipment\*
- PCI Express® (PCIe®) Gen3 x8 lanes (endpoint or root port)\*

\*Application-specific daughter cards, available separately, supporting a wide range of I/O and interface standards

### Arria 10 SoC Development Kit Block Diagram

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### 3. Kit content

#### Hardware

- - Arria 10 10AS066N3F40E2SG1 SoC
  - Embedded USB-Blaster™ II for hard processor system (HPS) or FPGA programming
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- PCI Express® (PCIe®) Gen3 x8, Dual FPGA mezzanine card (FMC) expansion headers
- Two 10/100/1000 SGMII Ethernet ports and one 10/100/1000 RGMII Ethernet port and two 10GbE small form factor pluggable (SFP) cages
- 1 FMC loopback card
- USB On-The-Go (USB OTG) port
- 1GB DDR4 HPS HILO memory card
- NAND, QSPI, and SD/MICRO boot flash cards
- 1GB DDR4 HILO memory card
- Display port and SDI port

## Software<sup>2</sup>

- - Golden System Reference Design
  - Board Update Portal design
  - Board Test System (BTS) design
  - Arria 10 SoC Development Kit User Guide
  - Arria 10 SoC Development Kit Quick Start Guide
  - Arria 10 SoC Development Board Reference Manual
  - Development Kit design files(BOM, Schematics, Layout)
  - Design software<sup>3</sup>
  - Intel® SoC FPGA Embedded Design Suite (EDS), including ARM® Development Studio 5™ (DS-5™) Altera Edition Toolkit
  - Quartus Prime software (required)
  - Nios® II processor (optional)
  - MegaCore® intellectual property (IP) library (optional)
  - Mentor Graphics® ModelSim®-Intel® FPGA software (optional)

## Notes:

1. DK-SOC-10AS066S-A development kit comes with a 10AS066N3F40E2SG device
2. Download the zip file, and install the Arria 10 SoC Board Test System.
3. A one-year license for Quartus® Prime design software is available upon purchase of the kit. License activation [instructions](#) and [FAQs](#) .

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