

## MSC Q7-SK US15W-RP

### Qseven Evaluation Kit



#### Description

The Qseven Evaluation Kit consists of the Qseven module MSC Q7-US15W-FD-014 with the Intel® Atom™ Z530 and the full feature set, the Qseven heatspreader MSC Q7-US15W-01 HSP-001, the Qseven Reference Platform MSC-Q7-MP-RP, an interface card for VGA output ADD2 VGA CARD and a Linux installation in the on-board Flash Disk.

In order to speed up the evaluation and development process, the Qseven Evaluation Kit is pre-assembled with the Qseven module mounted on top of the Qseven Reference Platform board including the heatspreader.

An SDVO interface card allows external VGA monitors to be connected to the Evaluation Kit. This enables direct screen output on a PC monitor. Optionally available is an alternative Evaluation Kit which includes a suitable LCD kit with a 10.4" LCD panel at a resolution of 800x600.

Furthermore the Qseven Evaluation Kits include a full-featured Ubuntu Linux installation. Plug in an ATX power supply to the Reference Platform and connect a PC monitor to the VGA output of the SDVO interface card or connect the included cables to the TFT kit – and the Evaluation Kit will be ready to run.

#### Highlights

- Intel® Atom™ Z530 (1.6GHz) with Heatspreader
- Mobile Intel® US15W System Controller Hub (SCH) with integrated Intel Graphics Media Accelerator 500
- 1GB DDR2 SDRAM, 3.6 GB Flash Disk
- ADD2 graphics interface card (VGA)
- Full Linux installation in on-board Flash Disk
- HD audio codec with surround support (6 channel)
- ATX power connector (20+4 pin), optional 5VDC
- Optional Evaluation Kit with 10.4" TFT at SVGA resolution 800x600

## Technical Data – Qseven Evaluationkit

### Module Interface

**CPU:** Intel® Atom Z530 (1.6 GHz)

**Chipset:** Intel® US15W SCH

**Memory:** 1GB DDR2-533 SDRAM on board, 3.6 GB Flash Disk

### Bus Interface

**SATA:** 2 x SATA-2 connectors (only 1 usable due to onboard Flash)

**MMC/SD Card:** Cardholder with 8-bit interface

**EEPROM:** Serial EEPROM for SM Bus, Serial EEPROM for I<sup>2</sup>C Bus, Serial EEPROM for EPI/DP extensions

**BIOS Flash:** Flash device on Qseven CPU module, PLCC32 socket on baseboard for external BIOS

### Standard Interfaces

**USB:** 8 x USB 2.0

Five USB-Host (Series-A Jack), one USB-Host or one USB-Client, one USB at Mini-PCIExpress Socket, one USB at ExpressCard Socket

**Serial:** 2x COM on 9 pin D-Sub connector driven by onboard Super-I/O, 2x COM port on header with SMSC Super-I/O

### Flat Panel / CRT Interfaces

**Graphics Controller:** Intel® Graphics Media Accelerator 500 (integrated in Intel® US15W SCH device)

**SDVO Interface:** up to 1,920 x 1,080 resolution (dep. on Q7 module)  
SDVO/VGA converter board (supplied)  
SDVO/DVI converter board available (see Optional Accessories)

**LCD Interface:** LVDS-Interface 18/24 bit, up to 1,366 x 768 on JILI30 connector, EEPROM to store display data, Backlight connector onboard; 10.4" SVGA LCD Kit with inverter and cables included in the alternative Starterkit: MSC Q7-SK-US15W-RP-002-KIT000

**VGA:** ADD2 VGA CARD (supplied)

### Sound Interface

**Audio:** High Definition Audio codec for Front Out, Mic1 In, Line1 In, Surround Out, Side surround Out, Center/LFE, S/PDIF (Realtek ALC888)

### Miscellaneous

**Debug Support:** POST Display and LED indicators, Beeper

**System Control:** SMSC 3114 or Winbond W83627DHG for extra COM ports

### LAN Interface

**Ethernet:** One RJ45 connector for 10/100/1000 LAN (controller on Qseven CPU module)

### Power Supply

**Power:** Standard 24-pin ATX power connector and additional 2-pin 5VDC connector; Power Consumption: app. 10W

### Heatspreader

MSC Q7-US15W-01 HSP-001 (mounted on Qseven CPU module)  
MSC Q7-XXX-01 HTR-001 (mounted under module's cooling strip)

### Environment

**Ambient Temperature:** 0° ... +60° C operating, -25° ... 85° C storage

**Humidity:** 20 ... 80% operating, 5 ... 95% storage (non condensing)

### Mechanical

**Dimensions:** 304 x 173 mm

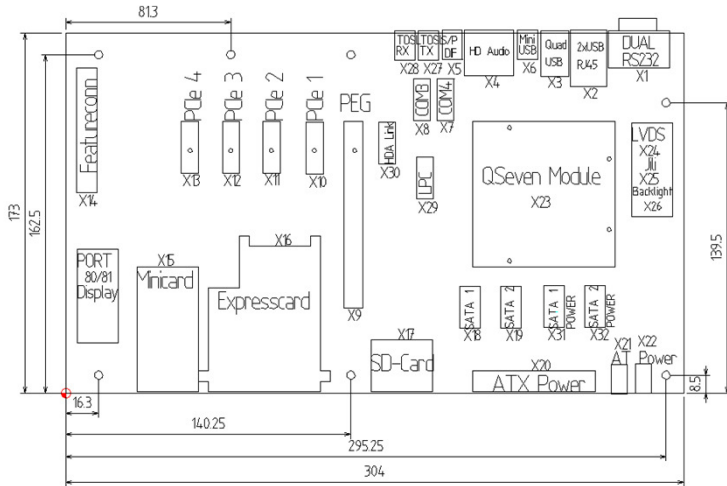
### Optional Accessories

**DVI out:** ADD2 DVI CARD

**LCD Kit:** included in MSC Q7-SK-US15W-RP-014-KIT001; parts used:  
NL8060BC26-28 (10.4" SVGA TFT LVDS)  
104PW201 (Backlight Inverter)  
KAB-INV-53261-0890-G (Inverter Power Cable)  
SAK-KAB-JILI30-TXLD07 (Data Cable)

# Order Reference – Qseven Evaluationkit

Order number	Product description	Order reference
	Qseven Evaluation Kit	MSC Q7-SK-US15W-RP-014-KIT000
	Qseven Evaluation Kit with 10.4" SVGA TFT	MSC Q7-SK-US15W-RP-014-KIT000



**Qseven™** ([www.qseven-standard.org](http://www.qseven-standard.org)) is an open standard which specifies a COM (Computer on Module) offering latest interface technologies such as PCI Express, SATA, USB 2.0, Gbit LAN and LVDS on an ultra small form factor module 7 x 7 cm (2.75 x 2,75 inch). It is positioned below the COM Express™ product portfolio.

Qseven modules are plugged onto a specific baseboard and support the x86 architecture as well as ARM/RISC architectures in the common specification. In order to assist customers in the evaluation of Qseven modules and small volume production, MSC is providing some baseboards such as the Qseven Embedded Platform or the Qseven Reference Platform.

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