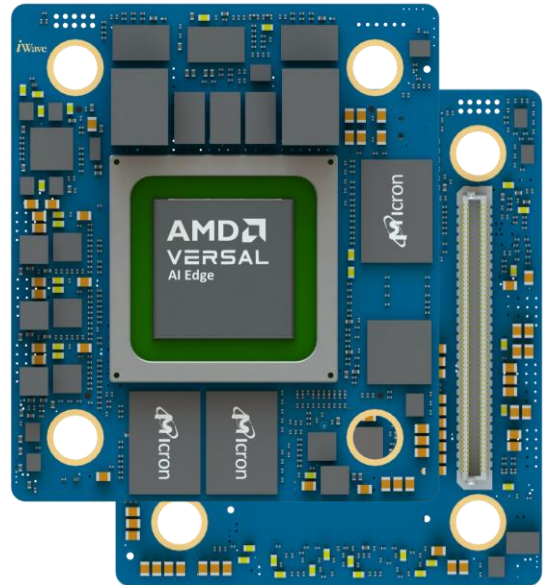


iG-G57M-ML®

Versal™ AI Edge XQ System on Module – MIL Grade

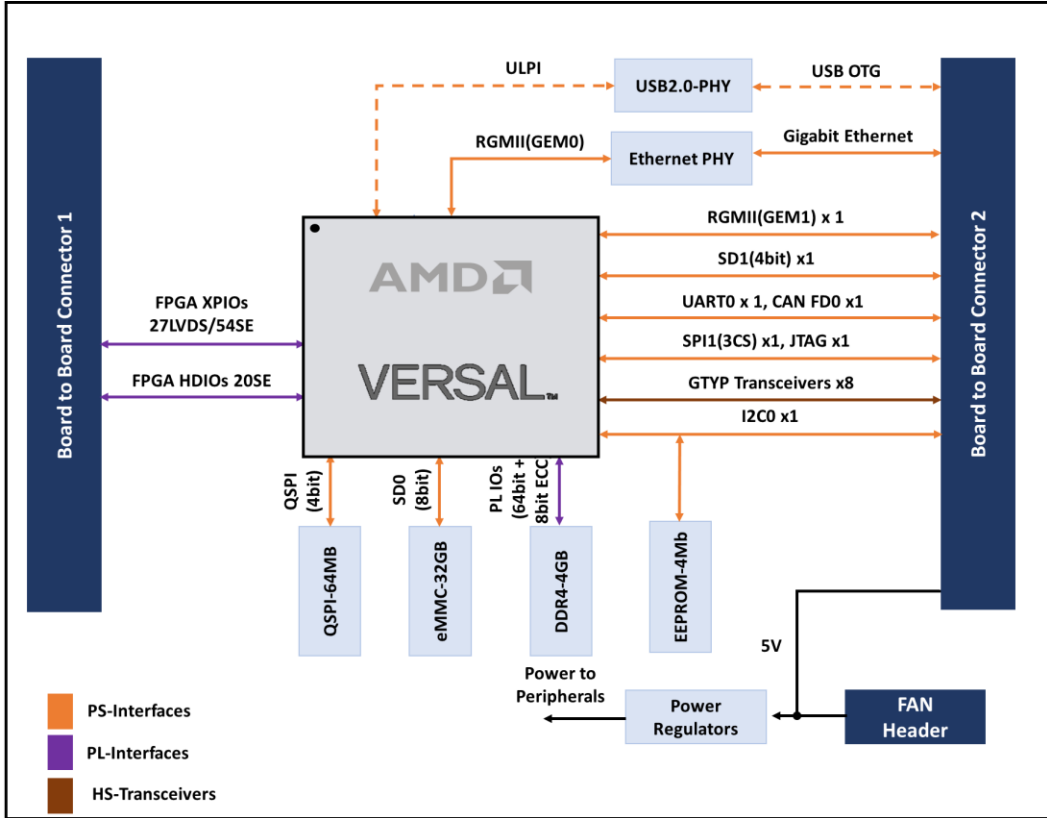
iWave's Versal™ AI Edge XQ System on Module – MIL Grade is a rugged platform powered by the AMD Versal™ AI Edge XQ adaptive SoC, the module combines AI Engines, programmable FPGA logic & Arm® processors to deliver high AI inference performance, deterministic real-time processing & low-latency acceleration in harsh operating environments. The SoM integrates high-speed GTYP transceivers, onboard LPDDR4 memory, eMMC, QSPI flash & extensive high-speed I/O in a compact, rugged form factor. Its military-grade design enables rapid deployment of secure, reliable & power-efficient embedded systems while reducing development complexity & accelerating time-to-market for mission-critical applications.



Highlights

- ❖ Versal™ AI Edge XQ Compatible with XQVE2302, XQVE2102 & XQVM1102 Devices
- ❖ Up to 329K Logic Cells & 150K LUTs
- ❖ 4GB DDR4 Memory and 4Mb EEPROM
- ❖ 32GB eMMC and 128MB QSPI Flash
- ❖ Up to 8 GTYP Transceivers and 27LVDS/54SE from XPIOs & 20SE from HDIOs

Block Diagram



Technical Specifications

SoC/ FPGA	- Versal™ AI Edge XQ SoC with SSRA784 Package - Dual-core Arm Cortex-A72 Processor APU @1.3GHz - Dual-core Arm Cortex-R5F Processor RPU @600MHz - Compatible with XQVE2302, XQVE2102 & XQVM1102 Devices - Up to 329K Logic Cells & 150K LUTs - Up to 34 AIE-ML Tiles with 68Mb AIE-ML Shared Memory	From PS Block - Select MAP (8-bit) x1 - GEM0 10/100/1000Mbps Ethernet x1 - GEM1 RGMII x1 - SD1 (4-bit) x 1 - Debug UART x1 - JTAG x1 - SPI (3CS) x1 - CAN FD x1 - PMC I2C x1
Memory	64-bit, 4GB LPDDR4 with 8-bit ECC (Upgradable up to 8GB)	10/100/1000Mbps Ethernet PHY x1
Storage	32GB eMMC Flash (Exp. up to 64GB) 256MB QSPI Flash 4Mb EEPROM	Fan Header x1
Board to Board Connectors Interfaces	From PL Block - Up to 8 GTYP Transceivers at 26.5625Gbps - Up to 27LVDS/54SE from XPIOs & 20SE from HDIOs	Power Input 5V through B2B Connector
		Form Factor REN
		BSP Support Linux/Vivado 2024 or above
		Operating Temperature -55°C to +125°C
		Environment Specification REACH & RoHS3 Compliant

A Global Leader in Embedded Systems Engineering and Solutions

Since 1999, we have pioneered leadership in embedded systems technology, establishing ourselves as a strategic embedded technology partner for advanced solutions. Our comprehensive portfolio encompasses ARM and FPGA System on Modules, COTS FPGA solutions, and ODM solutions which include Telematics, Gateways & HMI Solutions.

Beyond our robust product ecosystem, we provide comprehensive ODM support with specialized custom design and manufacturing capabilities, enabling customers to accelerate and optimize their product development roadmaps. With a strategic focus on industrial, automotive, medical, and avionics markets, we deliver innovative technology solutions to global clients.

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