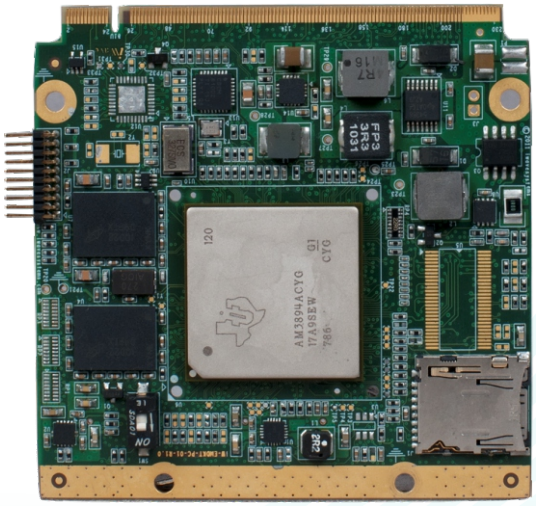
iWave
Embedding Intelligence

System On Module iW-RainboW-G12M-Q7

AM389x / DM816x Qseven SOM



iWave's AM389x/DM816x SOM is based on TI's Sitara AM389x/DM8168x ARM Cortex-A8 Microprocessor for faster and more robust applications. With extreme system and peripheral integration, the Sitara AM3892 and AM3894 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 up to 1.5 GHz CPU, on-board DDR3 RAM, Nand Flash, Micro SD slot and JTAG headers.

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

iW-RainboW-G12M-Q7 HIGHLIGHTS

ARM Cortex A8 up to 1.5 GHz, offering speed and robust performance

Advanced Operating System (OS) support to enable application processing, user interface and system control

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

Long term support: 5 Years

SPECIFICATIONS

Processor
TI AM389x/DM816x up to 1.5 GHz
Memory
1GB DDR3 SDRAM
128MB Nand Flash (expandable*)
On-board Micro SD Slot
Q7 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
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
Android 2.2*

** Optional*

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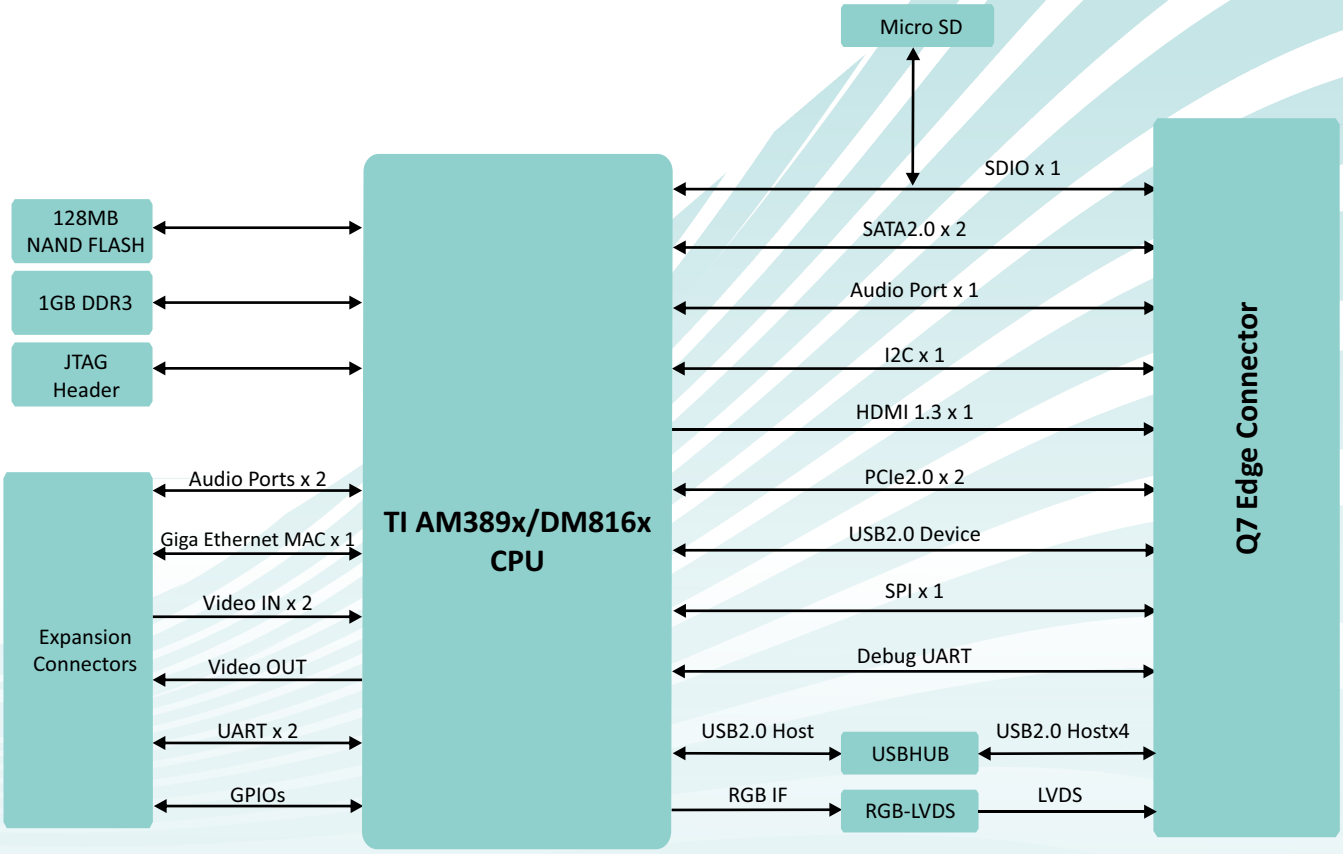
Windows Embedded
Silver Partner

AM389x / DM816x Qseven SOM BLOCK DIAGRAM



OS SUPPORT

Linux 2.6.37
Android 2.2*

DELIVERABLES

AM389x/DM816x Q7 SOM module
Board support packages
User manual

OPTIONAL KITS

iW-Rainbow-G7D
(ARM Q7 generic carrier board)

CUSTOM DEVELOPMENT

BSP Development/OS Porting
Custom SOM/Carrier card development
Custom application/GUI development
Design review and support

** Optional*

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 AM389x/ DM816x Qseven SOM
The SOM Module can be ordered online from the iWave Website
http://www.iwavesystems.com/webforms

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