

## Development Platform iW-RainboW-G15D-Q7 i.MX6 Qseven Development Kit



The Development Platform incorporates Qseven compatible i.MX6 SOM which is based on Freescale's i.MX6 Series multimedia focused processor and Generic Qseven compatible Development Board. This platform can be used for quick prototyping of any high end applications in verticals like Automotive, Industrial & Medical. Being a nano ITX form factor with 120mmx120mm size, the board is highly packed with all necessary onboard connectors to validate complete i.MX6 CPU features.

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

### iW-RainboW-G15D-Q7 HIGHLIGHTS

Ideal for Quick Proof of concept (POC) development.

Shortens 60% of the new product development life cycle

Quick customization services in a very shorter period

### SPECIFICATIONS

#### i.MX6 CPU Module:

i.MX6 Quad/Dual/Dual Lite/Solo  
ARM@Cortex™-A9 core @1GHz/800MHz

#### RAM

1GB DDR3 for Q/D/DL (Expandable up to 4GB\*)  
512MB DDR3 for Solo (Expandable up to 2GB\*)

#### Storage

4GB eMMC Flash (Expandable\*)  
2MB SPI Flash (Expandable\*)  
On-board Micro SD Slot

#### Carrier Board:

##### Storage

SATA 3.0 - 1Port  
Standard SD/MMC or  
On -board WiFi(WYSAAVDX7) -1 Port\*

##### Communication Interfaces

Gigabit Ethernet - 1 Port  
USB 2.0 Host - 2 Ports  
USB 2.0 OTG - 1 Port  
USB Debug Port (Serial to USB conversion)  
UART - 2 Ports  
4 Wire Resistive Touch Connector\*  
CAN - 2 Ports

PCIe x 1 Slot  
Mini PCIe Slot\*

- PCIe Interface
- USB Host Interface
- SIM Interface
- SMB Interface

**OS:** Linux 4.1.15, Android Nougat 7.1.1

#### Sensors

3-Axis Accelerometer  
Digital e-Compass  
Ambient Light Sensor  
Altimeter/Barometer  
**Audio and Video**  
AC'97 codec- Audio IN/OUT Jacks  
TV-IN RCA Jack (NTSC/PAL Input)\*  
Parallel Camera ZIF Connector- CSI1 (8Bit)  
MIPI Camera Connector  
LVDS1 - 7" 800x480 Display with Capacitive TP  
Backlight PWM Control  
HDMI v1.4 - Port  
LVDS 2 Connector

#### On-Board Headers

10 Pin JTAG Header\*  
SPI Header  
4x4 Keypad Interface Header  
RTC Coin Cell Holder

#### 120 Pin Expansion Connector Interface

24bpp RGB LCDIF  
ESAI  
MIPI-DSI  
MIPI-CSI  
CSI2 (8 Bit)  
Memory Interface (Address/Data Muxed)  
MLB (Supported only in Automotive CPU)

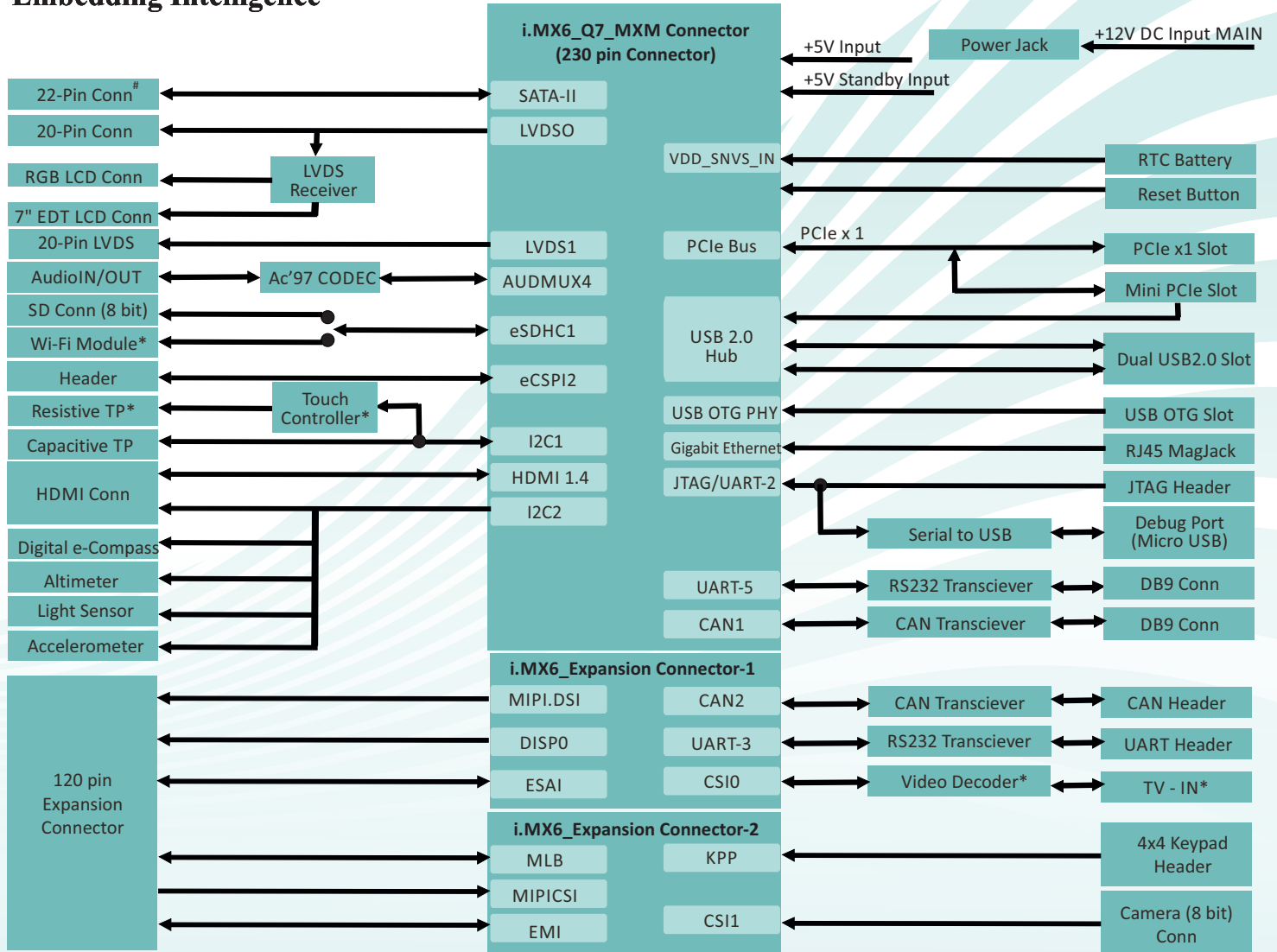
**Operating Temperature:** 0 to 50°C

**Form Factor:** Nano ITX 120mmx120mm

**Power Input:** 12V @2A DC Input

\*Optional items are not included in the standard deliverables

## i.MX6 Qseven DEVELOPMENT BOARD BLOCK DIAGRAM



<sup>#</sup>Support available only for i.MX6 Quad and Dual CPUs

### OS SUPPORT

Linux 4.1.15  
Android Nougat 7.1.1

### DELIVERABLES

iW-RainboW-G15D-Q7 Platform  
Board Support Packages  
Power Adapter  
User Manual

### OPTIONAL ADD ON MODULES

Camera Add On Module  
24BPP LCD Add On Module  
Wi-Fi Add On Module  
3G and GPS Add On Module

### CUSTOM DEVELOPMENT

Custom SOM/ Carrier Card Development  
BSP Development/ OS Porting  
Design Review & 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.

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### Ordering the i.MX6 Qseven Development Board

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

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