

# System On Module RainboW-G15M-Q7 Qseven Compatible i.MX6 Module



iWave Systems launching high performance Qseven SOM module based on Freescale's i.MX6 ARM Cortex-A9 processor for faster and multimedia focused applications. With extreme peripheral integration, the CPU supports industry latest high-performance interfaces, such as PCIe Gen2, Gigabit Ethernet, SATA 3.0, HDMI 1.4, SDXC, MIPI CSI/DSI and 64-Bit DDR3 interfaces.

The module is compatible to Qseven R1.20 ARM specification and features 1GHz ARM Cortex A9 Dual or Quad core CPU, on-board 1GB DDR3 RAM, eMMC Flash, Micro SD slot and JTAG headers.

**APPLICATIONS :** Industrial HMI, Automotive IVI, Video & Navigation, Graphical Instrument Clusters, Portable Medical Devices, Intelligent Industrial Control Systems and Home Energy Management Systems

## iW-RainboW-G15M-Q7 HIGHLIGHTS

ARM Cortex A9@ 1GHz Dual/Quad core

64-bit DDR3-1066 support

OpenGL® ES 2.0 3D, OpenVG™  
1.1 graphics accelerators

Multi format HD1080p HW decode and encode

Four simultaneous display support

Integrated high bandwidth connectivity peripherals

Industry latest HDMI1.4, SDXC, MIPI CSI/DSI interfaces

Technical & quick customization support

5+ years, Long term support

## SPECIFICATIONS

### CPU

i.MX6 1GHz/800MHz Cortex A9 Q/D/U/S

### Memory

512MB/1GB DDR3 SDRAM [Expandable]<sup>+</sup>

4GB eMMC Flash

Optional SPI Flash\*

On-board Micro SD Slot\*\*

### Qseven Edge Connector

PCIe v2.0 x 1 lane

HDMI 1.4

SATA 3.0 x 1

Gigabit Ethernet

Dual LVDS

USB2.0 Host x4

USB2.0 Device

AC97 Audio

8-bit SD/MMC

CAN1

SPI, I2C

UART

PWM

### Expansion Connector\*\*

Camera CSIx2 (8-bit)

MIPI CSI, DSI

24-Bit RGB LCD IF

Dual UART

4x4 Key, Memory Bus

ESAI, SPDIF

MLB, CAN2

I2C2, PWM, GPIO

### Temperature

-40°C to 85°C

### Board Form Factor

Qseven R1.20 Compatible

### Power Input

5V, 1A Typical

### Operating Systems

Linux 3.0.35

Android 4.0.4

WEC7\*

### Debug Support

Onboard JTAG Header\*\*

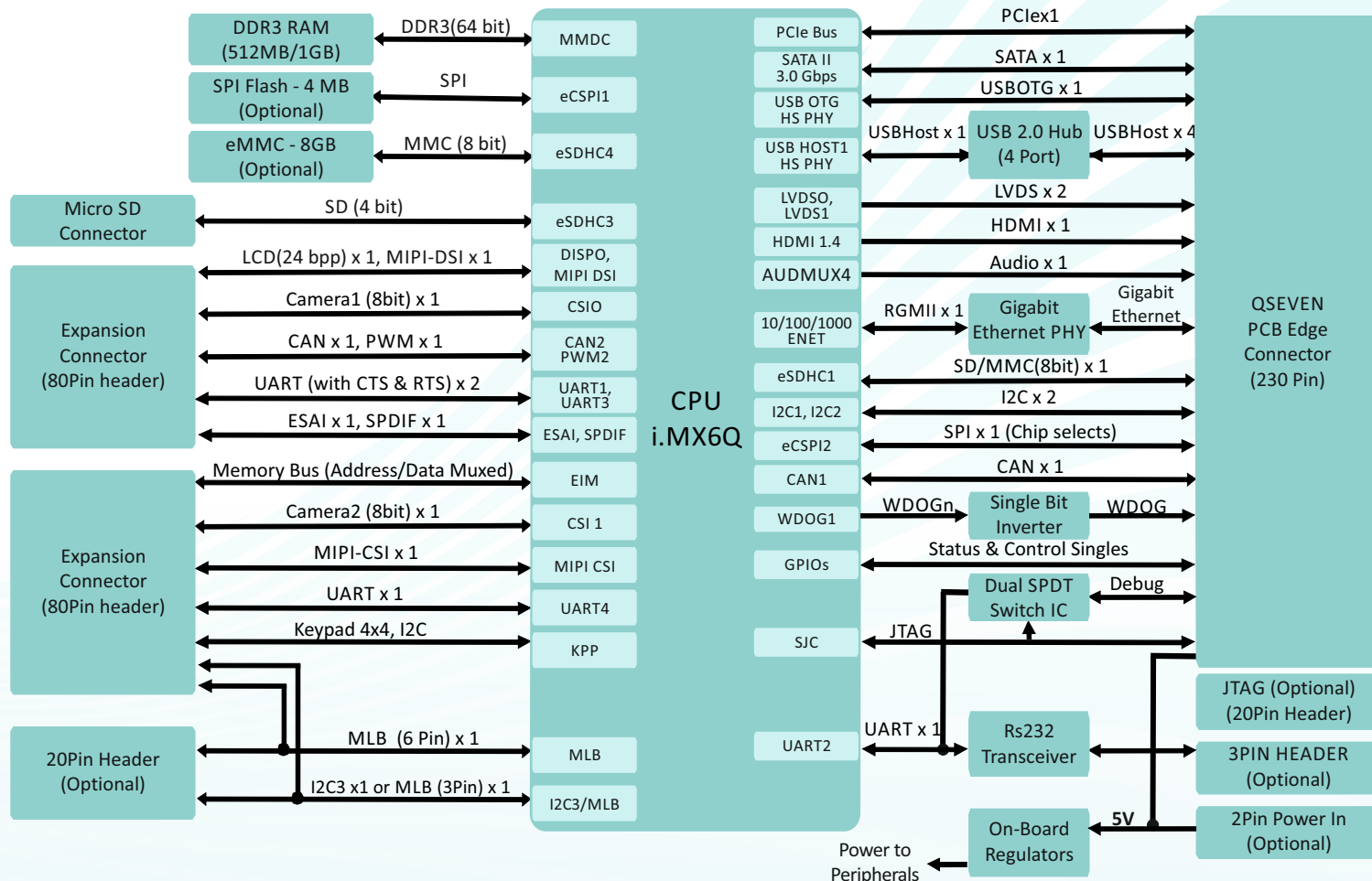
<sup>+</sup> 512MB DDR3 supported for i.MX6 Solo SOMs and for other CPU configurations 1GB DDR3 is supported

\*Optional features not supported by default

\*\* Not populated in mass production SOM

Note: device drivers provided are for specific interface chipsets which are used in iWave's carrier board

## i.MX6 Qseven MODULE BLOCK DIAGRAM



### OS SUPPORT

Linux 3.0.35  
Android 4.0.4  
WEC7\*

\* Optional

### DELIVERABLES

i.MX6 Qseven SOM Module  
Board Support Packages  
User Manual

### OPTIONAL KITS

RainboW-G15D-Q7  
(i.MX6 Development Kit)

### 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, Freescale, Intel Atom, Marvell and TI Processors.

iWave Systems 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.

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

\*Optional items not included in the standard deliverables

### Ordering the i.MX6 Qseven Module

The SOM Module can be ordered online from the iWave Website  
<http://www.iwavesystems.com/webforms>

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