Arria 10 SoC Development Kit

Introduction

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.

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

Figure 1. Arria 10 SoC Development Kit

With this kit, you can:

- Evaluate Arria 10 SoC device features and performance
- Begin development of your hardware and software design
- Use as a platform for target reference designs, OS/BSP, and tools

Figure 2. Arria 10 SoC Development Kit Block Diagram

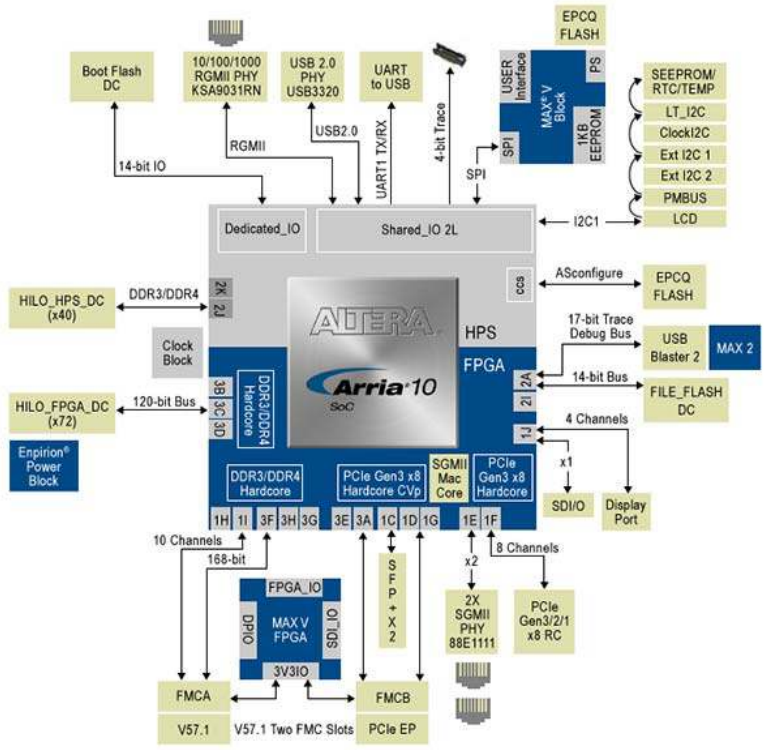

Table 1. Ordering Information

Ordering Code	Ordering Information
DK-SOC-10AS066-A	This development kit features a 10AS066N3F40I2LG device and a one-year license for the Quartus® II design software.

Notes:

1. Please contact Altera for shipping availability

Table 2. Development Kit Contents

Hardware

- Arria 10 10AS066N3F40I2LG[1] SoC
- Embedded USB-BlasterTM II for hard processor system (HPS) or FPGA programming
- 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
- USB On-The-Go (USB OTG) port
- 1GB DDR4 HPS HILO memory card
- NAND, QSPI, and SD/MCIRO boot flash cards
- 1GB DDR4 HILO memory card
- Character LC- Display port and SDI port

Software[2]

- 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[3]
- Altera® SoC Embedded Design Suite (EDS), including ARM® Development Studio 5TM (DS-5TM) Altera Edition Toolkit
- Quartus II software (required)
- Nios® II processor (optional)
- MegaCore® intellectual property (IP) library (optional)
- Mentor Graphics® ModelSim®-Altera software (optional)

Notes:

1. DK-SOC-10AS066S-ES development kit comes with a 10AS066N3F40I2SGES device
2. Download and install Arria 10 SoC Development Kit installer first
3. A one-year license for Quartus® II development software ships with the development kit