

System On Module iW-RainboW-G27M

i.MX 8 QM/QP Qseven Module

The i.MX 8 QM/QP(QuadMax/QuadPlus) Qseven System On Module integrates Cortex A72, Cortex A53 & Cortex-M4F Cores, Dual GPU systems, 4K H.265 capable VPU and dual failover-ready display controllers based i.MX 8 QM/QP SoC with on SOM 1000/100/10 Mbps Ethernet PHY, USB 3.0 HUB and IEEE 802.11 a/b/g/n/ac/ax Wi-Fi & BT 5.0 module. The i.MX 8 QM/QP Qseven System On Module is aimed to offer maximum performance with higher efficiency for complex embedded application of consumer, medical and industrial embedded



iW-RainboW-G27M HIGHLIGHTS

- i.MX 8 QM/QP SoC with 64-bit ARMv8 Architecture
- Multi-OS Platform Support
- 10+ years of Product Longevity Program
- IEEE 802.11a/b/g/n/ac/ax Wi-Fi & Bluetooth 5.2
- 1000/100/10 Mbps Ethernet
- Qseven v2.1 Compatible SOM

APPLICATIONS:

Intelligent Industrial Control Systems, Industrial Human-Machine interface, Ultra-portable Devices, Home Energy Management Systems, Portable Medical Devices, 4k Digital Signage, Media streaming, Augmented & Virtual Reality, Home Automation & Entertainment, Drones, Secure POS and Video and analytics.

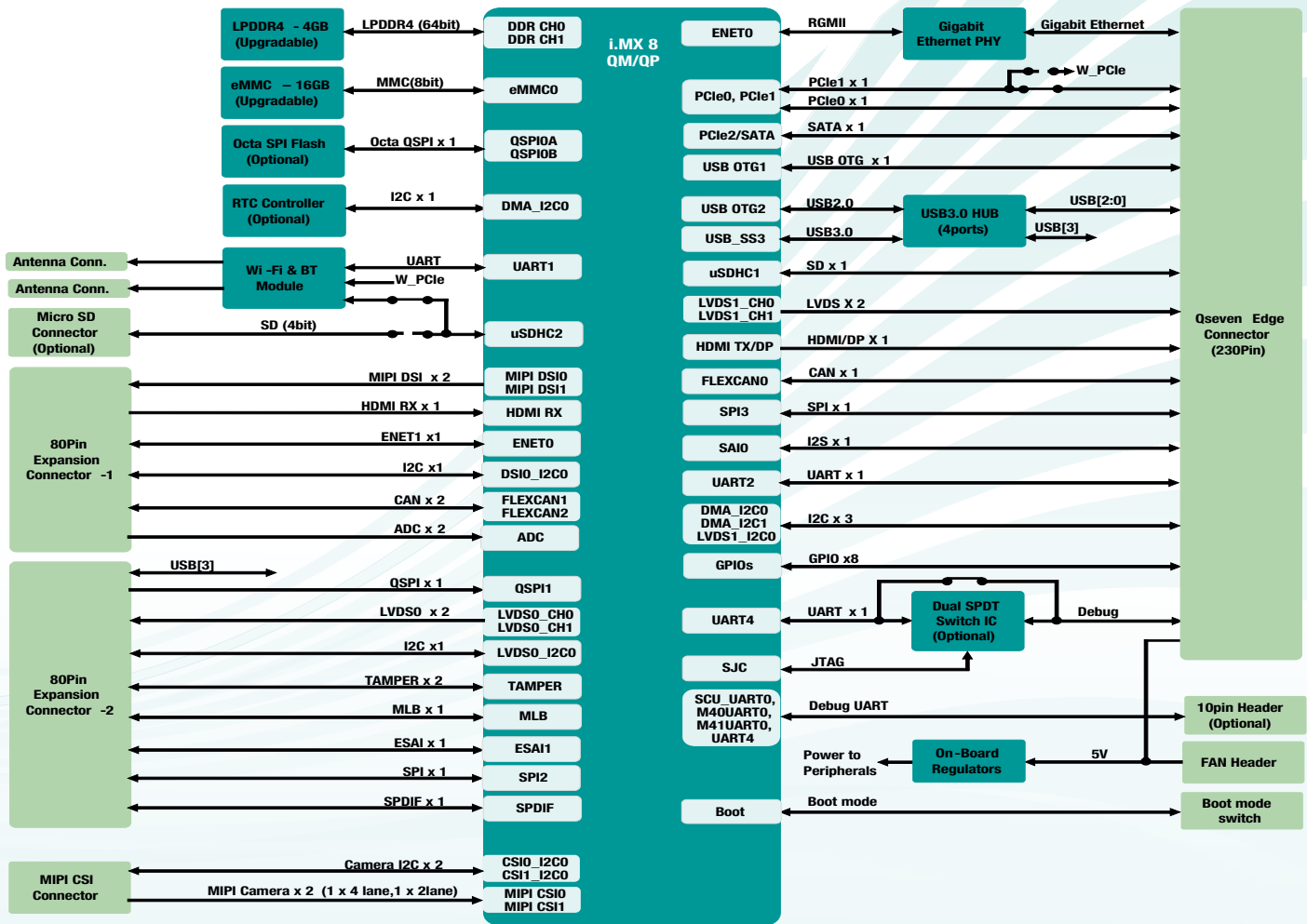
SPECIFICATIONS

Processor	DMA I2C x 1
i.MX 8 QuadMax: 2 X Cortex-A72, 4 x Cortex-A53 & 2 x Cortex-M4F	JTAG/Debug UART x 1
i.MX 8 QuadPlus: 1 X Cortex-A72, 4 x Cortex-A53 & 2 x Cortex-M4F	GPIO's
Memory & storage	Expansion Connector-1
LPDDR4 - 4GB (Expandable) ¹	MIPI - DSI x 2
eMMC Flash - 16GB(Expandable) ¹	HDMI RX
Octa QSPI Flash (Optional)	ENET1 x 1
Micro SD Slot (Optional)	I2C x 1
Other	CAN x 2
RTC Controller (Optional)	ADC x 2
FAN Connector	PWM x 1(optional)
UART Header (Optional)	GPIO's
Camera Connector	Expansion Connector-2
MIPI-CSI x 2 (1x4 Lane, 1x2 Lane)	LVDS x 2
CSI-I2C x 2	USB Host 3.0 X 1
Qseven Edge Connector:	QSPI x 1
PCIe Gen 3.0 x 2	I2C x 1
SATA 3.0 x 1	TAMPER x 2
USB Host 3.0 x 3	MLB x 1
USB Host 2.0 x 3	ESAI x 1
USB OTG 2.0	SPI x 1
Gigabit Ethernet	SPDIF x 1
LVDS x 2	Operating Temperature
SDIO	-40°C to +85°C (Industrial)
HDMI/DP	0°C to +70°C (Commercial)
SPI	Board Form Factor
I2S	Qseven v2.1 Compatible
CAN	Power Input :
Data UART	5V, 5A
PWM x 3	Operating System
	Linux 5.10.52, Android Pie 9

Note:

1.Contact iWave for Memory expansion support.

i.MX 8 QM/QP Qseven SOM Block Diagram



OS SUPPORT

Linux 5.10.52
Android Pie 9

DELIVERABLES

i.MX 8 QM/QP Qseven Module
Board Support Package
User Manual

OPTIONAL KITS/Modules

i.MX 8 QM/QP Development Kit
7" Cap 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 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.*

Note: iWave reserves the right to change these specifications without notice as part of iWave's continuous effort to meet the best in breed specification. The registered trademarks are proprietary of their respective owners.

i.MX 8 QuadMax Qseven Module

The device can be ordered online from the iWave Website
<https://www.iwavesystems.com/product/i-mx-8-qm-qp-qseven-som/>
Or from our Local Partners in your region
<http://www.iwavesystems.com/about-us/business-partner.html>

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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