

# System On Module iW-RainboW-G57M

## Versal AI Edge/Prime SOM



Xilinx Versal AI Edge/Prime based System On Module features the Versal AI Edge SoC VE2302/2202/2102/2002 and Versal Prime VM1102 device with SFVA784 package. The Versal AI Edge/Prime supports Dual-core Arm Cortex-A72 up to 1.7GHz and Dual-core Arm Cortex-R5F up to 750MHz based processing system.

The Versal AI Edge/Prime The SOM is equipped with a 64-bit 4GB LPDDR4 RAM. The SOM supports a 8 GTYP high speed Transceiver which can support up to 32 Gbps to run demanding application.

**Applications:** Autonomous driving, Wire & Wireless application, Embedded computing, application requiring AI Engine and AI Engine-ML

### iW-RainboW-G57M

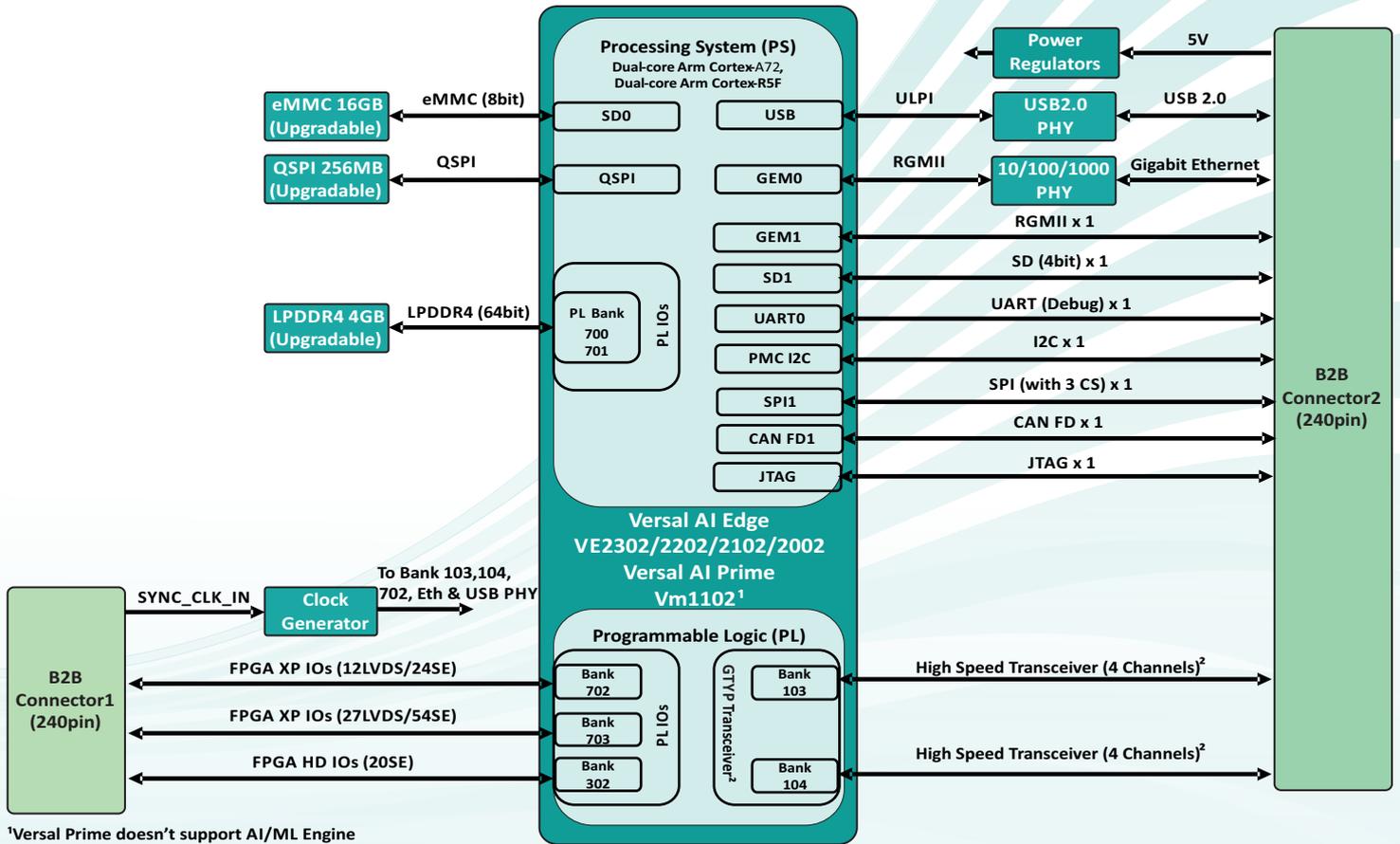
#### HIGHLIGHTS

- Dual-core Arm Cortex-A72 core up to 1.7GHz
- Dual-core Arm Cortex-R5F core up to 750MHz
- Programmable Network on Chip (NoC)
- 40G Multi-rate Ethernet MAC
- AIE-ML Data & Shared memory
- 64-bit LPDDR4 memory
- Dual 240 pin Board to Board Connectors

### SPECIFICATIONS

<b>On Board Feature</b>	<b>From PS (Processing System)</b>
<b>CPU</b>	Gigabit Ethernet x1 Port
Xilinx's Versal AI Edge/Prime SoC	USB2.0 OTG x1 Port
Dual-core Arm Cortex A72	RGMII Interface x1
Dual-core Arm Cortex R5F	SD1(4-bit) x1 Port
<b>Memory &amp; Storage</b>	SPI(3CS) x1 Port
4GB LPDDR4(64bit) memory	UART/ PMC I2C/ CAN FD x1 Port
16GB eMMC Flash (Upgradable)	PS JTAG x1 Port
256MB QSPI Flash (Upgradable)	<b>Operating System</b>
<b>On SOM Feature</b>	Linux
10/100/1000 Ethernet PHY Transceiver	<b>Power Supply</b>
USB2.0 PHY Transceiver	5V through Board to Board connector2
FAN Header	<b>Temperature Support</b>
<b>Dual Board to Board Connector interfaces</b>	-40°C to +85°C (Industrial grade)
<b>From PL (Programmable Logic)</b>	<b>Form Factor</b>
GTYP Transceiver x8 upto(32 Gbps)	50mm x 60mm
39 LVDS Pairs	<b>Environmental Specification</b>
20 SE FPGA IOs	REACH & RoHS3

## Versal AI Edge/Prime SOM Block Diagram



<sup>1</sup>Versal Prime doesn't support AI/ML Engine

<sup>2</sup>GTP transceiver is not supported in VE2102 & VE2002

### OS SUPPORT

Linux version 6.1.30  
Xilinx-v2023.1

### DELIVERABLES

Versal AI Edge/Prime Module  
Board Support Package  
Datasheet

### OPTIONAL KITS/Modules

Versal AI Edge/Prime Development kit

### CUSTOM DEVELOPMENT

BSP Development/OS Porting  
Custom SOM/Carrier Development  
Custom Application/GUI Development  
Design Review and Support

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*\*Optional items not included in the standard deliverables.*

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### Versal AI Edge or Prime SOM

The device can be ordered online from the iWave Website  
<https://www.iwavesystems.com/product/versal-ai-edge-or-prime-som/>  
Or from our Local Partners in your region  
<http://www.iwavesystems.com/about-us/business-partner.html>

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