

BittWare
a molex company

AV-811p
PCIe Adaptive SoC Card



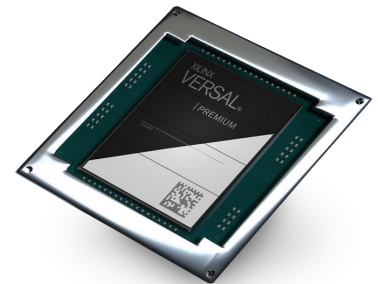
Preliminary Product Info

Versal™ Premium Adaptive SoC Card

AI Engine* and 2x the logic and memory of other Versal adaptive SoCs

Brought to market in partnership with LDA Technologies, the AV-811p 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, the AV-811p is a deployment-ready full height, ¾ length PCIe accelerator compatible with high-performance servers. The card features QSFP-DDs for up to 4x 400GbE, LPDDR4 memory, PCIe Gen5 x8x8, AI engine,* and a sophisticated Board Management Controller (BMC) for advanced system monitoring and control.

* Available on VP2802 only.

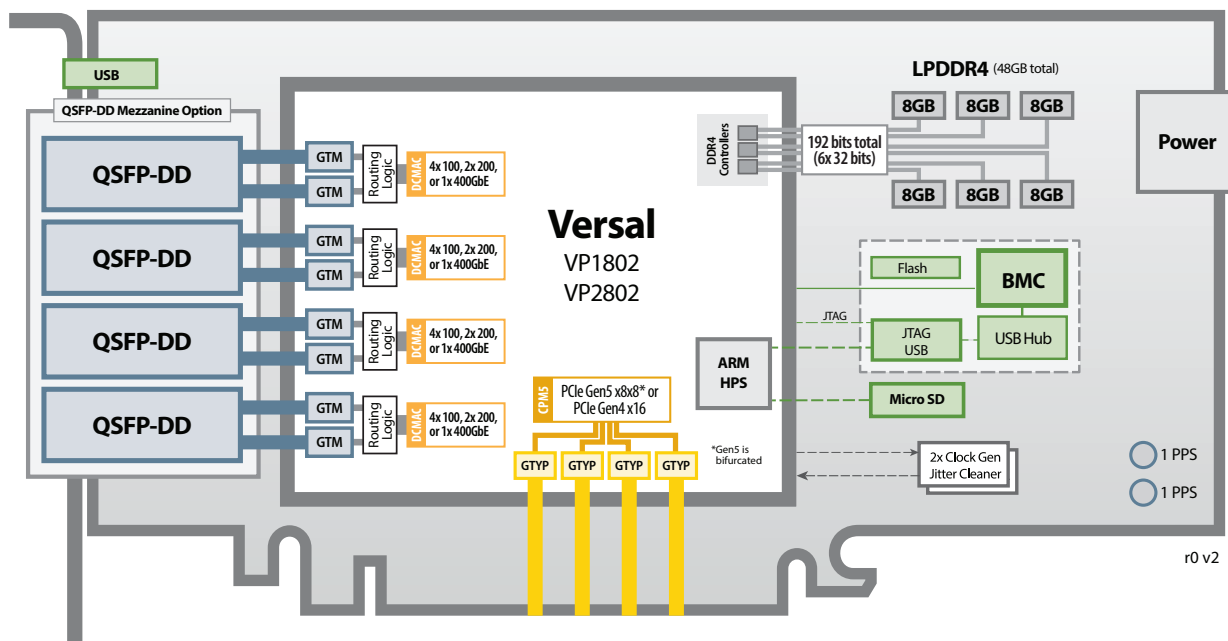


key features

Up to
4x 400GbE

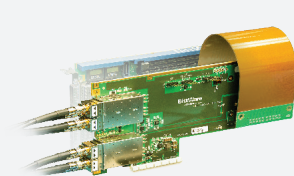
PCIe Gen5
x8x8

Versal Premium
7.3M System Logic Cells
14.3K DSP Engines



Additional Services

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



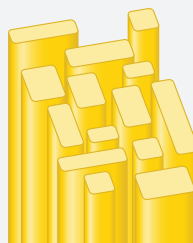
Customization

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



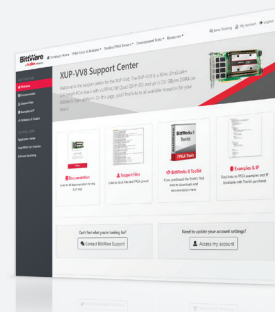
Server Integration

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	- Versal Premium - VP1802 or VP2802 - Core speed grade - 2 - AI engines (VP2802) 472 AI Engine Tiles 118Mb AI Engine Memory - Contact BittWare for other FPGA options
On-board Flash	Flash memory for booting FPGA
External memory	48GB LPDDR4
Host interface	PCIe Gen5 x8x8 (biifurcated) interface direct to FPGA, connected to PCIe Hard IP
QSFP-DD Module	Optional QSFP-DD I/O module with 4x QSFP-DD cages connected to FPGA via 8x SerDes channels each (32x total)
Clocking	2x Jitter cleaners for network recovered clocking 2x 1PPS (in-board)
USB	USB access to BMC, USB-JTAG, USB-UART

Board Management Controller

- Onboard CLI
- Python, C++ API (contact BittWare)
- 200 Mbps parallel port connected to the FPGA fabric and the NO
- 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 12-pin AUX connector
- 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.)



To learn more, visit www.BittWare.com

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