

# Arria10 optical module



## Overview

The module features up to 24 high-speed transceivers operating at up to 17.4 Gbps and extensive I/O (LVDS and single-ended) exposed via high-speed board-to-board connectors, delivering flexible connectivity for data-intensive systems. Arria 10 FPGAs and SoC FPGAs deliver more than a full speed grade of core performance improvement and up to a 20% advantage in fMAX compared to the competition, based on publicly available OpenCore designs. They also offer up to 40% lower power consumption than previous-generation FPGAs and SoC. The Arria® 10 device family consists of high-performance and power-efficient 20 nm mid-range FPGAs and SoCs. It supports HPC and LPC connector FMC modules as defined by VITA 57. The heart of the board is formed by the Intel/Altera Arria10 FPGA in NF40 BGA-1517 package with high count I/O to facilitate the connectivity of all require FMC HPC connector pins. Arria 10 GT devices have the same core performance and feature set as Arria 10 GX devices, with the added capability of sixteen 28.

## Article Content

### ARRIA 10 SOC SOM

Bank 3B, 3C, 3A supports variable IO level setting from PMIC (1.8V, 1.5V, 1.35V, 1.2V). Each FPGA IO Bank (2A,3A,3B,3C) which goes to Expansion connectors support two General Purpose Clock Input

### Arria® 10 Device Overview

Arria 10 transceivers provide exceptional signal integrity at data rates up to 25.8 Gbps. Clocking options include ultra-low jitter ATX PLLs (LC tank based), clock multiplier unit (CMU) PLLs, and fractional PLLs.

### Enclustra FPGA Solutions | Mercury+ AA1 | Altera Arria

The Mercury+ AA1 System-on-Chip (SoC) module combines Altera's Arria 10 ARM Processor-based SoC FPGA with fast DDR4 ECC SDRAM, eMMC flash, quad

### 10AX057H3F34E2SG

Arria 10 GT devices have the same core performance and feature set as Arria 10 GX devices, with the added capability of sixteen 28.05-Gbps short reach transceivers for chip-to-chip and chip-to-module

### How to config Arria 10 10GBase-R support SFP+ optic module

I'm using the "Arria 10 1G/10GbE and 10GBASE-KR PHY" for a design I'm working on with the Arria 10, and fpga serdes connect to SFP+ optic module. Described in the manual support edc, on page 6

### Arria® 10 Device Overview

Adaptive Logic Module Arria 10 devices use a 20 nm ALM as the basic building block of the logic fabric. The ALM architecture is the same as the previous generation FPGAs, allowing for efficient

### Intel Arria 10 Device Family Definition

25.8 Gbps transceivers for supporting CAUI-4 and CEI-25G applications with CFP2 and CFP4 modules. Intel® Arria® 10 SX—an SoC device integrating ARM-based HPS and FPGA featuring 17.4 Gbps

### Intel® Arria® 10 module, smaller than a credit card

Intel® Arria® 10 module, smaller than a credit card The Mercury+ AA1 SoC module from FPGA specialists Enclustra is based on the Intel Arria 10. Alongside the integrated dual-core ARM®

### NAMC-ARRIA10-FMC Technical Reference Manual

nector FMC modules as defined by VITA 57.1. The heart of the board is formed by the Intel/Altera Arria10 FPGA in NF40 BGA-1517 package with high count I/O to facilitate the connectivity of all require.

Intel® Programmable Acceleration Card (PAC) with Intel® Arria® 10

This acceleration card has a QSFP+ cage on the front panel which supports 40 GbE or four 10 GbE channels using optical transceivers. The QSFP+ interface supports many serial communication

Arria® 10 SoC FPGA System on Module

The module features up to 24 high-speed transceivers operating at up to 17.4 Gbps and extensive I/O (LVDS and single-ended) exposed via high-speed board-to-board connectors, delivering flexible

Arria 10 Device Overview

The Arria 10 enhanced PCS hard IP supports 10GBASE-R PCS compliant with IEEE 802.3 10 Gbps Ethernet (10GbE). The integrated hard IP support for 10GbE and the 10 Gbps transceivers save

ADRV9002 Arria10 SoC Quick Start Guide

To be compatible with the ADRV9002NP/W2/PCBZ the Arria10 SoC Development Kit requires a minor rework. In the default configuration of the Arria10 SoC

Intel® Arria® 10 Device Datasheet

Intel® Arria® 10 Device Datasheet This datasheet describes the electrical characteristics, switching characteristics, configuration specifications, and I/O timing for Intel® Arria® 10 devices.

The Dream Chip Arria 10 SoM Base Board is an evaluation board for

The Arria 10 SoM was developed with an emphasis on embedded and automotive vision applications. Using Intels Arria 10 SoC devices in the 29x29 mm package, the module off ers a multitude of

Arria® 10 FPGA and SoC FPGA Overview

Arria 10 FPGAs and SoC FPGAs deliver more than a full speed grade of core performance improvement and up to a 20% advantage in fMAX compared to the competition, based on publicly available

6.7.6. SFP+

The Arria 10 GX FPGA development board includes one SFP+ module that uses transceiver channels from the FPGA. This module takes in serial data from the FPGA and transform them into optical signals.

Intel® Arria® 10 Core Fabric and General Purpose I/Os Handbook

Intel Arria 10 LABs operate in high-performance mode or low-power mode. The Intel Quartus Prime software automatically optimizes the LAB power consumption mode based on your design.

[INTEL ARRIA 10 USER MANUAL Pdf Download | ManualsLib](#)

For the steps to install the SoC EDS Tool Suite, refer to the Altera SoC Embedded Design Suite User Guide.

[INTEL ARRIA 10 USER MANUAL Pdf Download | ManualsLib](#)

View and Download Intel Arria 10 user manual online. SoC Development Kit. Arria 10 microcontrollers pdf manual download.

[Altera Arria 10 SoC Development Kit Circuit Note](#)

The Altera Arria 10 SoC Development Kit offers a quick and simple approach for developing custom ARM<sup>®</sup> processor-based SoC designs. Design productivity is

[Intel<sup>®</sup> Arria<sup>®</sup> 10 Device Datasheet](#)

Intel Arria 10 devices are rated according to a set of defined parameters. To maintain the highest possible performance and reliability of the Intel Arria 10 devices, you must consider the operating

[Arria<sup>®</sup> 10 FPGA and SoC FPGA Overview](#)

With their combination of performance, power efficiency, and compact form factor, Arria 10 devices are ideal for a broad range of applications, including communications, data center, military, broadcast,

[Intel<sup>®</sup> Arria<sup>®</sup> 10 SoC Development Kit User Guide](#)

1. Intel<sup>®</sup> Arria<sup>®</sup> 10 SoC Development Kit Overview This document describes the hardware features of the Intel<sup>®</sup> Arria<sup>®</sup> 10 SoC development board, including the detailed pin-out and component

[Flyer ARRIA 10 SoC SoM](#)

PCIe Carrier board The following deliverables are only included with the purchase of an Arria<sup>®</sup> 10 SoC SoM Instant-DevKit :

[Arria 10 FPGA System on Module](#)

Arria 10 FPGA System on Module with 4GB 64-bit DDR4 for FPGA, featuring full I/O and high-speed transceiver support for demanding designs

[Arria 10 Device Overview](#)

Provides an overview of the Arria 10 device family features, ordering codes options, maximum resource counts, and available device packages.

[Intel<sup>®</sup> Arria<sup>®</sup> 10 SoC Development Kit User Guide](#)

SMA Ports FPGA\_PB[0-3] Boot Memory SFP + Optical Ports HPS Clock Source Selection  
Jumper FPGA HPS\_DP[0-3] MAX V CPLD System Controller J33 Clock Cleaner Source  
Select Clock Cleaner

10AX048E4F29I3SG

The 28.05-Gbps transceivers are ideal for interfacing with the emerging CFP2 and CFP4 optical modules that typically require four lanes at data rates in the range of 25 to 28 Gbps. Backplane

## Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://kwsaevents.co.za>

Email: [sales@kwsaevents.co.za](mailto:sales@kwsaevents.co.za)

Phone: +27 21 852 4719

Address: 25 Riebeek Street, Cape Town, 8001, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

