iWave
Embedding Intelligence

Development Platform RainboW-G7D

Q7 Generic Carrier Board

SPECIFICATIONS

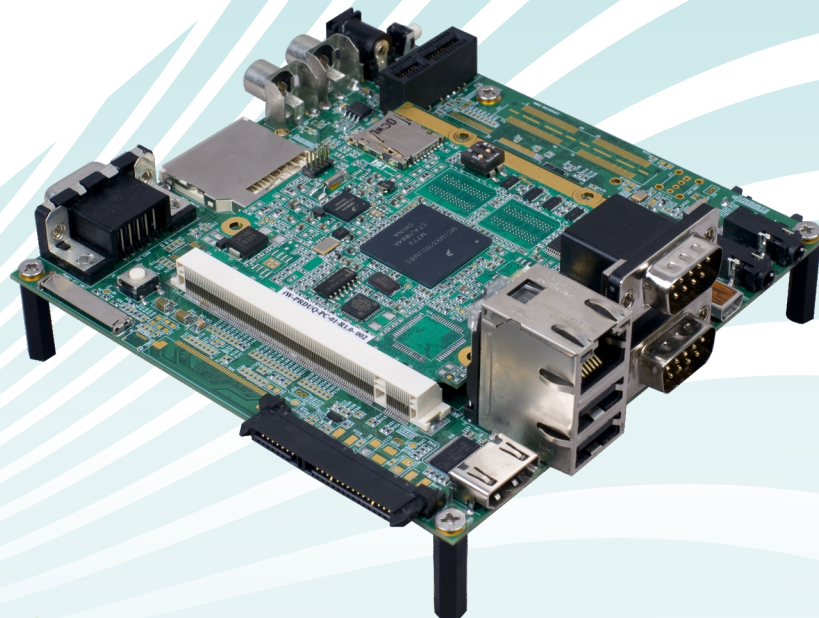| Display |
|---|
| 7" 800x480 TFT LCD |
| VGA Port/ TV Out |
| HDMI Port * |
| LVDS Display connector* |
| **Touch Panel** |
| Resistive Touch |
| Capacitive touch* |
| **Video Input** |
| Camera Interface* |
| TV IN* |
| **Audio** |
| External Audio Codec |
| Headphone/ Mic Jacks |
| **PCIe** |
| PCIe Mini Card* |
| PCIex1 Port * |
| **USB** |
| USB2.0 Device - Mini AB connector |
| USB2.0 Host 2 ports – Type A Connector |
| **Serial** |
| UART- DB9 connector |
| **Storage** |
| SATA Port1 – 7P Connector* |
| SATA Port2 - 22P Connector* |
| Standard SD Slot |
| **Communication** |
| 10/100Mbps Ethernet - RJ45 Jack |
| 802.11b/g/n Wi-Fi Module* |
| CAN Port - DB9 connector* |
| **Power** |
| 12V DC Input |
| On-board RTC coin Battery |
| **Form Factor** |
| 120mm x 120mm – Nano ITX |
| **Temperature supported** |
| 0 to 60°C |

* Optional

iW-RainboW-G7D is a generic Q7 Carrier board targeted for quick validation of high performance Q7 R1.20 compatible CPU modules. This board has rich set of features including Video IN/ OUT, Audio, Wired/ Wireless communication, PCIe, USB and various serial communication ports. Being a nano ITX form factor with120mmx120mm size, the board is highly packed with all necessary onboard connectors to validate complete Q7 supported features.
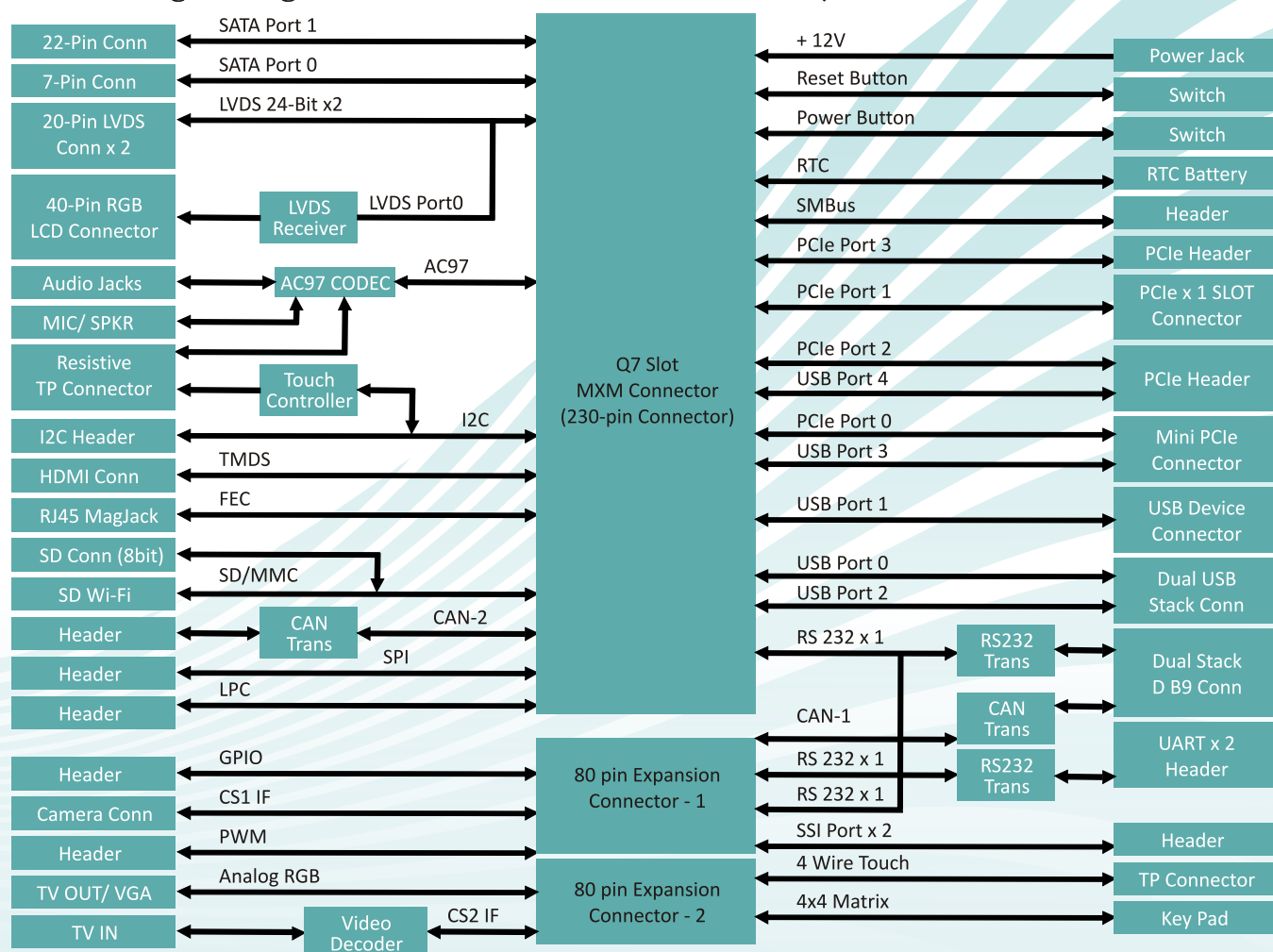
iW-RainboW-G7D HIGHLIGHTS

- Ideal for quick development
- Shortens product development life cycle
- Quick customization can be done in a very shorter period
- Suitable for validation of any R1.20 Q7 compatiable module

APPLICATIONS :

Industrial/ Medical, Green Energy Controller, Panel PC, Industrial appliance Control, Medical HMI, High-end PDAs, Secure Devices, Automotive In Vehicle Infotainment Systems, Kiosks, POS, General Embedded.

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Q7 Carrier Board BLOCK DIAGRAM

Left side blocks and connections:

Block	Signal
22-Pin Conn	SATA Port 1
7-Pin Conn	SATA Port 0
20-Pin LVDS Conn x 2	LVDS 24-Bit x2
40-Pin RGB LCD Connector	LVDS Receiver — LVDS Port0
Audio Jacks	AC97 CODEC — AC97
MIC/ SPKR	
Resistive TP Connector	Touch Controller
I2C Header	I2C
HDMI Conn	TMDS
RJ45 MagJack	FEC
SD Conn (8bit)	SD/MMC
SD Wi-Fi	
Header	CAN Trans — CAN-2
Header	SPI
Header	LPC
Header	GPIO
Camera Conn	CS1 IF
Header	PWM
TV OUT/ VGA	Analog RGB
TV IN	Video Decoder — CS2 IF

Center: **Q7 Slot MXM Connector (230-pin Connector)**

80 pin Expansion Connector - 1
80 pin Expansion Connector - 2

Right side blocks and connections:

Signal	Block
+ 12V	Power Jack
Reset Button	Switch
Power Button	Switch
RTC	RTC Battery
SMBus	Header
PCIe Port 3	PCIe Header
PCIe Port 1	PCIe x 1 SLOT Connector
PCIe Port 2 / USB Port 4	PCIe Header
PCIe Port 0 / USB Port 3	Mini PCIe Connector
USB Port 1	USB Device Connector
USB Port 0 / USB Port 2	Dual USB Stack Conn
RS 232 x 1	RS232 Trans — Dual Stack D B9 Conn
CAN-1	CAN Trans
RS 232 x 1 / RS 232 x 1	RS232 Trans — UART x 2 Header
SSI Port x 2	Header
4 Wire Touch	TP Connector
4x4 Matrix	Key Pad

OS SUPPORT

WinCE 6.0*
Linux 2.6.35*
Android 2.3*
QNX*

DELIVERABLES

Q7 Carrier Board
User Manual
Power Adapter

OPTIONAL KITS

Am389x Q7 SOM
i.MX51 Q7 SOM
i.MX53 Q7 SOM

CUSTOM DEVELOPMENT

BSP Development / OS Porting
Design review and support
Custom SOM / Carrier Development

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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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Optional items not included in the standard deliverables

Ordering the Q7 carrier Board
The board can be ordered online from the iWave Website
http://www.iwavesystems.com/enquiry.htm