

System On Module iW-RainboW-G34M i.MX8M Mini/Nano Q/QL/D/DL/S/SL **SODIMM Module**



The i.MX8M Mini Q/QL/D/DL/S/SL SODIMM System On Module featuring the NXP i.MX8M, will be the new addition to iWave's i.MX8M SOM portfolio. The i.MX8M Mini/Nano SODIMM System On Module integrates that Quad Cortex A53 @ upto 1.8 GHz, 1080p60 H.265, H.264, VP8, VP9 Decode, 1080p60 H.264, VP8 Encode. MIPI-DSI (4-lane) display interface and MIPI-CSI (4-lane) camera interface USB2.0, PCIe interface with on SOM 10/100/1000 Mbps Ethernet PHY and 802.11n Wi-Fi & BLE5.0 module. The i.MX8M Mini SODIMM System On Module is aimed to offer applications such as Digital Signage, Industrial HMI, Home Automation, Audio/Video Streaming devices and General Embedded applications.

iW-RainboW-G34M HIGHLIGHTS

Quad Cortex-A53 @ upto 1.8 GHz

Dual/Quad Cortex-M4F @ 400 MHZ

64-bit Armv8-A architecture

H.265, H.264 Video Decode

H.264, VP8 Video Encode

2D and 3D Graphics Processing Unit

Wi-Fi 802.11a/b/g/n/ac + BLE v5.0

Dual 1000/100/10 Mbps Ethernet

SPECIFICATIONS

SOC:
NXP i.MX8M Mini/Nano Q/QL/D/DL/S/SL
Upto 4 X Cortex-A53 & 1 X Cortex-M4F
PMIC:
BD71847MWV
Memory:
1GB LPDDR4 (Expandable)
8GB eMMC Flash (Expandable)
2MB QSPI Flash (Optional)
Micro SD slot
Communication:
Wi-Fi 802.11a/b/g/n/ac + BLE v5.0
Gigabit Ethernet PHY Transceivers x 1
PCIe to Gigabit Ethernet PHY Transceivers x 1
(Optional)
SODIMM Edge Connector Interfaces:
Gigabit Ethernet x 2 Port (One is optional)
PCle x 1 Port
USB2.0 OTG x 2 Ports
SD (4bit) x 1 Port
SAI/I2S (Audio Interface) x 1 Port

Debug UART

Data UART (with CTS & RTS) x 2 Port (One is optional)
Data UART (without CTS & RTS) x 1 Port
SPI x 3 Ports
I2C x 2 Ports
PWM x 2 Ports
JTAG
MIPI DSI 4 lane x 1 Channel
MIPI CSI 4 lane x 1 Channel
SPDIF x 1 Port
GPIOs
Power Supply:
3.3V, 4A Input from SODIMM Edge Connector
Form Factor:
67.6mm X 37mm
Temperature support:
Industrial,Commercial: -40°C to +85°C
OS Support:
Linux 4.14.98, Android Pie 9.0.0
REACH & RoHS2 Complaint





i.MX8M Mini SODIMM SOM Block Diagram



Note:

1. UART1 is shared between SODIMM Edge connector and Bluetooth Module, by default it will be connected to Bluetooth Module

- 2. uSDHC1 is shared between Wi-Fi module and micro SD connector, by default it will be connected to Wi-Fi Module.
- 3. SAI5 is connected to SODIMM Edge connector and Bluetooth Audio, by default it will be connected to SODIMM Edge.
- 1. Not supported in i.MX8M Nano

OS SUPPORT Linux 4.14.98 Android Pie 9.0.0

DELIVERABLES

i.MX8M Mini SODIMM Module Board Support Package User Manual

OPTIONAL KITS/Modules

i.MX8M Mini Development Kit Touch Display 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, established in 1999, focuses on Product Engineering Services involving Embedded Hardware, Software & FPGA. The company designs and develops cutting edge products and solutions. iWave has been an innovator in the development of highly integrated, high performance, low power and low cost System On Modules and Development Platforms. iWave's expertise has brought out multiple SOMs based on ARM NXP, Intel Atom, Marvell and TI Processors.

iWave System has won the confidence of its customers over the years by being a reliable partner in developing innovative products. Our engineers combine outstanding System design experience to deliver Quality Solutions. iWave specializes across Industrial, Automotive and Medical domains. We support our customers by being time efficient, which in turn helps our customers accelerate time to market their products. iWave is a Windows embedded Silver partner and a winner of the Partner Excellence Award.

*Optional items not included in the standard deliverables.

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i.MX8M Mini SODIMM Module

The device can be ordered online from the iWave Website http://www.iwavesystems.com/webforms Or from our Local Partners in your region http://www.iwavesystems.com/about-us/business-partner.html

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