

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

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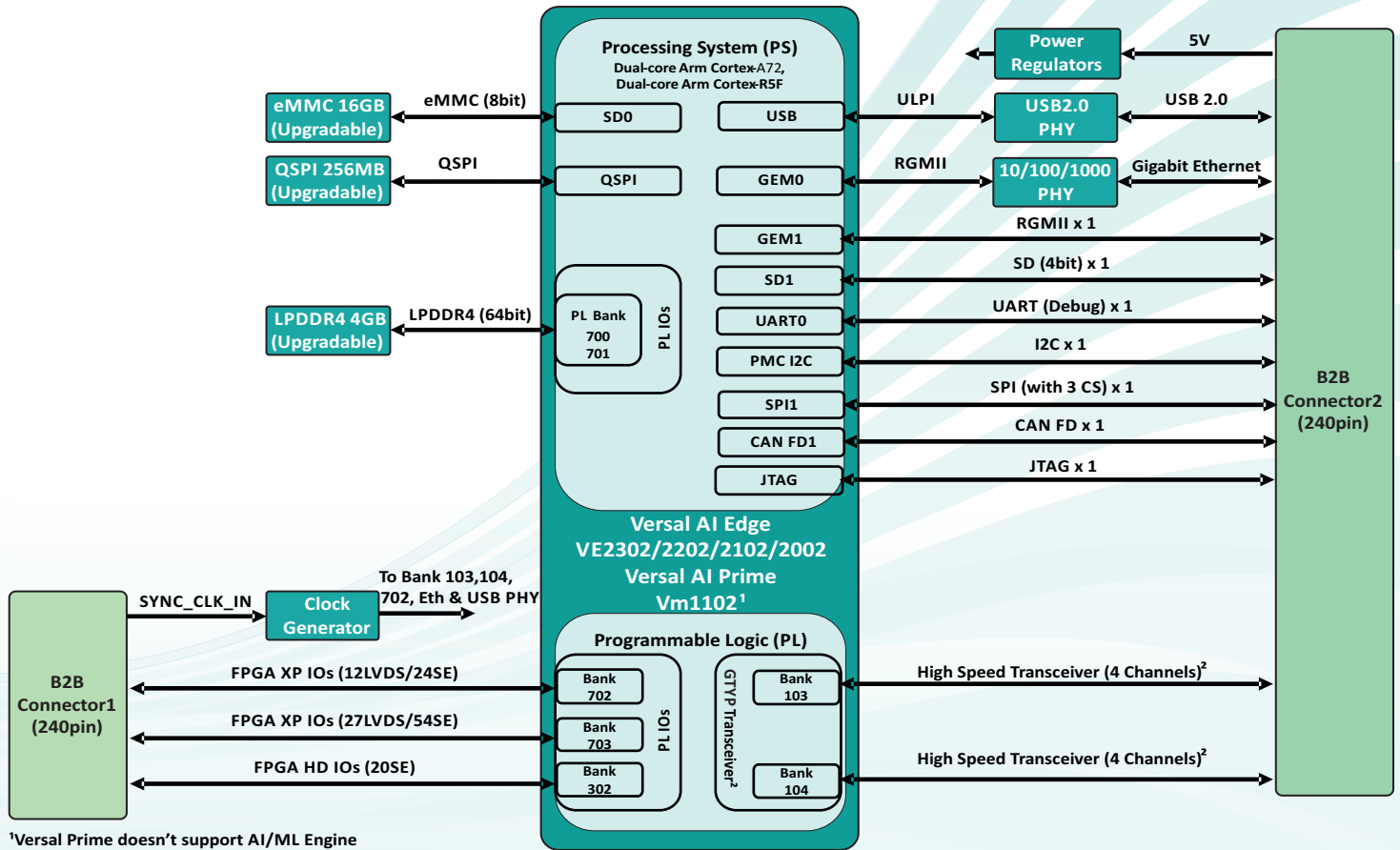
HIGHLIGHTS

- 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

| | |
|---|--------------------------------------|
| On Board Feature | From PS (Processing System) |
| CPU | 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 |
| Memory & Storage | 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) | Operating System |
| On SOM Feature | Linux |
| 10/100/1000 Ethernet PHY Transceiver | Power Supply |
| USB2.0 PHY Transceiver | 5V through Board to Board connector2 |
| FAN Header | Temperature Support |
| Dual Board to Board Connector interfaces | -40°C to +85°C (Industrial grade) |
| From PL (Programmable Logic) | Form Factor |
| GTYP Transceiver x8 upto(32 Gbps) | 50mm x 60mm |
| 39 LVDS Pairs | Environmental Specification |
| 20 SE FPGA IOs | REACH & RoHS3 |

Versal AI Edge/Prime SOM Block Diagram



¹Versal Prime doesn't support AI/ML Engine

²GTP 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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