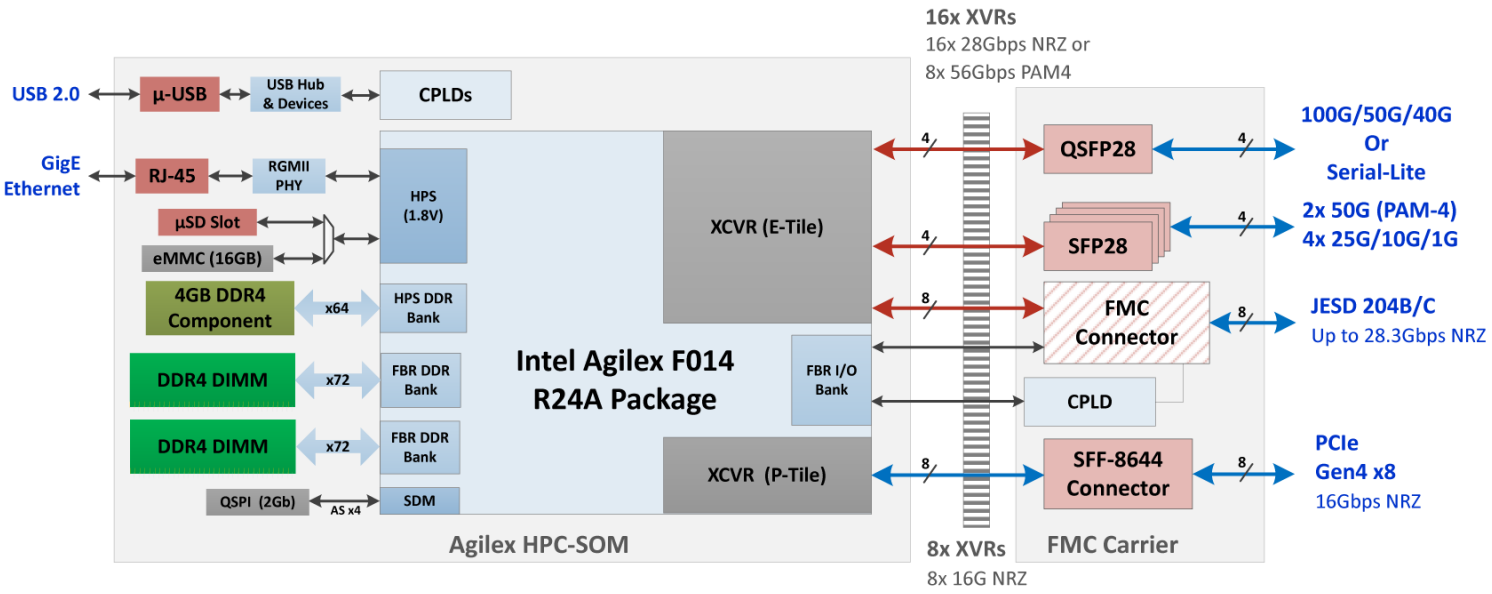
Agilex 5G/Wireless Development Platform (ADI Version)
Product Brief (HTK-HPCSOM5G-AGF)

Features

- Intel 10nm Agilex AG014 FPGA with P-Tile and E-Tile transceivers
- 8 transceiver lanes with up to 28.9Gbps NRZ to FMC transceiver lanes for JESD support
- 4 E-Tile XCVRs to QSFP56 connector for implementing up to 100Gbps network interface
- 4 E-Tile XCVRs to quad SFP56 connector for implementing 4x 25Gbps/10Gbps network interfaces
- P-Tile based x8 Gen4 PCIe interface through SFF8644 connector/cable assembly
- LVDS interfaces on FMC for JESD204B/C SYSREF/SYNC interface support.
- Two UDIMM/RDIMM interfaces for deep captures and playback support
- Complete Linux FPGA support package available
- Integrated and verified with Analog Devices AD9081/AD9082 MxFE ADC/DAC FMC modules
- Optional Board Support Package with ADI APIs and Agilex JESD204B/C IP Core available. Includes DAC pattern generator/playback and ADC capture logic for analysis and prototyping

Highly integrated, Scalable, Feature Rich, HPC centric development platform

The Agilex 5G/Wireless development platform provides a quick evaluation and prototyping platform for 5G/Wireless solutions based on the Intel's latest high performance 10nm Agilex F-Series FPGA. The development platform consists of two modules, an Agilex FPGA based main SOM (System On Module) board and a carrier board which implements breakout of the FPGA I/Os through high speed SOM connectors. The carrier module provides an FMC VITA57.1 connector for interfacing to a limited set of Analog Devices high speed ADC/DAC/MxFE FMC modules. In addition, the FMC carrier module also provides multiple networking interfaces to breakout the E-Tile high speed transceivers of the Agilex FPGA.



Power Rails

- Intel Enpirion based power tree
- 160A capacity VID core supply using Intel ED8401 controller and ET6160 power stages

On board HPS interfaces

- 4GB DDR4 SDRAM
- 10/100/1000 Base T Ethernet
- 16GB onboard eMMC
- µSD card slot

Onboard FPGA fabric interfaces

- 2 dual rank 72-bit RDIMM memory slots
- 2GB micron SDM QSPI flash

Onboard debug support

- USB-Blaster for CPLD and FPGA JTAG access
- USB-I2C bridge for register access to the CPLD, FPGA and power modules
- USB-UART bridge for console access to the HPS
- Temperature and voltage sensors for board telemetry

IP Cores available

- 10G Extreme Low latency IP Core
- 25G Ultra Low latency IP Core
- 100G Ethernet IP Core
- 200G Ethernet IP Core
- RS-FEC (544, 514) and (528,514) IP Cores
- UDP/IP Offload Engine (UOE) IP Core
- Configurable Control/Data plane packet filters
- Peripheral IP Cores (e.g. I2C, MDIO, SPI etc.)

Links

https://hiteksys.com/development-platforms
https://hiteksys.com/development-platforms/agilex-5g-wireless-platform

For sales or more information:

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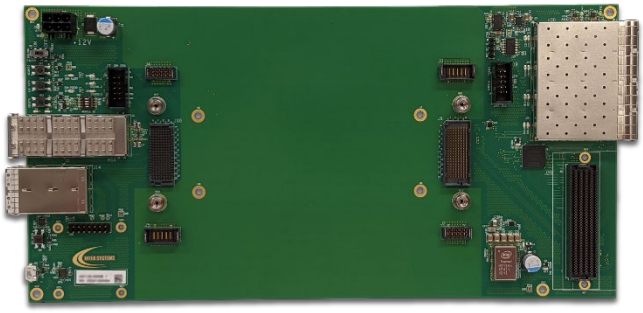
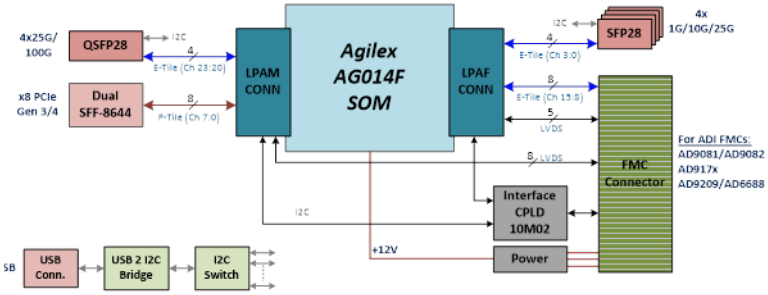
Agilex-SOM FMC Carrier



Features

- ATX +12V PCIe power connector for powering up the FMC carrier as well as Agilex-SOM module
- FMC power rails including +12V, +3.3V (I/O and AUX) and +1.2V VADJ (fixed)
- Intel Max10 for module control/status and FMC module single-ended I/O expansion
- 4x SFP28 connectors for quad 1G/10G/25G networking interface
- QSFP28 interface for 4x25G/100G networking interface
- Dual SFF-8644 connectors for PCIe Gen4x8 interface support through cable assembly
- Configurable Control/Data plane packet filters
- Micro-USB based debug/configuration interface using CP2112 USB-I2C bridge and TCA9548 I2C switch.



Product Ordering Codes

HPCSOM-AGF-01-01: AGF014 ES, w/HPS -3 core speed. Includes two 8GB DIMM and basic carrier board for power.

HPCSOM-AGF-01-02: AGF014 ES, w/HPS -3 core speed. Includes two 8GB DIMM and breakout carrier board for power and networking.

Contact Sales for other options