

# System On Module iW-RainboW-G50M

## i.MX 93 OSM-LF LGA Module



The i.MX 93 SoC based LGA Module is designed as per The Open Standard Module™ specification (OSM). It integrates NXP's i.MX 93 offerings Dual Cortex A55 @ 1.7GHz, NPU with up to 0.5 TOP/s and IEEE 802.11 a/b/g/n/ac/ax Wi Fi + Bluetooth 5.3+ IEEE802.15.4 module.

The i.MX 93 OSM LGA module is aimed to offer for applications mainly focusing on Machine Learning, NPU and vision system, advanced multimedia and industrial automation with high reliability.

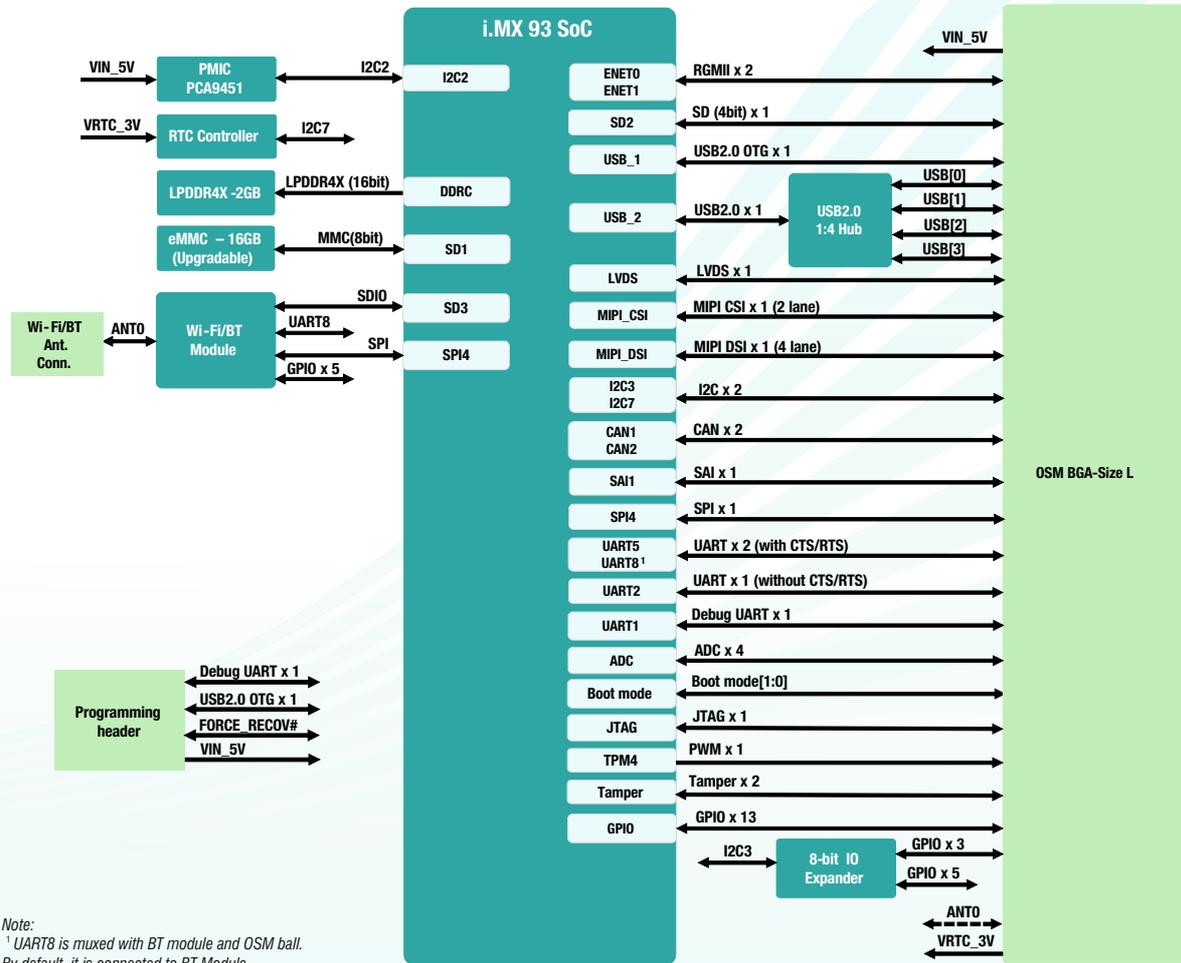
### iW-RainboW-G50M HIGHLIGHTS

- i.MX 93 Dual with 64-bit ARM v8.2-A architecture
- NPU with up to 0.5 TOP/s Neural Network performance
- Up to 2GB LPDDR4X Memory
- IEEE 802.11a/b/g/n/ac/ax+ Bluetooth 5.3+ IEEE802.15.4
- OSM v1.1 Size-LF LGA Module with 45mm x 45mm form factor
- 10+ years of Product Longevity Program

### SPECIFICATIONS

<b>SoC</b>	MIPI_CSI (2 lane) x 1
<b>i.MX 9352:</b> 2x Cortex®-A55, NPU, MIPI DSI, LVDS, MIPI CSI, Parallel camera, Parallel display, 2x Ethernet, 2x USB 2.0, 7x I2S TDM	MIPI_DSI (4 lane) x 1
<b>i.MX 9351:</b> 1x Cortex-A55, NPU, MIPI DSI, LVDS, MIPI CSI, Parallel camera, Parallel display, 2x Ethernet, 2x USB 2.0, 7x I2S TDM	CAN x 2
<b>i.MX 9332:</b> 2x Cortex®-A55, MIPI DSI, LVDS, MIPI CSI, Parallel camera, Parallel display, 2x Ethernet, 2x USB 2.0, 7x I2S TDM	UART with Flow Control x 2 (1 is optional)
<b>i.MX 9331:</b> 1x Cortex®-A55, MIPI DSI, LVDS, MIPI CSI, Parallel camera, Parallel display, 2x Ethernet, 2x USB 2.0, 7x I2S TDM	UART without Flow Control x 1
<b>Memory &amp; Storage</b>	Debug UART x 1
LPDDR4X -2GB	I2S x 1
eMMC Flash - 8GB (Expandable)	SPI x 1
<b>Other</b>	I2C x 2
IEEE 802.11a/b/g/n/ac/ax+ Bluetooth 5.3+ IEEE802.15.4	PWM x 1
<b>OSM LGA Features</b>	JTAG x 1
RGMI x 2	GPIOs
SD(4bit) x 1	ADC x 4 (2 through Vendor defined pins)
USB 2.0 OTG x 1	Tamper x 2 (through Vendor defined pins)
USB 2.0 HOST x 4	<b>OS Support</b>
LVDS x 1	Linux 5.4.7 (or higher)
	<b>General Features</b>
	<b>Power Input</b>
	5V, 2.5A through OSM LGA
	<b>Form Factor</b>
	45mm x 45mm (Size LF)
	<b>Operating Temperature</b>
	-40°C to +85°C (Industrial)
	<b>Environment Specification</b>
	REACH & RoHS3 Compliant

### i.MX 93 OSM LGA Module Block Diagram



#### OS SUPPORT

Linux 5.4.7 (or higher)

#### DELIVERABLES

i.MX 93 OSM Module  
Board Support Package  
User Manual

#### OPTIONAL KITS/Modules

i.MX 93 OSM Development Kit  
Heat Sink  
Camera Module

#### CUSTOM DEVELOPMENT

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

iWave Systems Technologies is an ISO 9001:2015 certified company, head quartered in Bangalore India established in the year 1999. The company focuses on providing embedded solution and services for Industrial, Medical, Automotive and various other Embedded Computing applications. iWave Systems offers wide range of System On Modules and Single Board Computers built using wide range of CPU and FPGA SoC platforms with different form factors such as Qseven, SMARC, SODIMM and HPC by closely working with Tier-1 silicon companies such as NXP, Xilinx, Intel etc.

iWave Systems offers various state of art ready ODM solutions such as Connected Telematic Control Unit / OBD II devices for the automotive edge analytics, Comprehensive ARINC818 solutions for the low latency Aerospace applications and Rugged IP rated performance scalable HMI solutions for Industrial applications.

iWave Systems also provides comprehensive Engineering design services involving Embedded Hardware, FPGA and Software development. iWave offers carrier board and custom hardware development with manufacturing and certification services. iWave's Hardware expertise spans complex board design up to 30 layers; Analog, Digital & RF Designs; FPGA Development up to 3+ million gates and VHDL / Verilog RTL Development & Verification. Our Software expertise ranges from OS Porting, Firmware & Device Drivers Development and Wireless & Protocol Stacks.

\*Optional items not included in the standard deliverables.

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#### i.MX 93 OSM LGA Module

The device can be ordered online from the iWave Website  
<https://www.iwavesystems.com/product/i-mx-93-osm-lf-lga-module/>  
Or from our Local Partners in your region  
<http://www.iwavesystems.com/about-us/business-partner.html>

#### INDIA

iWave Systems Technologies Pvt Ltd.  
#7/B, 29th Main, BTM Layout  
2nd Stage,  
Bangalore - 560 076  
mktg@iwavesystems.com

#### JAPAN

iWave Japan Inc.  
8F Kannai Sumiyoshi Building,  
3-29 Sumiyoshi-cho, Naka -ku,  
Yokohama Kanagawa, Japan  
mktg@iwavesystems.com

#### EUROPE

International Sales & Marketing Europe  
Venkelbaan 55 2908KE Capelle  
aan den IJssel,  
The Netherlands  
info@iwavesystems.eu

#### USA

iWave USA  
1692 Westmont Ave. Campbell  
Ca95008  
USA  
info@iwavesystems.us