



# System On Module iW-RainboW-G61D

## i.MX 95 SMARC Development Board



The i.MX 95 SMARC Development Platform incorporates i.MX 95 SoC based SMARC SOM and SMARC Carrier board for complete validation of i.MX 95 SoC functionality. The Development board can be used for quick prototyping of various applications targeted by the i.MX 95 Applications Processor. With the 120mmx120mm Nano ITX size, SMARC Carrier board is highly packed with all the necessary on-board connectors to validate the features of i.MX 95 SMARC SOM.

**APPLICATION:** Applications focusing on Machine Learning and Artificial Intelligence, NPU & Vision System, advanced multimedia and industrial automation, Vision and advanced sensing, Factory Automation, Machine Vision and more.

### iW-RainboW-G61D

#### HIGHLIGHTS

i.MX 95 offerings, 6x Arm Cortex A55 @ 1.8GHz,  
1x Arm Cortex-M33, 1x Arm Cortex-M7

NPU with up to 2.0 TOP/s Neural Network performance

IEEE 802.11 a/b/g/n/ac/ax+ Bluetooth 5.3 module

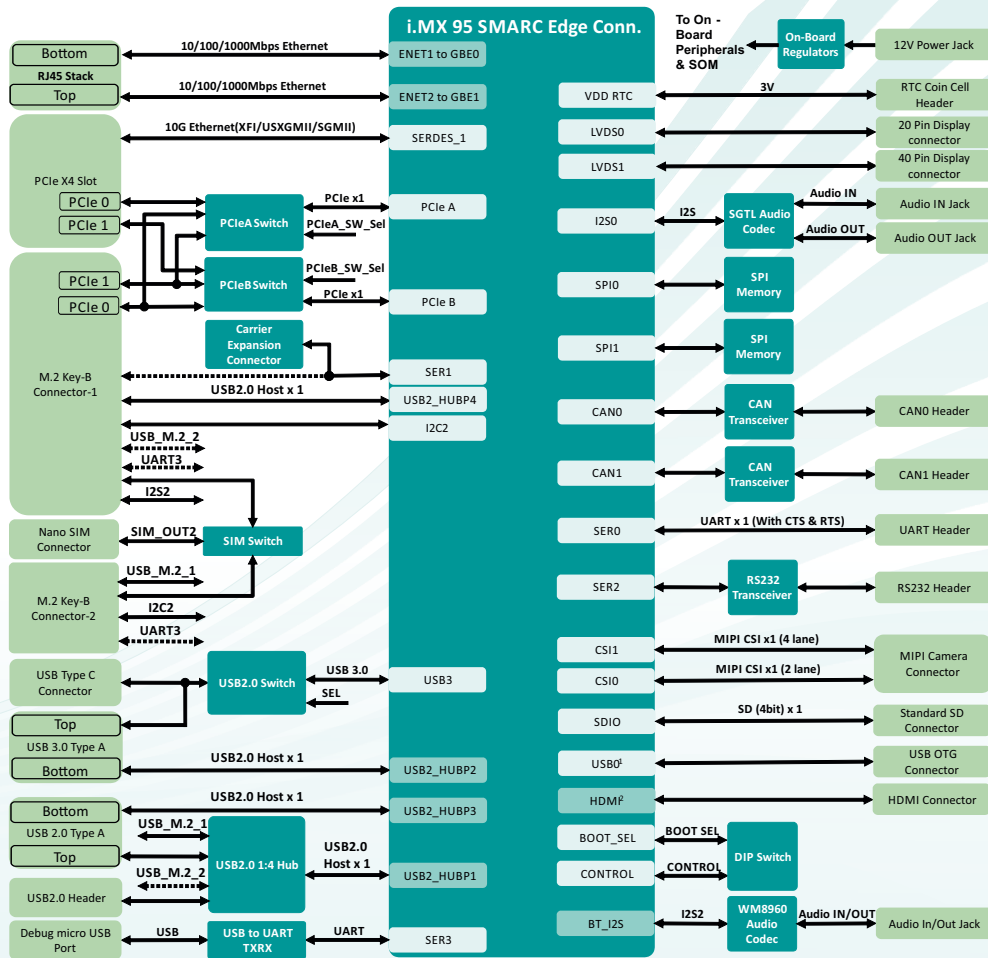
Dual 1000/100/10 Mbps Ethernet

10+ years of Product Longevity Program

#### SPECIFICATIONS

<b>SoC</b>	
<b>i.MX 95:</b> 6x Arm Cortex A55, 1x Arm Cortex-M33, 1x Arm Cortex-M7, NPU, VPU, GPU, ISP	
Up to 16GB LPDDR5 Memory	
eMMC Flash - 16GB (Expandable)	
EEPROM	
QSPI Flash - 16Mb	
Gigabit Ethernet PHY Transceiver x 2	
IEEE 802.11 a/b/g/n/ac/ax+ Bluetooth 5.3	
USB2.0 1:4 Hub	
RTC Controller	
TPM2.0 (Optional)	
Debug UART header (Optional)	
MIPI DSI to HDMI Controller (Optional)	
JTAG Header (Optional)	
Temperature Sensor (Optional)	
<b>SMARC Carrier Board</b>	
Gigabit Ethernet Jack- 2 Port	
10G Ethernet x 1 Port (Optional)	
M.2 PCIe connector -1 Port (1 lane PCIe)	
PCIe X 4 connector -1 Port (1 lane PCIe)	
USB 2.0 Host Type-A x 2	
USB 3.0 Host Type-A/ Type-C OTG	
USB 2.0 OTG Type microAB x 1(Optional)	
Standard SD x1	
HDMI-Type A Connector (Optional)	
20pin LVDS Connector	
40pin LVDS Connector	
MIPI CSI Camera Connector	
Audio In & Out Jack through I2S Codec x 2	
Full Function UART Header x 1	
Full Function RS232 Header x 1	
RTC with a backup battery	
CAN Header x 2	
Debug UART through Micro USB Port	
<b>OS Support</b>	
Linux 6.1.55	
<b>Power Input</b>	
12V, 2A DC	
<b>Form Factor</b>	
120mmx120mm Nano ITX Size	
<b>Operating Temperature</b>	
0°C to +60°C	

## i.MX 95 SMARC Development Board Block Diagram



Note: 1. USB0 is optional in SOM. USB3 cannot be supported incase of providing support for USB0.  
2. HDMI is an optional feature of SOM.

### OS SUPPORT

Linux 6.1.55

### DELIVERABLES

i.MX 95 SMARC Module  
Board Support Package  
User Manual

### OPTIONAL KITS/Modules

i.MX 95 SMARC SMARC Development Kit  
Heat Sink

### 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.

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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 95 SMARC Development Board

The device can be ordered online from the iWave Website

<https://www.iwavesystems.com/product/i-mx-95-smarc-system-on-module/>  
Or from our Local Partners in your region

<http://www.iwavesystems.com/about-us/business-partner.html>

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