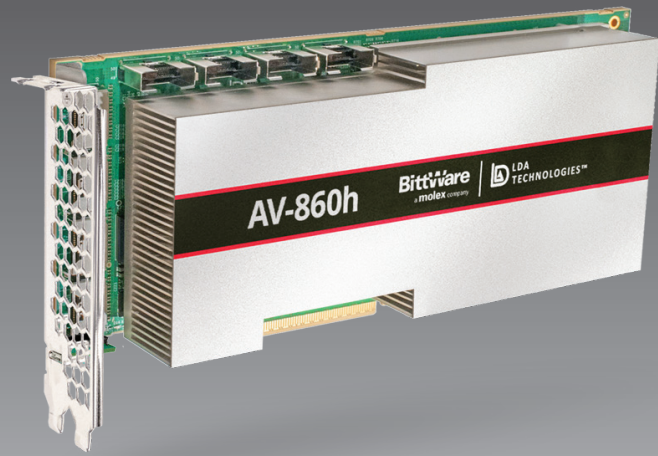


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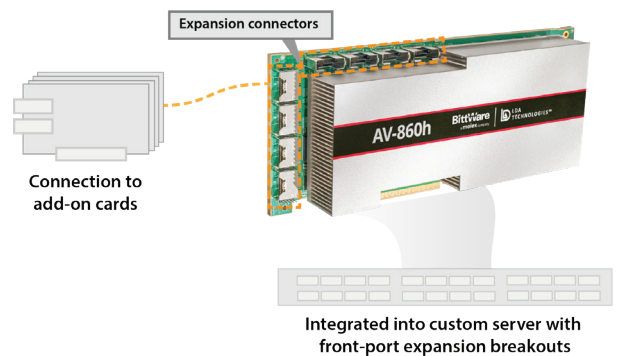
AV-860h
PCIe Adaptive SoC Card



Versal™ HBM Adaptive SoC Card

32GB HBM2e, High-Speed I/O, and PCIe Gen5

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 AMD Xilinx®'s 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.

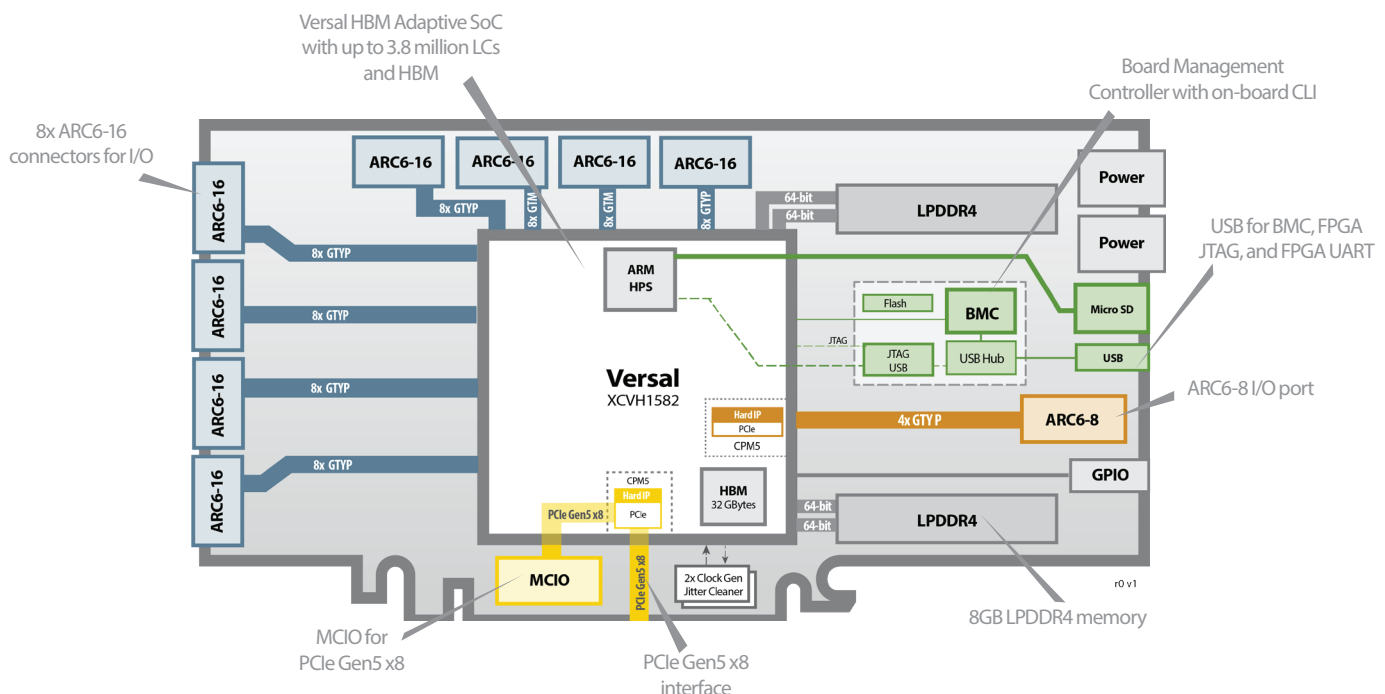


key features

32 GB HBM2e
and
64GB LPDDR4

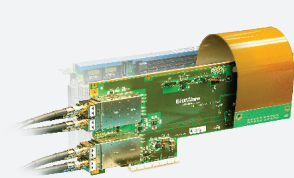
PCIe
Gen5 x8

Versal HBM
with up to **3.8M**
Logic Cells



Additional Services

Take advantage of BittWare's range of design, integration, and support options



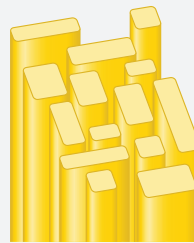
Customization

[Additional specification options](#) or [accessory boards](#) to meet your exact needs.



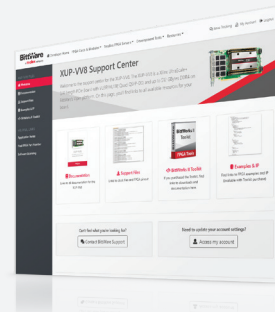
Server Integration

Available pre-integrated in our [TeraBox servers](#) in a range of configurations.



IP and Solutions

Our portfolio of IP and solutions reduce risk for development and deployment.



Service and Support

BittWare Developer Site provides online documentation and issue tracking.

Board Specifications

Adaptive SoC	<ul style="list-style-type: none">Versal HBM<ul style="list-style-type: none">XCVH1582Core speed grade - 232 GB HBM2e
On-board Flash	<ul style="list-style-type: none">Flash memory for booting FPGA
External memory	<ul style="list-style-type: none">32GB LPDDR4 @ 4266MHz -or- 64GB LPDDR4 @ 3733MHz
Host interface	<ul style="list-style-type: none">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	<ul style="list-style-type: none">8x ARC6-16 connectors connected to FPGA via 64x SerDes channels<ul style="list-style-type: none">48x GTYP16x GTMARC6-8 connector connected to FPGA via 4x SerDes channelsMCIO for PCIe Gen5 x8
Clocking	<ul style="list-style-type: none">2x Jitter cleaners for network recovered clocking2x 1PPS (in-board)
USB	<ul style="list-style-type: none">USB access to BMC, USB-JTAG, USB-UARTUSB C on front panel, USB in and out on back panel

Board Management Controller

- Onboard CLI
- Python, C++ API (contact BittWare)
- 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)

I/O Add-on Cards

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

Connect I/O such as QSFP-DD to the I/O expansion ports



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 +
- UKCA (United Kingdom) 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

To learn more, visit www.BittWare.com

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