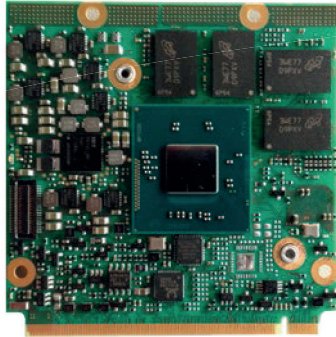


NEW



Features

- Single, dual or quad-core Intel® Atom™ Processor E3800 Series System-on-Chip
- Up to 8 GB DDR3L at 1066/1333 MHz
- HDMI and LVDS
- GbE, camera interface
- 2x SATA 3Gb/s or 1x SATA and 1x SATA-SSD
- Extreme Rugged™ operating temperature: -40°C to +85°C or 0°C to +60°C
- Supports Smart Embedded Management Agent (SEMA) functions



Specifications

Core System

| | |
|-----|---|
| CPU | Intel® Atom™ Processor E3800 Series, single, dual or quad-core SoC with integrated graphics Atom™ E3845 (4C/1333), 1.91 GHz, Gfx 542/792 MHz (Turbo), 10 W TDP Atom™ E3826 (2C/1066), 1.46 GHz, Gfx 533/667 MHz (Turbo), 7 W TDP Atom™ E3815 (1C/1066), 1.46 GHz, Gfx 400 MHz (no Turbo), 5 W TDP Atom™ E3805 (2C/1066), 1.33 GHz (No GFX) 3W TDP |
|-----|---|

| | |
|-----------------------|--|
| Memory | Up to 8 GB DDR3L at 1066/1333 MHz, memory down |
| Embedded BIOS | AMI UEFI with CMOS backup in 8 MB SPI BIOS, Fast Boot support |
| Cache | 512 kB to 2 MB L2 cache |
| SEMA Board Controller | Supports: Voltage/Current monitoring, Logistics and Forensic information, Flat Panel Control, I²C Bus Control, User Flash, Failsafe BIOS (dual BIOS), Watchdog Timer and Fan Control |

Video

| | |
|---------------------|---|
| GPU Feature Support | 7th generation Intel® graphics core architecture with four execution units supporting two independent displays 2D and 3D graphics hardware acceleration Support for DirectX 11.1, OGL ES 2.0, OGL 3.2 Video decode HW acceleration for H.264, MPEG2, VC1, VP8 formats Video encode HW acceleration for H.264, MPEG2 formats |
| LVDS | Dual channel 24-bit LVDS from DDIO |
| HDMI | HDMI from DDIO (up to 2,560 x 1,600 pixels) |

Audio

| | |
|---------|--|
| Chipset | Intel® HD Audio controller integrated in SOC |
| Ports | I²S and HDA for audio codec on carrier |

Ethernet

| | |
|----------------|--------------------------------------|
| Intel® MAC/PHY | 1x Intel® i210IT Ethernet controller |
| Interface | 10/100/1000 GbE |

I/O Interfaces

| | |
|--------|---|
| PCIe | 3x PCIe x1 Gen2 |
| USB | 1x USB 3.0 + 5x USB 2.0 host + 1x USB 2.0 client |
| SATA | 2x SATA 3 Gb/s or 1x SATA & 1x SATA-SSD (optional) |
| eMMC | Soldered, bootable eMMC flash storage from 4 GB to 64 GB (optional) |
| SSD | onboard SATA-SSD (optional) |
| SDIO | 1x SDIO (4-bit) |
| Camera | CSI 4L/1L on feature connector |
| Serial | 1x I²C, 1x SPI, 1x HS-UART, Power Management, SMBus |
| LPC | 1x LPC / (optional GPIO) |

Power

| | |
|----------------|--------------------------------|
| Standard Input | 5.0 V ±5% |
| Power States | Supports C0-C6, S0, S3, S4, S5 |

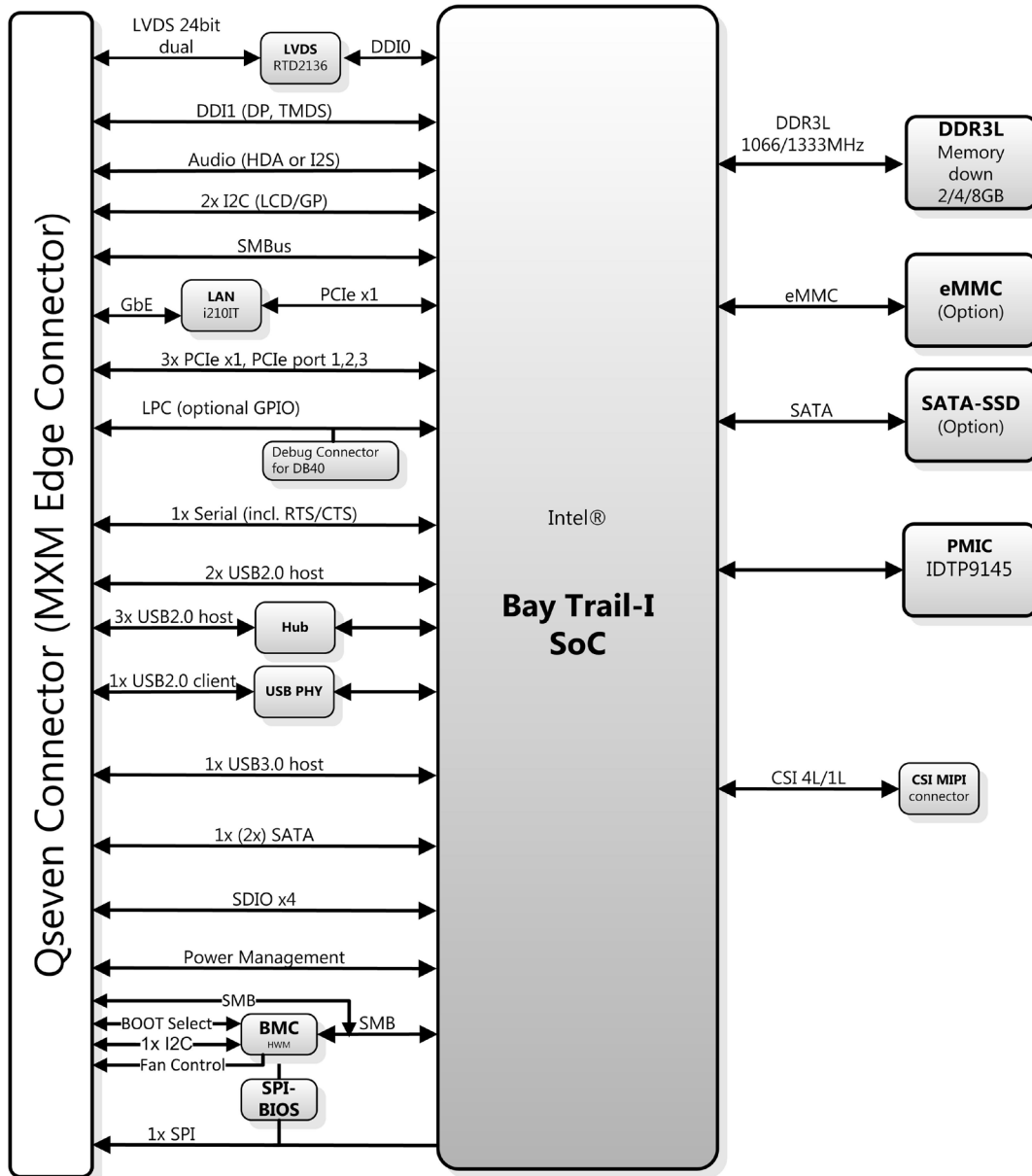
Mechanical and Environmental

| | |
|-----------------------|--|
| Form Factor | Qseven Specification v2.0 |
| Dimension | Standard size, 70 mm x 70 mm |
| Operating Temperature | Standard: 0°C to +60°C Extreme Rugged™: -40°C to +85°C |
| Humidity | 5-90% RH operating, non-condensing 5-95% RH storage (and operating with conformal coating) |
| Shock and Vibration | IEC 60068-2-64 and IEC-60068-2-27 MIL-STD-202F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D |
| HALT | Thermal Stress, Vibration Stress, Thermal Shock and Combined Test |

Operating Systems

| | |
|------------------------|---|
| Standard Support | Linux, VxWorks, Windows 7/8, Windows Embedded Compact 7 |
| Extended Support (BSP) | QNX, Android |

Functional Diagram



Ordering Information

Modules

| Model Number | Description/Configuration |
|------------------------|---|
| Q7-BT4-4G-8G-ER | Qseven Standard Size Module with Intel® Atom™ E3845, quad core, 4 GB DDR3L, 8GB eMMC, Extreme Rugged™ operating temperature: -40°C to +85°C |
| Q7-BT2-4G-8G-ER | Qseven Standard Size Module with Intel® Atom™ E3826, dual core, 4 GB DDR3L, 8GB eMMC, Extreme Rugged™ operating temperature: -40°C to +85°C |
| Q7-BT1-2G-8G-ER | Qseven Standard Size Module with Intel® Atom™ E3815, single core, 2 GB DDR3L, 8GB eMMC, Extreme Rugged™ operating temperature: -40°C to +85°C |
| Q7-BT-HS | Heatspreader for Q7-BT |

* Other configurations by request

Note: All specifications are subject to change without further notice.