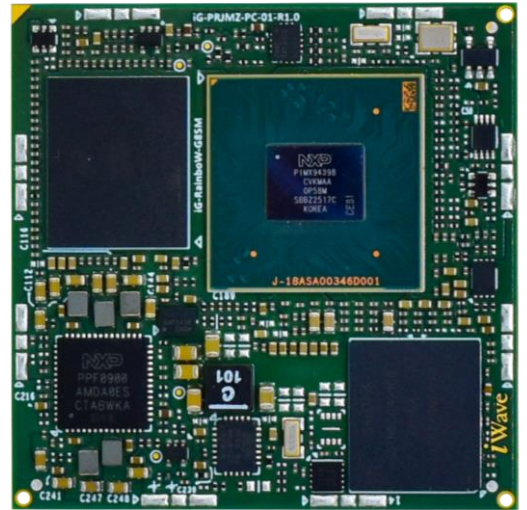


iG-G85M®

i.MX 94 OSM Size-L System on Module

iWave's i.MX 94 OSM Size-L System on Module is a compact, high-performance embedded platform designed for next-generation edge and industrial applications. Based on NXP's i.MX 94 processor family and compliant with the Open Standard Module (OSM) specification, it delivers an optimal balance of performance, power efficiency, and scalability in a solderable LGA form factor.

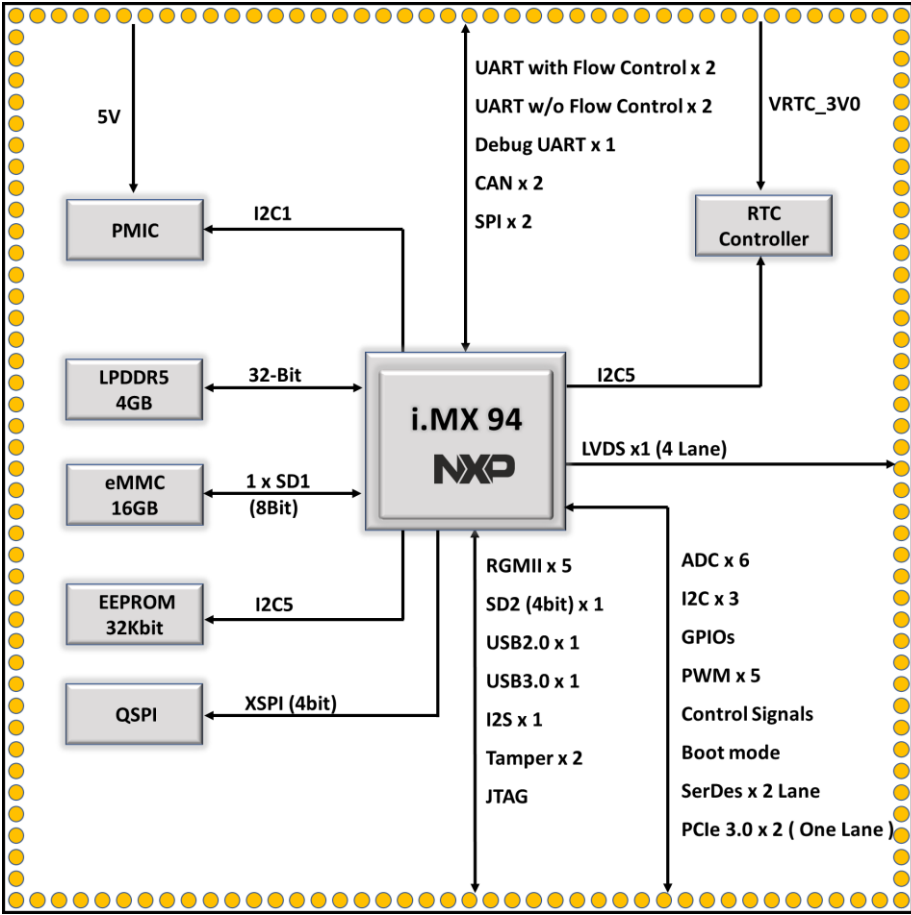
The module integrates multi-core Arm processing, high-speed interfaces, and rich connectivity within a compact 45 mm × 45 mm Size-L footprint. Its standardized OSM architecture enables seamless integration, reduced design complexity, and faster time-to-market for embedded systems.



Highlights

- ❖ i.MX 94 SoC with 4 x ARM Cortex-A55, 2 x ARM Cortex-M7 and 2 x ARM Cortex-M33
- ❖ 4GB LPDDR5(Expandable), 16GB eMMC (Expandable)
- ❖ RGMII x 5, 10G Ethernet x 1, PCIe 3.0 x 2 , LVDS x 1
- ❖ OSM v1.2 Size-L LGA Solderable Module

Block Diagram



Technical Specifications

CPU	4 x Cortex-A55@1.7GHz 1 x M33 core@300MHz 1 x M33 core@333MHz 2 x M7 core@800MHz
Memory & Storage	4GB LPDDR5 16GB eMMC 32Kb EPPROM
OSM LGA Features	5 x RGMII 1 x USB 2.0 1 x USB 3.0 1 x SD (4bit) 2 x SPI 3 x I2C 2 x UART with Flow Control 1 x I2S 2 x UART w/o Flow Control

OSM LGA Features	1 x Debug UART 2 x CAN 2 x PCIe 3.0 1 x LVDS DSI(4 lane) 5 x PWM 1 x JTAG 6 x ADC(ADC x 4 supported through vendor defined pins) - GPIOs
Power Input	5V, 2.5A through OSM LGA
Operating Temp.	-40°C to 85°C (Industrial Grade)
Form Factor	45mm x 45mm (Size L)
OS Support	Linux 6.12.49
Environment Spec.	REACH & RoHS3 Compliant

Product accessories

i.MX 94 OSM based SBC

The i.MX 94 SBC features dual 10/100/1000 Mbps Ethernet ports, a USB 2.0 OTG interface with a micro-AB receptacle, and a USB 3.0 interface via a dual-stack Type-A or USB Type-C connector. It includes a microSD card slot, debug UART and RS232 headers for development and communication, and an M.2 Key-B connector for expansion. The board also supports audio input and output through an I2S codec with a dedicated speaker header, along with a CAN header for automotive and industrial connectivity, and onboard SPI flash for storage.

Thermal Solutions & Enclosure

For any highly integrated OSM Modules, thermal design is very important factor. iWave Supports Heat Sink solution for i.MX94 OSM LGA Module.

Enclosure is essential for a SBC, iWave provides rugged Aluminum and metal enclosure options which keeps the device safe whilst maintaining full access to all the major ports.

Applications

- **Industrial Automation**

Servo drive, Motion Control, PLCs, Industrial Gateways, CNC, Robotics

- **Building Control and Energy**

Building Automation, Energy Meters, EV Charging

- **Automotive**

Automotive Connectivity Domain Controller, Advanced Telematics, Smart Antenna

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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