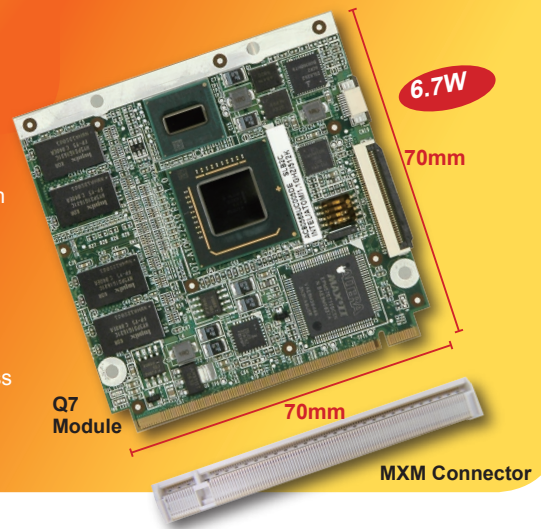


Q7 Introduction

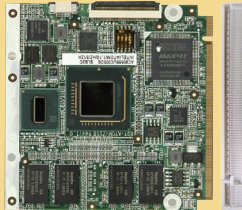
- The Qseven™ concept is an off-the-shelf, multi vendor, Single-Board-Computer that integrates all the core components of a common PC and is mounted onto an application specific carrier board.
- Qseven™ modules have a standardized form factor of 70mm x 70mm and have specified pinouts based on the high speed MXM system connector that has a standardized pinout regardless of the vendor.
- The Qseven™ module provides the functional requirements for an embedded application. These functions include, but are not limited to, graphics, sound, mass storage, network and multiple USB ports. A singleruggedized MXM connector provides the carrier board interface to carry all the I/O signals to and from the Qseven™ module.



Pin Definition of Q7

Qseven offers the newest I/O technologies on this minimum size form factor. This includes serial high speed buses such as:

- 4 x PCI Express x1 Lanes
- DisplayPort, TDMS or SDVO Interface
- 8x USB 2.0
- ExpressCard
- High Definition Digital Audio
- 2 x Serial ATA
- LPC interface
- Secure Digital I/O interface
- Gigabit Ethernet
- 2 x 24bit LVDS Display Interface



1. PCI Express
2. USB 2.0
3. Express Card
4. SATA
5. SDIO
6. Audio
7. Display Port
8. HDMI
9. GbE

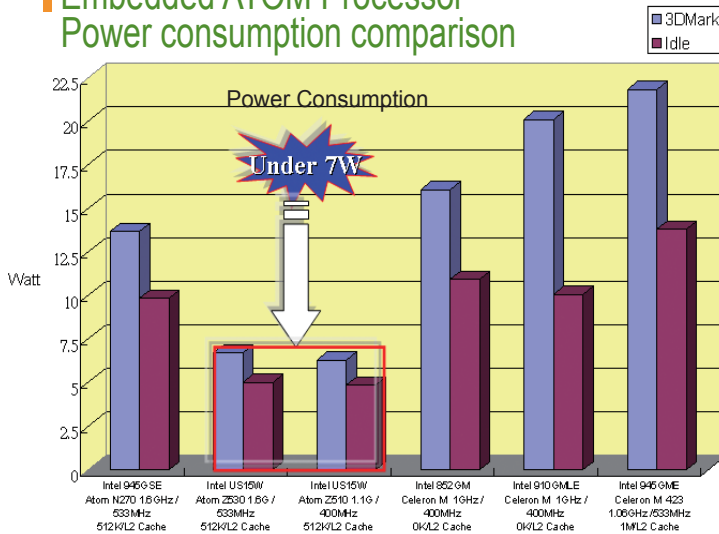
Benefit of Q7

- Compact size, cost efficient & low power consumption (TDP 12W)
- legacy free & fast serial interface

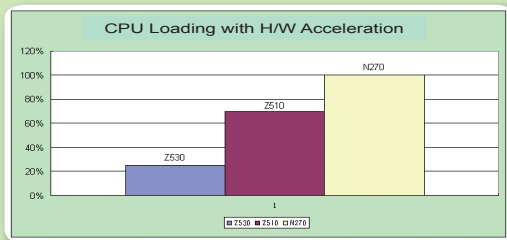
ETX/COM Express/Q7 Comparison Table

Platform	ETX 3.0	COM Express Type IIBasic Module	Q7
Size	95 x 114 mm	95 x 125 mm	70 x 70 mm
Connector	4 x 100-pin	2 x 220-pin	1 x 230-pin
Memory	1 x SO-DIMM	1 x SO-DIMM	on board memory
VGA	Yes	Yes	N/A
LCD	TTL or LVDS	Up to 2 x single LVDS or Dual channel LVDS	SDVO/HDMI/DP (Shared)
Expansion	PCI & ISA	PCI & PCI Express	PCI Express
Ethernet	10/100 Mbps	10/100/1000 Mbps	10/100/1000Mbps
USB	4	8	8
SATA	2 (ETX 3.0 only)	up to 4 SATA	up to 2 SATA
IDE	2CH	1CH	N/A
Audio	Mic-In/Lin-in/Lin-Out	AC97/HD interface	HD interface
Power	5V	12V	5V

Embedded ATOM Processor Power consumption comparison



H.264 Graphic Performance



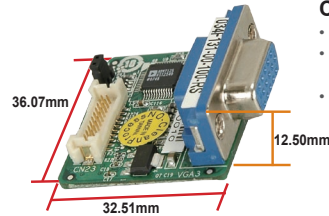
SW: Power DVD V8.0 / Video type: H.264 DVD 1080P video file			
CPU	Z530/1.6G	Z510/1.1G	ATOM N270
CPU Loading (With H/W acceleration)	20%~30% smoothly	60%~80% Laggard	Not Support

iQ7-US15W Supported Video Codecs

IEI Q7 module – iQ7-US15W with Intel® US15W chipset graphic video codecs support table

Codec	Profile @ Level	Max Bit Rate (bps)	Resolution and Frame Rate
H.264	BP@L3	10M	720 x 480 @ 30fps (NTSC), 720 x 576 @ 25fps (PAL)
H.264	MP@L4.1	50M	1920 x 1080 @ 30fps, 1280 x 720 @ 60fps
H.264	HP@L4.1	50M	1920 x 1080 @ 30fps, 1280 x 720 @ 60fps
VC-1 (WMV9)	SP@MP	384K	240 x 176 @ 30fps, 352 x 288 @ 15fps (CIF)
VC-1 (WMV9)	MP@HP	20M	1920 x 1080 @ 30fps
VC-1 (WMV9)	AP@L3	45M	1920 x 1080p @ 24fps, 1920 x 1080i @ 30, 1280 x 720p @ 60
MPEG-4 Part 2	SP@L3	384K	CIF @ 30fps
MPEG-4 Part 2	ASP@L5	8M	720 x 480 @ 30fps (NTSC), 720 x 576 @ 25fps (PAL)
DivX	Certified HD	4M	1280 x 720 @ 30 fps
MPEG-2	MP@HL	80M	1920 x 1080 @ 30fps
MPEG-1	CPB	1.856M	768 x 576 @ 30fps
JPEG	Baseline	N/A	Not restricted

LVDS-VGA-R10



Single Channel LVDS to VGA Converter board

- Provide 2nd VGA option for Dual VGA display
- Resolution adjust by BIOS: Support 640x480, 800x600, 1024x768
- 18 bit LVDS to VGA Converter board

Packing List

- 1 x LVDS to VGA Converter board
- 1 x QIG

Ordering Information

Part No.	Description
LVDS-VGA-R10	18 bit LVDS to VGA converter board
32600-112300-RS	30pin LVDS connecting cable
32600-114400-RS	20pin LVDS connecting cable