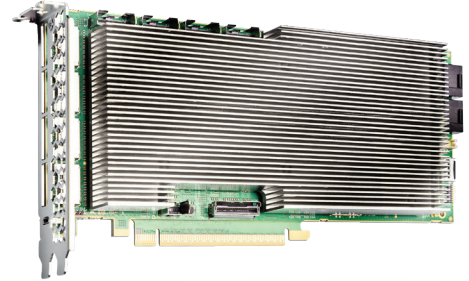


BittWare AV-860h PCIe Card >

Brought to market in partnership with LDA Technologies, the AV-860h is a PCIe Gen5 accelerator card designed to deliver extreme performance for data center and edge compute workloads.

Featuring the AMD Versal Premium Adaptive SoC with 32GB of HBM2e memory, the AV-860h is a deployment-ready full height, ¾ length PCIe accelerator compatible with high-performance servers. The card features LPDDR4 memory, PCIe Gen5 x8, and a sophisticated Board Management Controller (BMC) for advanced system monitoring and control. Use the card as an accelerator, or connect it to I/O via a custom server or add-on card.



FEATURES AND ADVANTAGES

8x ARC6-16 for I/O expansion

Ideal for network-intensive applications

PCIe Gen5 x8

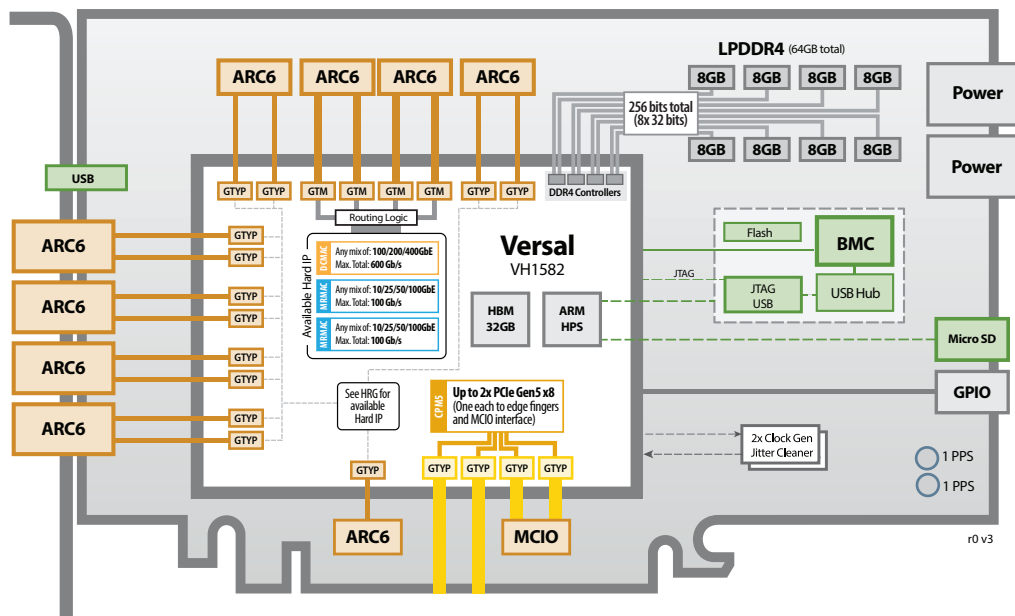
High-speed interface between CPUs and accelerators

Versal Premium HBM with up to 3.8M logic cells

Networked, power-optimized cores on an adaptable platform

32 GB HBM2e and 64GB LPDDR4

Large pool of on-chip and off-chip memory



BittWare AV-860h PCIe Card >

SYSTEM SPECIFICATIONS

Adaptive SoC

- Versal HBM
 - XCVH1582
 - Core speed grade - 2
 - 32 GB HBM2e

On-board Flash

- Flash memory for booting FPGA

External memory

- 64GB LPDDR4

Host interface

- PCIe 4.0 x16 or 2x PCIe 5.0 x8 (in bifurcation mode) interface direct to FPGA, connected to PCIe Hard IP

I/O Expansion

- 8x ARC6-16 connectors connected to FPGA via 64x SerDes channels
 - 48x GTYP
 - 16x GTM
- ARC6-8 connector connected to FPGA via 4x SerDes channels
- MCIO for PCIe Gen5 x8

Clocking

- 2x Jitter cleaners for network recovered clocking
- 2x 1PPS (in-board)

USB

- USB access to BMC, USB-JTAG, USB-UART
- USB C on front panel, USB in and out on back panel

Board Management Controller

- Onboard CLI
- Python, C++ API (contact us)
- 200 Mbps parallel port connected to the FPGA fabric and the NOC
- USB SD Card Reader for simple OS images transfer to ARM processors
- Fast FPGA Boot Flash programming
- Temperature, voltage, current monitoring
- SNMP agent for centralized management
- Dedicated preprogrammed array of 32 MAC addresses
- I/O port monitoring full QSFP, SFP, QSFP-DD access and programming through CLI and API
- CLI-based clock selection supporting custom clock configurations

Cooling

- Standard: dual-width passive heatsink

Electrical

- On-board power derived from 12V PCIe slot and 2x AUX connectors
- Power dissipation is application dependent

Environmental

- Operating temperature 5°C to 35°C

Form factor

- ¾-length, standard-height PCIe dual-width board
- 10 x 4.37 inches (254 x 111.15 mm)

DEVELOPMENT TOOLS

Application development

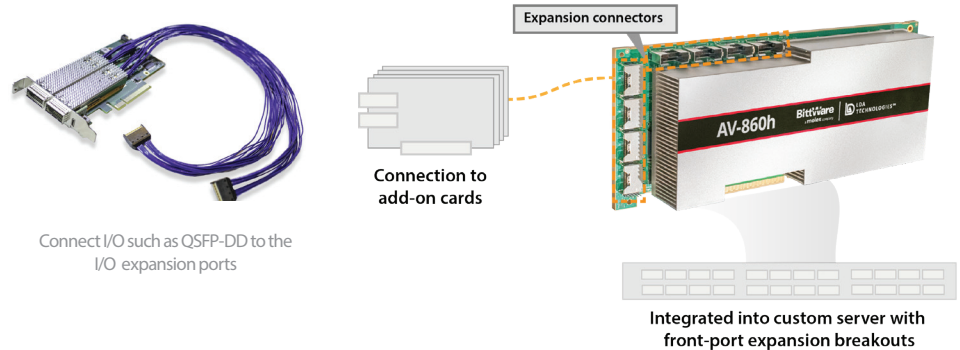
Supported design flows -Vivado Design Suite (HDL, Verilog, VHDL, etc.)

SAFETY & COMPLIANCE

- FCC (USA) 47CFR15.107 / 47CFR15.109
- CE (Europe) EN55032:2015 + A11:2020 / EN55035:2017 + A11:2020 / EN61000-3-2:2019 + A11:2020 / BS EN55032:2015 + A11:2020 / BS EN55035:2017 + A11:2020 / BS
- ICES (Canada) ICES-003 Issue 7 October 2020
- RoHS compliant to the 2011/65/EU + 2015/863 directive

I/O ADD-ON CARDS

The ARC6-16 ports are designed for connecting high-speed I/O to the AV-860h. Contact us to learn about available add-ons or to discuss a custom design.



AMD

Embedded
Partner
Network

PLATINUM

LDA
TECHNOLOGIES™

To learn more, visit bittware-molex.com

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