iWave
Embedding Intelligence

Development Platform iW-RainboW-G20D-QSeven

RZ/G1M,G1N Q7 Development Kit

iWave's RZ/G1M,G1N development board incorporates RZ/G1M,G1N QSeven SOM which is based on Renesas high performance RZ/G1M,G1N Dual ARM Cortex A15 MPU and the carrier board with optional 7" capacitive Display Kit. The development board can be used for quick prototyping of various applications targeted by the RZ/G1M,G1N processor. With the 120mm x 120mm Nano ITX size, the kit is highly packed with all the necessary on-board connectors to validate the RZ/G1M,G1N MPU features.

APPLICATIONS: Industrial HMI and Access Control , Industrial Control and Automation, Infotainment & Digital Signage, Video Surveillance & Security, Real Time Image Recognition, Home & Office Automation, White Goods and Smart Appliances.

iW-RainboW-G20D-QSeven HIGHLIGHTS

High Performance Dual Cortex - A15 MPU @ 1.5 GHz

SGX544MP2 3D Graphic Core @ 520MHz

Multi - Channel Video input, HD Encode & Decode

USB3.0, Gigabit Ethernet, PCIe, SATA, LVDS IOs

7" Display Kit with Capacitive Touch Screen

SPECIFICATIONS

RZ/G1M,G1N QSeven SOM:	Audio Codec, In / Out Jack
RZ/G1M,G1N Cortex A15 MPU @ 1.5GHz	Serial Console on USB Port
1GB DDR3 RAM	Data UART - 1 Port
2MB SPI NOR Flash	CAN PHY - 1 Port
4GB eMMC Flash	IO Expansion Connectors
10/100/1000 Ethernet PHY	12V, 2A DC Input
QSeven Carrier Board:	Nano ITX Size: 120mm x120mm
SATA - 1 Port [1]	**Camera Daughter Board [3] :**
PCIe - 1 Port [1]	16-Bit Camera - 1 Port [4]
Gigabit Ethernet - 1 Port	8-Bit Camera - 1 Port
LVDS Display - 1 Port	Analog Video Input - 1 Port
USB 3.0 Host - 1 Port	HDMI Display - 1 Port [4]
USB 2.0 Host - 2 Ports	**OS Support:**
USB 2.0 OTG - 1 Port	Linux 3.10.31
SD Slot - 1 Port	**Operating Temperature:**
7" Display with CAP Touch[2]	0°C to +60°C

Note1: SATA and PCIe are Multiplexed in the RZ/G1M,G1N MPU. Only one be supported at a time. PCIe is supported in default configuration.
Note2: 7" Capacitive Display Kit is optional feature.
Note3: Camera Daughter board is optional feature.
Note4: 16-Bit Camera and RGB interfaces are Multiplexed. HDMI Port is supported by default.

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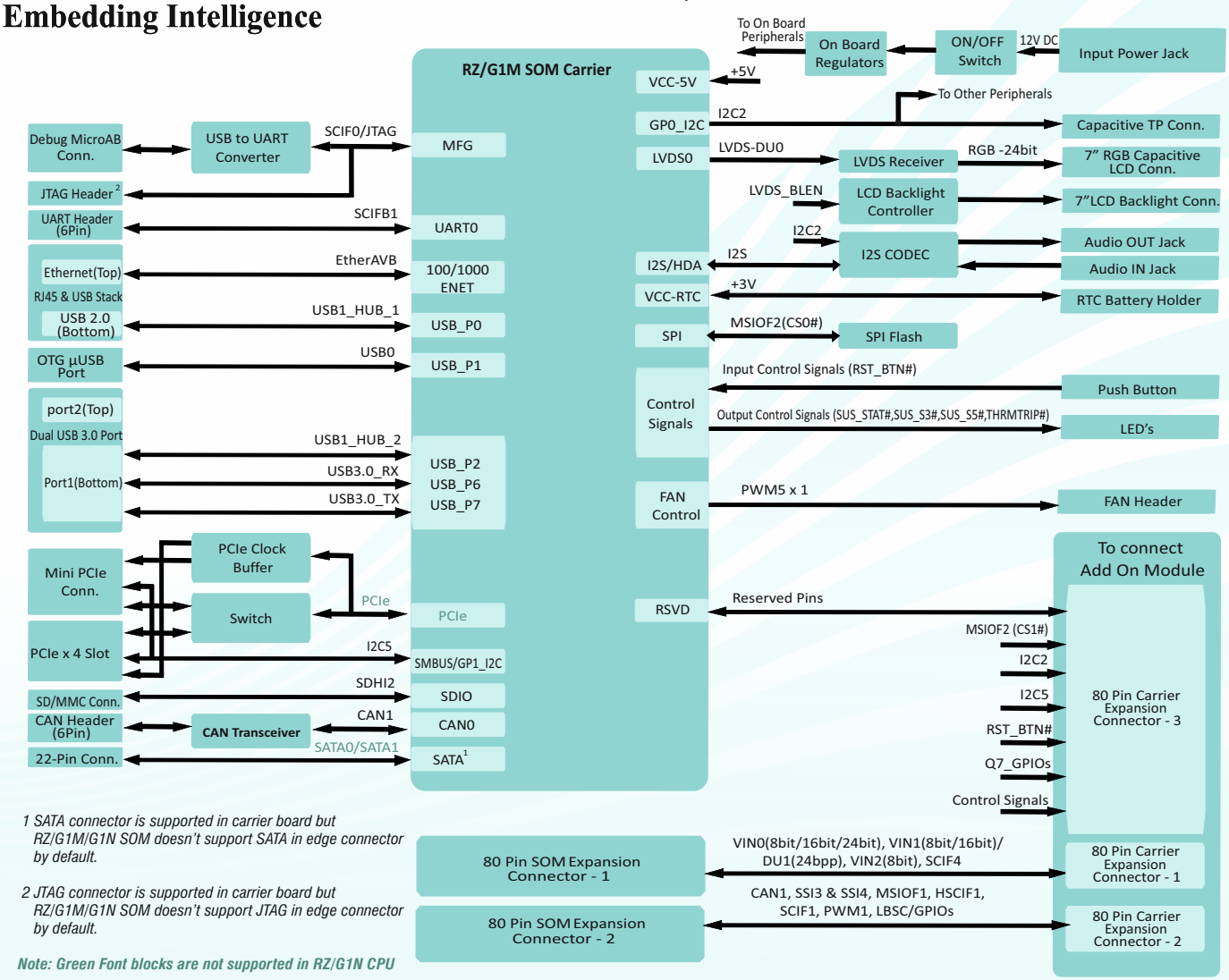
RENESAS

RZ/G1M,G1N Qseven Carrier Board - BLOCK DIAGRAM



1 SATA connector is supported in carrier board but RZ/G1M/G1N SOM doesn't support SATA in edge connector by default.

2 JTAG connector is supported in carrier board but RZ/G1M/G1N SOM doesn't support JTAG in edge connector by default.

Note: Green Font blocks are not supported in RZ/G1N CPU

OS SUPPORT

Linux 3.10.31

DELIVERABLES

RZ/G1M QSeven Development Kit
Board Support Package
Hardware & Software User Manuals

OPTIONAL KITS

7"LCD Display Kit with
Cap Touch Screen
Camera Daughter Board

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.

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*Optional items not included in the standard deliverables.

Ordering the RZ/G1M QSeven Development Kit

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

iW-G20D-QSEVEN-BR-R1.2

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