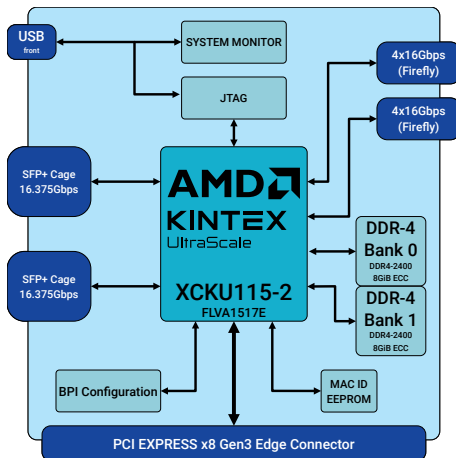
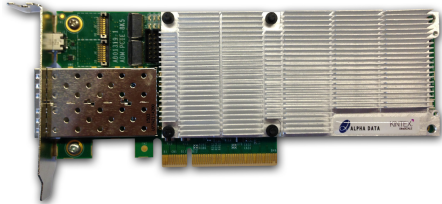


AD01319



Applications

- High-Performance Data Processing
- Video Processing
- Machine Learning
- High-Performance Computing (HPC)
- Network Acceleration

Summary

The ADM-PCIE-8K5 is a half-length, low profile, PCI Express Add-In Card featuring the powerful and efficient AMD Kintex UltraScale KU115-2 FPGA.

The ADM-PCIE-8K5 features two independent channels of DDR4 memory capable of 2400MT/s (fitted with two 8GB ECC banks as standard 16GB - optional 32GB available), dual SFP+ cages providing 2x 10GbE/16G Fiber Channel (Gen 5) capability. Dual Firefly connectors for up to 4x16Gbps per connector. Voltage/temperature/current control and monitoring. The board is supplied with an air-cooled heat sink and optional fan for development systems, without sufficient airflow over the PCIe slots. For deployment in rack-mount server systems, the fan is not required (passive cooling).

IBM Power8 and CAPI compliant

Target Device

AMD Kintex UltraScale
XCKU115-2 (FLVA1517E)

LUTs = 663k FFs = 1326k
DSPs = 5520
BRAM = 75.9Mb

6x PCI Express Gen3 x8 cores

Application Data Memory

2x 1G x 72 (8GiB) DDR4-2400

Other User Memory

2kb I2C EEPROM - Non-volatile data storage for the user design (i.e. storing MAC addresses).

Configuration Memory

BPI 1GBit Flash Memory
Configured as 2 x 512MBit zones

Configuration Modes

From onboard Flash
Over USB/JTAG

Deliverables

ADM-PCIE-8K5 Board
One Year Warranty
One Year Technical Support

Board Features

- 2x SFP+ Cages
- 2x Firefly Interfaces
- Heatsink with passive and fan cooling options

Host Interface

PCI Express Gen3 x8

Communications Interfaces

2x SFP+ 1x16Gbps - User Configurable, includes 10G Ethernet

2x Firefly Connector 4x16Gbps - PCIe, Fibre Channel, Infiniband, Ethernet, Aurora

Input/Output Interfaces

Other Interfaces

USB board management (built-in JTAG).

Board Management

The board management logic can monitor the temperature, voltage, and current of the system to check on the operation of the board. The monitoring is implemented using a microcontroller providing a host USB interface. The information can also be accessed directly from the microcontroller over the USB interface on the front panel. When enabled**, IPMI can also be used to communicate with the system monitor, allowing for remote communication and management with the ADM-PCIE-8K5.

** IPMI is disabled by default and should only be enabled when the board is installed in an IPMI-compliant system. Please contact the factory for details on enabling IPMI on the ADM-PCIE-8K5

Support

Optional integrated Board Support Package (BSP) including extensive FPGA example designs, plug and play drivers, and a mature Application Programming Interface (API)
 CAPI Compliant (optional CAPI board support package available).

Board Format

1/2 Length Low profile x8 PCIe form Factor
 WxHxD = 173mm x 68.9mm x 17.5mm
 Weight = 200g

Environmental Specification

Cooling Option	Operating Temperatures		Storage Temperatures	
	Min	Max	Min	Max
AC0	0°C	+55°C	-40°C	+85°C

Operating Humidity : Up to 95% (non-condensing)

EMC Standards

See the ADM-PCIE-8K5 Declaration of Conformity document

Ordering Information

Order Code: ADM-PCIE-8K5(m)(o)(f)(g)(j)(NF)

Option	Code	Description of Options
Memory	m	blank = 16GB (DDR4-2400) onboard memory, /32GB = 32GB (DDR4-1866) onboard memory
SFP+ Cages and Optical Modules	o	blank = SFP+ Cages only, Optionally fitted Modules /D10 = 2x 10 Gigabit SFP+ optical modules, /D14 = 2x 14 Gigabit SFP+ optical modules
FireFly® Optical Modules	f	blank = not fitted, /F = 2x 14 Gigabit FireFly® optical module - MPO Front Panel (full height bracket required)
GPIO (RS232/485)	g	blank = RS232/485 NOT available, /G = RS232/485 available
Si5328 Jitter Attenuator	j	blank = Si5328 NOT fitted, /J = Si5328 Si5328 fitted
No fan option	NF	blank = optional cooling fan installed, /NF = no fan