Apollo Agilex SoM

Accelerate real-time computing for edge and AI applications !

Apollo Agilex SoM – *Simplify your path from concept to production*

Designed for high-performance AI-enabled edge solutions and HPC solutions, Apollo Agilex SoM packs unbeatable performance and provides highest real-time computing capability for edge and AI applications.

Apollo Agilex SoM takes advantage of the latest Intel® Agilex™ 7 SoC FPGA with 1400K logic elements to obtain performance and power breakthrough (with up to 40% lower power than Stratix 10 series). Combining high-end hardware interfaces such as high-capacity and high-bandwidth DDR4 SO-DIMM Sockets (up to 32GB DDR4), on-board QSFP28 connector, on-board USB-Blaster II, and FMC/FMC+ connectors for I/O expansion, the board delivers more than 2X the performance of previous generation development kits.

Through the integrated hardware features, developers can achieve optimized performance, flexible and rapid development, and simplify the path from concept to production with the Apollo Agilex SoM.
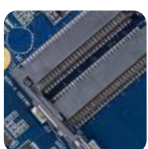
🔍 Key Benefits

FPGA

Intel® Agilex™ 7 FPGA F-Series SoC FPGA offered with 1400K LEs(AGFB014R24B2E2V): Core speed -2, Transceiver speed -2

QSFP28

Simplified design, lower power, and faster time-to-market with a QSFP28 connector for 100/40/25/10 GbE network interface

DDR4

2 independent banks of DDR4 SO-DIMM sockets with error correction code (ECC), up to 16GB@2666MT/s for each socket

HPS Interface

Support USB 2.0 OTG, USB to UART, Gigabit Ethernet, MicroSD socket and RTC interface for HPS fabric

FMC/FMC+

FMC+ (including one PCIe Gen 4 x16 interface; P-Tile XCVR), and FMC connectors (including two 100GbE interfaces; E-Tile XCVR) support 26 high speed transceivers and provide interface expansion for users to develop with various high speed FMC daughter cards
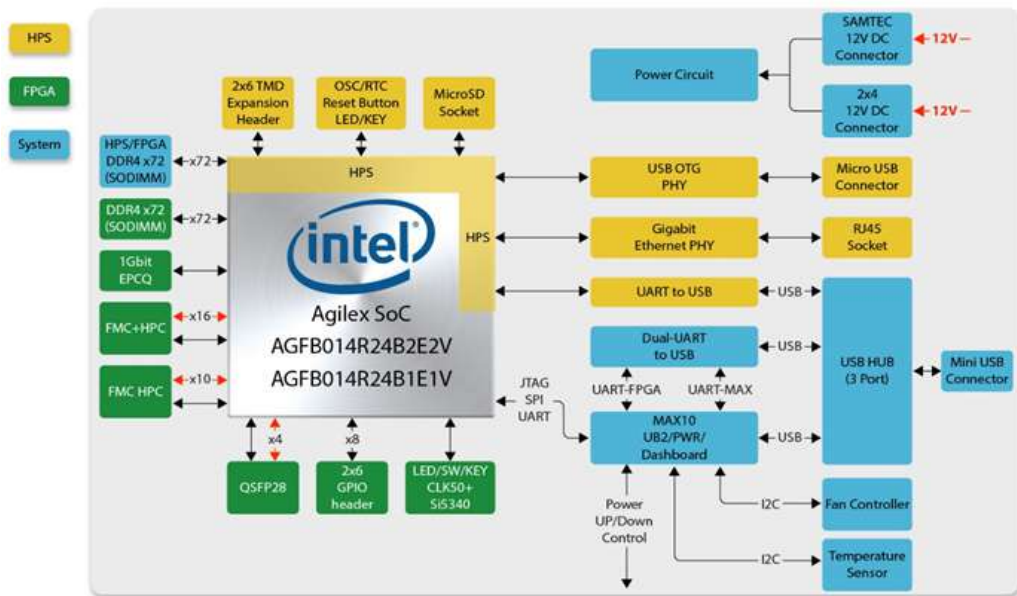
Software Support

Support Linux BSP

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⚙ Block Diagram

👍 Recommended Daughter Cards Application for Apollo Agilex SoM

Multimedia

12G SDI-FMC
12G SDI input and output

HDMI-FMC
4K HDMI input and output

Interface Conversion

P16E-FMCP
Convert FMC+ transceivers to PCIe x16 Edge

XTS-FMC
Convert FMC transceivers to SMA connectors

F2G-FMC
Convert FMC I/O to 2x20 GPIO connector

For more details , visit **Terasic Apollo Agilex SoM**