

## Summary

The ADM-PCIE-8V3 is a half-length, low profile, PCI Express Add-In Card featuring the powerful and efficient Xilinx Virtex UltraScale VU095-2 FPGA.

The 16 lane PCIe Gen3 capable card-edge allows for dual 8 lane endpoints in a bifurcated system for maximum data throughput.

Front IO with 2x QSFP28 sockets, each supporting one 100GbE or four 25GbE interfaces. Full profile card slots can also support two additional 100GbE interfaces via Samtec FireFly® modules, allowing this board to become a massive network device with 4x 100GbE ports.

Two 1G x72 DDR4-2400 ECC memory banks each provide 8GiB of on-board DDR4-2400 memory (72 bits wide).

System monitoring of temperature, voltage, and current gives developers accurate feedback of power utilization for their designs.

Optional Board Support Package (BSP) with example FPGA designs, application software, mature Application Programming Interface (API) and driver support for MS Windows and Linux.

This card comes with low-profile and full-height front brackets (low-profile bracket fitted as standard) and an optional blower for low air-flow systems.

## Features

### Applications

- Data Center
- Network Accelerator
- High Performance Computing (HPC)
- Data Processing
- System Modelling
- Market Analysis

### Target Device(s):

Xilinx Virtex-UltraScale: XCVU095-2 (FFVC1517)

### Memory:

**SDRAM** - 2x banks of 1G x 72, DDR4-2400 (16GiB total), upgradable to 16GiB, DDR4-1866 (dual bank devices), per bank (32 GiB total)

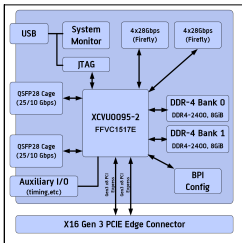
**FLASH** - On-board re-programmable flash memory for embedded configuration

### Front I/O:

- 2 QSFP28 cages
- Micro USB for Xilinx Vivado JTAG support (FPGA programming and debug)
- Customizable low speed front I/O

### Other I/O:

2x FireFly® for internal connection or front IO via optional faceplate



Specification	
Product Name	<b>ADM-PCIE-8V3</b>
Target Device(s)	Xilinx Virtex-Ultrascale XCVU095-2 (FFVC1517)
Interface	PCI Express Gen3 x8 (Dual)
Memory	<b>SDRAM</b> - 2x banks of 1G x 72, DDR4-2400 (16GiB total), upgradable to 16GiB, DDR4-1866 (dual bank devices), per bank (32 GiB total) <b>FLASH</b> - On-board re-programmable flash memory for embedded configuration
Front I/O	2 QSFP28 cages Micro USB for Xilinx Vivado JTAG support (FPGA programming and debug) Customizable low speed front I/O
Other I/O	2x FireFly® for internal connection or front IO via optional faceplate
Clocks	Programmable Clock Generator
Device Configuration	Configure from on-board flash memory Programming over USB/JTAG. The USB/JTAG Interface is compatible with all of the Xilinx Vivado Tools.
Software	Optional Integrated Board Support Package (BSP) including extensive FPGA example designs, plug and play drivers, and a mature Application Programming Interface (API)
Environmental	<b>Temperature:</b> Operating Temperature 0°C to +55°C <b>EMC:</b> FCC 47CFR Part 2 EN55022 Equipment Class B <b>RoHS Compliance:</b> All standard products are RoHS compliant. Please contact Alpha Data Sales for details of Tin/Lead build options.

Ordering Code	
ADM-PCIE-8V3 (m)(q)(f)(g)	
DDR4 Memory Options	m blank = 8Gb parts, 8GiB (DDR4-2400) per bank, 16GiB total, /32Gb = 16Gb parts, 16GiB (DDR4-1866) per bank, 32 GiB total
QSFP cages and Optical Modules	q blank = QSFP28 Cages only, Optionally fitted Modules /Q10 = 2x 10 Gigabit QSFP optical module, /Q14 = 2x 14 Gigabit QSFP optical module, /Q28 = 2x 28 Gigabit QSFP optical module
FireFly® Optical Modules (available in full height bracket only)	f blank = none, /F14 = 2x 14 Gigabit FireFly® optical module, /F28 = 2x 28 Gigabit FireFly® optical module
GPIO (available in full height bracket only)	g blank = none, Contact alpha data for customizable options (timing input, RS232, RS485, Direct FPGA Connections)

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