

iG-G57M

Versal Prime System on Module

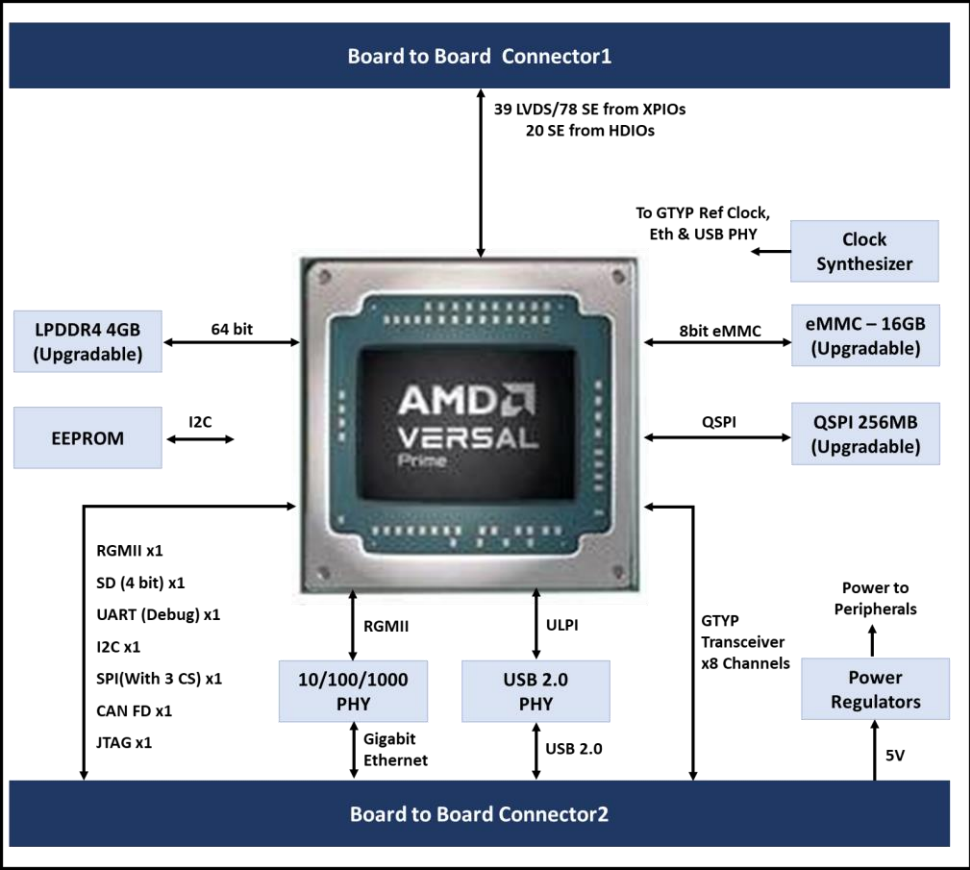
The Versal Prime-based System on Module (SOM) features the Versal Prime (VM1102) device in an SFVA784 package. It is powered by a dual-core Arm Cortex-A72 processor running at up to 1.65GHz, along with a dual-core Arm Cortex-R5F processor operating at up to 800MHz. The SOM includes 4GB of 64-bit LPDDR4 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™ Prime SoC with SFVA784 package
- ❖ Compatible with VM1102 device
- ❖ Up to 328K Logic cells & 150K LUTs
- ❖ 4GB LPDDR4 Memory (Expandable)
- ❖ 16GB eMMC Flash and 256MB QSPI Flash
- ❖ 8 GTYP transceiver lanes and 98 user IO

Block Diagram



Technical Specifications

CPU	- Versal™ Prime SoC with SFVA784 package - Dual-core Arm Cortex-A72 @1.65GHz - Dual-core Arm Cortex-R5F @800MHz	Dual Board to Board Connector interfaces From PS (Processing System) - RGMII x 1 1G Ethernet - USB2.0 x 1 - SD1 (4-bit) x 1 - Debug UART x 1 - PMC I2C x 1 - SPI1(3CS) x 1 - CAN FD x 1 - JTAG x 1
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 Transceivers x8 up to 32Gbps 39 LVDS a78 SE from XPIOs 20 SE from HDIO	Operating System Linux 2024.2 and Vivado2024.2 or above
		Operating Temp. -40°C to +85°C (Industrial Grade)
		Form Factor 50mm x 60mm (REN)
		Power Input 12V through B2B Connector
		Environment Spec. REACH & RoHS3 Compliant

Ordering Information

iW-G57M-1102-4L004G-E016G-BIB

Versal Prime SoC VM1102 (-1MSI Speed) with 4GB PS LPDDR4,16GB eMMC, Industrial grade

iW-G57D-1102-4L004G-E016G-LCB

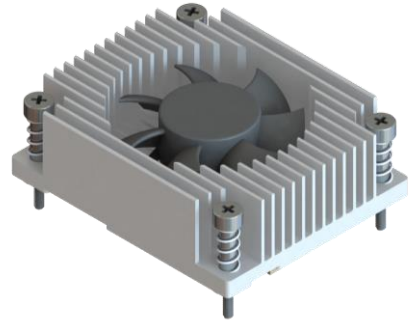
Versal Prime VM1102 SoC (-1MSI Speed) with 4GB PS LPDDR4,16GB eMMC - Development kit with Linux

Product accessories



Development Kit

Versal Prime SoC Devkit includes a SOM & carrier board, featuring FMC+ (HSPC), HDMI IN/OUT, SDI Video IN/OUT, & 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 Prime SoM.

Applications

Storage Acceleration

Enhances data throughput and reduces latency by offloading compute-intensive storage tasks for high-performance data processing.

Data Center Network Acceleration

Optimizes network performance by accelerating packet processing, traffic management, and security functions in data centers.

5G xHaul

Enables high-speed, low-latency fronthaul, midhaul, and backhaul connectivity to support scalable and efficient 5G network infrastructure.

Passive Optical Networks

Delivers high-bandwidth fiber connectivity using cost-efficient, point-to-multipoint optical access networks.

Communications Test Equipment

Provides high-precision signal generation, analysis, and validation for testing and verifying communication systems.

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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