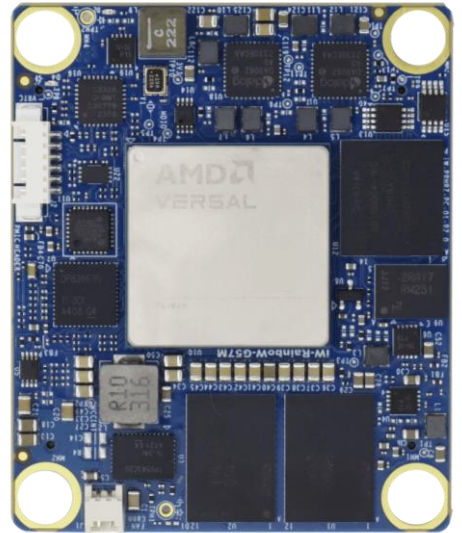


iG-G57M

Versal AI Edge System on Module

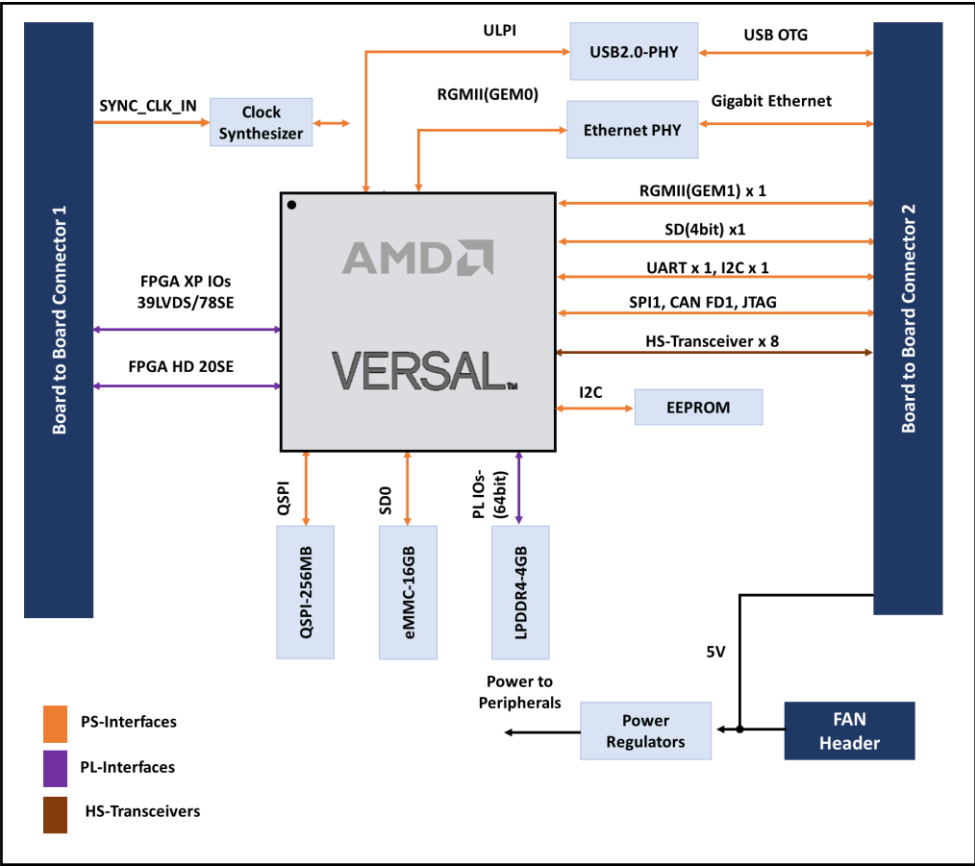
The Versal AI Edge/Prime-based System on Module (SOM) features the Versal AI Edge SoC VE2302/2202/2102/2002 device in an SFVA784 package. It is powered by a dual-core Arm Cortex-A72 processor running at up to 1.7GHz, along with a dual-core Arm Cortex-R5F processor operating at up to 750MHz. The SOM includes 4GB of 64-bit LPDDR4 RAM and is equipped with 8 GTYP high-speed transceivers, supporting data rates of up to 32Gbps, making it ideal for demanding applications.



Highlights

- ❖ Versal™ AI Edge with SFVA784 Package
- ❖ Compatible with VE2302/2202/2102/2002 Devices
- ❖ Dual-core Arm Cortex-A72 core up to 1.7GHz
- ❖ Dual-core Arm Cortex-R5F core up to 750MHz
- ❖ Programmable Network on Chip (NoC)
- ❖ Up to 328K Logic Cells & 150K LUTs
- ❖ 2 x 240pin High-Speed Connectors with 98 user IOs
- ❖ 40G Multi-rate Ethernet MAC
- ❖ AIE-ML Data & Shared memory

Block Diagram



Technical Specifications

CPU	- Versal AI Edge SoC - Dual-core Arm Cortex A72 - Dual-core Arm Cortex R5F
Memory	4GB LPDDR4 (64bit) memory 16GB eMMC Flash (Upgradable) 256MB QSPI Flash (Upgradable)
On SOM Features	10/100/1000 Ethernet PHY Transceiver - USB2.0 PHY Transceiver - FAN Header
Dual Board to Board Connector interfaces	From PL (Programmable Logic) - GTYP Transceiver x 8 up to (32 Gbps) 39 LVDS Pairs 20 SE FPGA IOs

Dual Board to Board Connector interfaces	From PS (Processing System) - Gigabit Ethernet x 1 Port - USB2.0 OTG x 1 Port - RGMII Interface x 1 - SD1(4-bit) x 1 Port - SPI(3CS) x 1 Port - UART/ PMC I2C/ CAN FD x 1 Port - PS JTAG x 1 Port
Operating System	Linux
Operating Temp.	-40°C to +85°C (Industrial Grade)
Form Factor	50mm x 60mm (REN)
Power Input	5V through B2B Connector 2
Environment Spec.	REACH & RoHS3 Compliant

Ordering Information

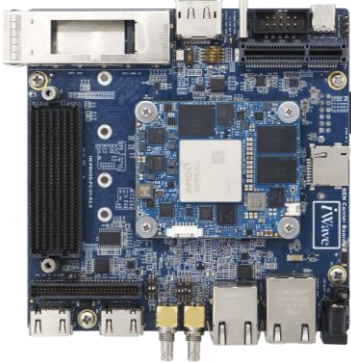
iW-G57M-2302-4L004G-E016G-BEA

VE2302 (-1LSE) Speed Versal Edge AI SoC with 4GB LPDDR4,16GB eMMC SOM – Boot Code

iW-G57M-2302-4L004G-E016G-LEA

VE2302 (-1LSE) Speed Versal Edge AI SoC with 4GB LPDDR4,16GB eMMC SOM – Linux

Product accessories



Development Kit

Versal AI Edge/Prime SoC Devkit includes a SOM & carrier board, featuring FMC+ (HSPC), HDMI IN/OUT, SDI Video IN/OUT, & a 12-pin PMOD connector for validating PL interfaces.



Thermal Solutions

For any highly integrated System on Modules, thermal design is an important factor. iWave Supports heat Spreader for Versal AI Edge/Prime SoM.

Applications

▪ Autonomous driving

It leverages AI and sensor fusion to enable self-driving vehicles with real-time perception, decision-making, and control.

▪ Wired & Wireless application

It enables seamless communication and data transfer across wired and wireless networks for connectivity and automation.

▪ Embedded computing

Embedded computing applications integrate specialized hardware and software to enable real-time processing and control in diverse systems.

▪ AI Engine and AI Engine-ML

It accelerates high-performance AI/ML workloads, enabling real-time data processing and intelligent decision-making.

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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