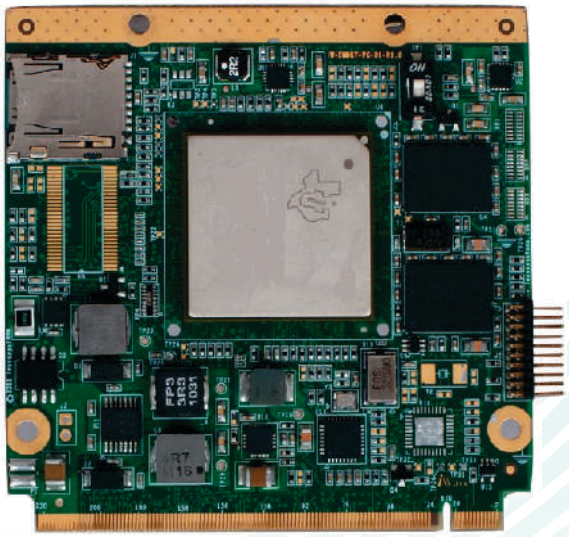
iWave
Embedding Intelligence

System On Module iW-RainboW-G12M-Q7

DM816x Qseven SOM



iWave's DM816x SOM is based on TI's DaVinci DM8168x ARM Cortex-A8+C674x DSP Microprocessor for faster and more robust applications. With extreme system and peripheral integration, the DSP+ARM MPUs provide multiple high-performance interfaces, such as PCIe Gen2, HDMI 1.3, SATA2.0, Gigabit Ethernet and DDR3 interfaces.

The module is compatible to Qseven R1.20 ARM specification and features 1.2 GHz CPU, on-board DDR3 RAM, Nand Flash, Micro SD slot and JTAG header.

APPLICATIONS : Industrial Automation, Medical, HMI, Interactive POS, Single Board Computing, Network & Communication Processing, Video Surveillance Systems.

iW-RainboW-G12M-Q7 HIGHLIGHTS

C674x 1 GHz DSP+ARM Cortex A8 @ 1.2 GHz

Integrated high bandwidth connectivity peripherals

SGX530 3D Graphics Engine for rich user interfaces

Dual simultaneous 1080p display engine

More complex Graphical User Interfaces (GUIs)

Technical & Quick customization support

SPECIFICATIONS

Processor
TI DM816x ARM Cortex A8 @ 1.2 GHz
C674x DSP @ 1 GHz
Memory
1GB DDR3 SDRAM
128MB Nand Flash (expandable*)
On-board Micro SD Slot (default boot)
Qseven Edge Connector
PCIe 2.0 x 2 Lanes
HDMI 1.3
SATA 2.0 x 2
LVDS, I2S Port
USB2.0 Host x 4
USB2.0 Device
SD/SDIO
SPI, I2C
Audio McASP Port

Debug UART
Expansion Connectors
Gigabit Ethernet GMII x 1
HD Video IN x 2 Ports
Analog HD & SD Video OUT
Audio McASP x 2 Ports
UART x 2 Ports
GPIOs
JTAG Header
Temperature
Operating 0°C to +70°C
Board Form factor
Qseven R1.20 Compatible (70mm x 70mm)
Power Input
5V, 2A
Operating Systems
Linux 2.6.37

** Optional items are not supported by default*

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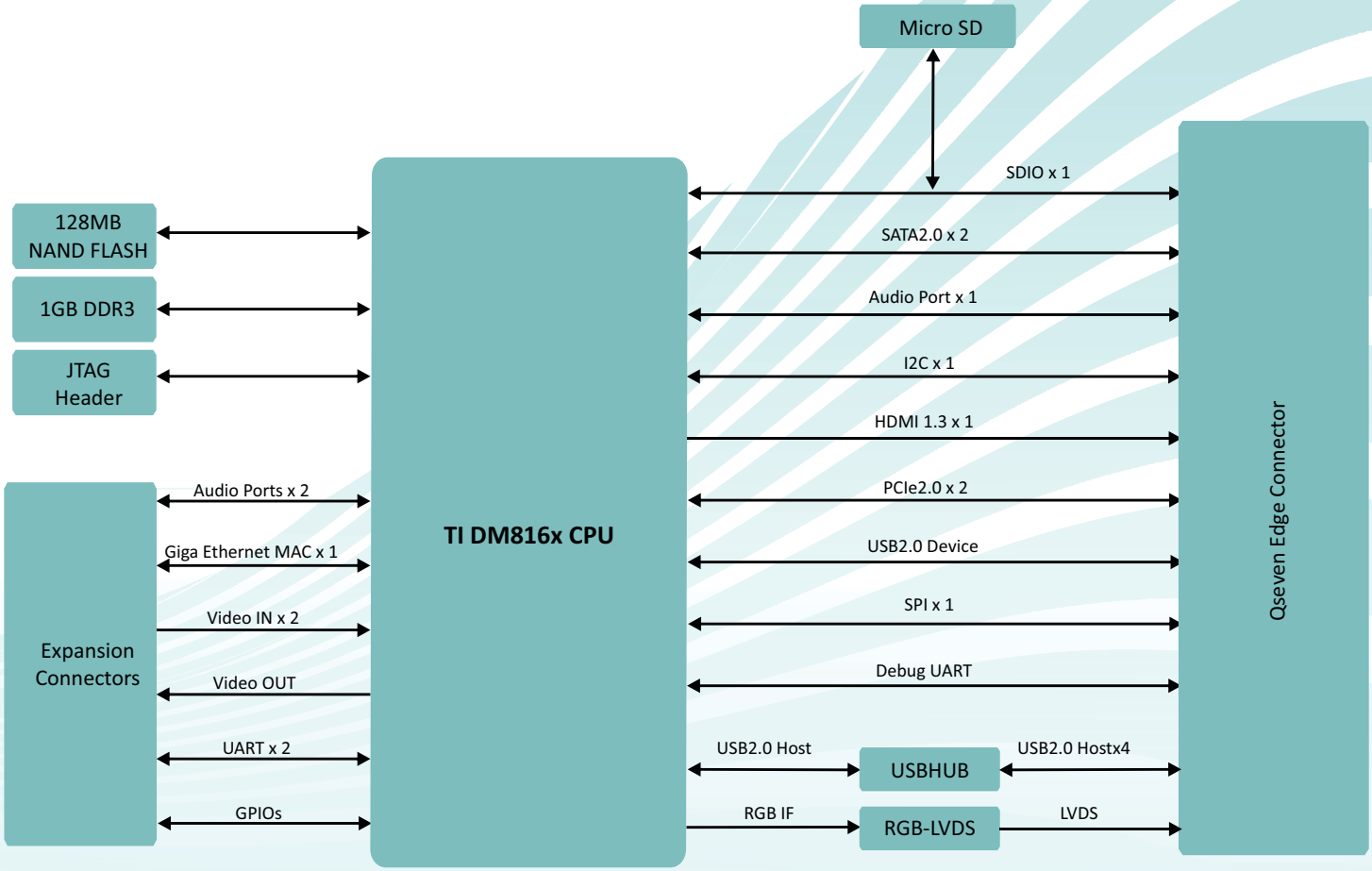
Texas Instruments

DM816x Qseven SOM BLOCK DIAGRAM



** Optional featured. Not supported by default*

OS SUPPORT

Linux 2.6.37

DELIVERABLES

DM816x Qseven SOM module
Board Support Packages
User manual

OPTIONAL KITS

iW-RainboW-G7D
(ARM Qseven generic carrier board)
Heat Spreader

CUSTOM DEVELOPMENT

BSP Development/OS Porting
Custom SOM/Carrier card 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, NXP, Renesas, Altera, Qaulcomm, Intel 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 in breed specification. The registered trademarks are proprietary of their respective owners.

Ordering the DM816x Qseven SOM

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

iW-G12M-Q7-BR-R1.2

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