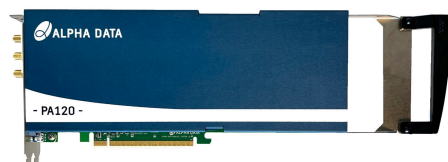


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Applications

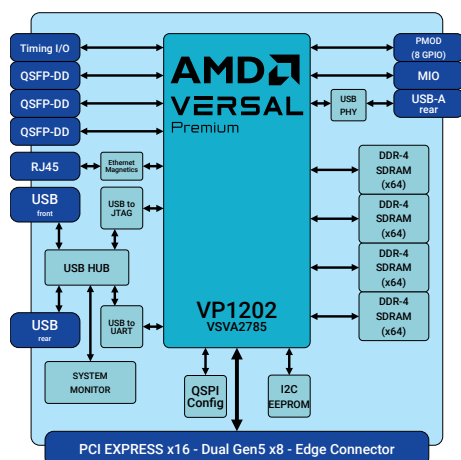
- In-line NIC processing
- Network Traffic Analysis/Threat Detection
- CPU offload acceleration
- Time Sensitive Networking
- Synchronous Ethernet
- Network Data Capture
- Network Test and Measurement
- Scientific Data Capture and front-end signal processing

Summary

The ADM-PA120 is an adaptable Data Processing Unit suitable for high-performance network-attached acceleration. ADM-PA120 is a PCIe form factor plug-in card, based on the AMD Versal™ Premium Adaptive SoC - VP1202/VP1502.

Board Features

- AMD Versal™ Premium Adaptive SoC (VP1202/VP1502)
- 3x QSFP-DD High-speed each x8 serial links (28Gbps NRZ / 56Gbps PAM4)
- 4x Timing I/O (incl. 1PPS)
- Front Panel GigE Interface
- System Monitor
- Heatsink with optional fan



Target Devices

AMD Versal™ Premium Adaptive SoC
VP1202, VP1502 (A2785)

FPGA Specification

LUTs = 900.2k(1720k)
DSPs = 3984(7440)
BRAM = 47Mb(89Mb)
URAM = 190Mb(366Mb)
2x ARM Cortex-A72 MPCore™
2x ARM Cortex-R5F MPCore™
1x 256kB On-Chip Memory with ECC

Application Data Memory

3x 512M x 64bit (4GiB) LPDDR4-3900
LPDDR4-SDRAM
1x 512M x 64bit (4GiB) LPDDR4-3200
LPDDR4-SDRAM

Configuration Memory

x8 QSPI 4Gb (2x 2Gb devices)

Configuration Modes

The FPGA is configurable using a front panel USB interface and the Vivado tool suite (through the onboard diligent module). The configuration flash for the FPGA is writeable via the USB interface and the Vivado tool suite, or the provided Alpha Data Firmware.

Host Interface

Dual PCI Express Gen5 x8

Input/Output Interfaces

QSFP-DD (Front Panel)

3x QSFP-DD Cages for copper or fibre interconnectivity. Capable of up to 28Gbps NRZ (all QSFP-DD cages) or 56Gbps PAM4 (2 of the QSFP-DD cages).

10MHz external input clock (Front Panel)

10MHz input (ITU-T G.703 section 20 compliant)

1PPS Input (Front Panel)

1PPS timing input (ITU-T G.703 section 19.2 compliant)

1PPS Output/Trigger Output (Front Panel)

1PPS timing output (ITU-T G.703 section 19.2 compliant)

Time Of Day (ToD) (Front Panel)

RJ45 Connector for ToD and 1PPS input/Output (ITU-T G.703 section 19. compliant)

Other Interfaces

Gigabit Ethernet Interface (RJ45) to front Panel

USB-A for Application use

Dual USB Configuration Sockets (front and back)

Support

Reference Design Package available separately

Deliverables

ADM-PA120 Board
One Year Warranty
One Year Technical Support

Board Format

PCIe 3/4 Length, full height, Dual Slot, includes front panel
WxHxD = 267.2mm x 126.3mm x 41.9mm
Weight = PCB assembly - 865gg

Environmental Specification

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

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

EMC Standards

See the ADM-PA120 Declaration of Conformity document

Ordering Information

Order Code: ADM-PA120(a)(f)

Option	Code	Description of Options
FPGA Configuration	a	Blank = Default device - AMD Versal™ Premium Adaptive SoC VP1202-2MS - CPM5 Overdrive Enabled /VP1502 = VP1502 device fitted : AMD Versal™ Premium Adaptive SoC VP1502-2MS - CPM5 Overdrive Enabled
Fan Fitted	f	BLANK = active (cooling fans) /NF = passive (no fans)
Note	Please Contact sales for other options.	