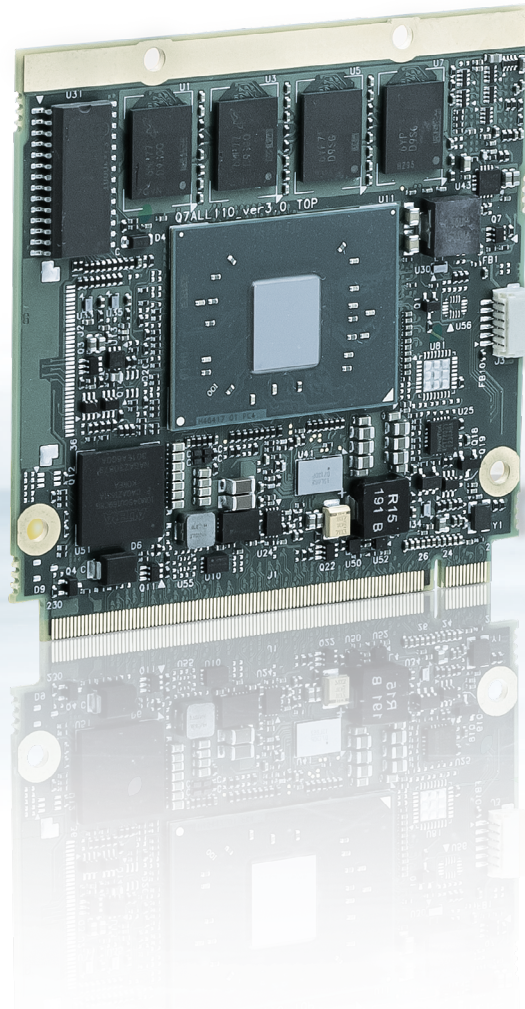


Qseven-Q7AL



Latest Generation Intel Atom[®], Pentium[®] and Celeron[®] Processor Series

- ▶ Up to 8 GByte onboard DDR3L memory down (ECC / non ECC)
- ▶ Dual display support
- ▶ 2x USB 3.0, 4x USB 2.0 (1x OTG), 2x SATA, eMMC onboard
- ▶ Industrial grade temperature

POSSIBILITIES START HERE



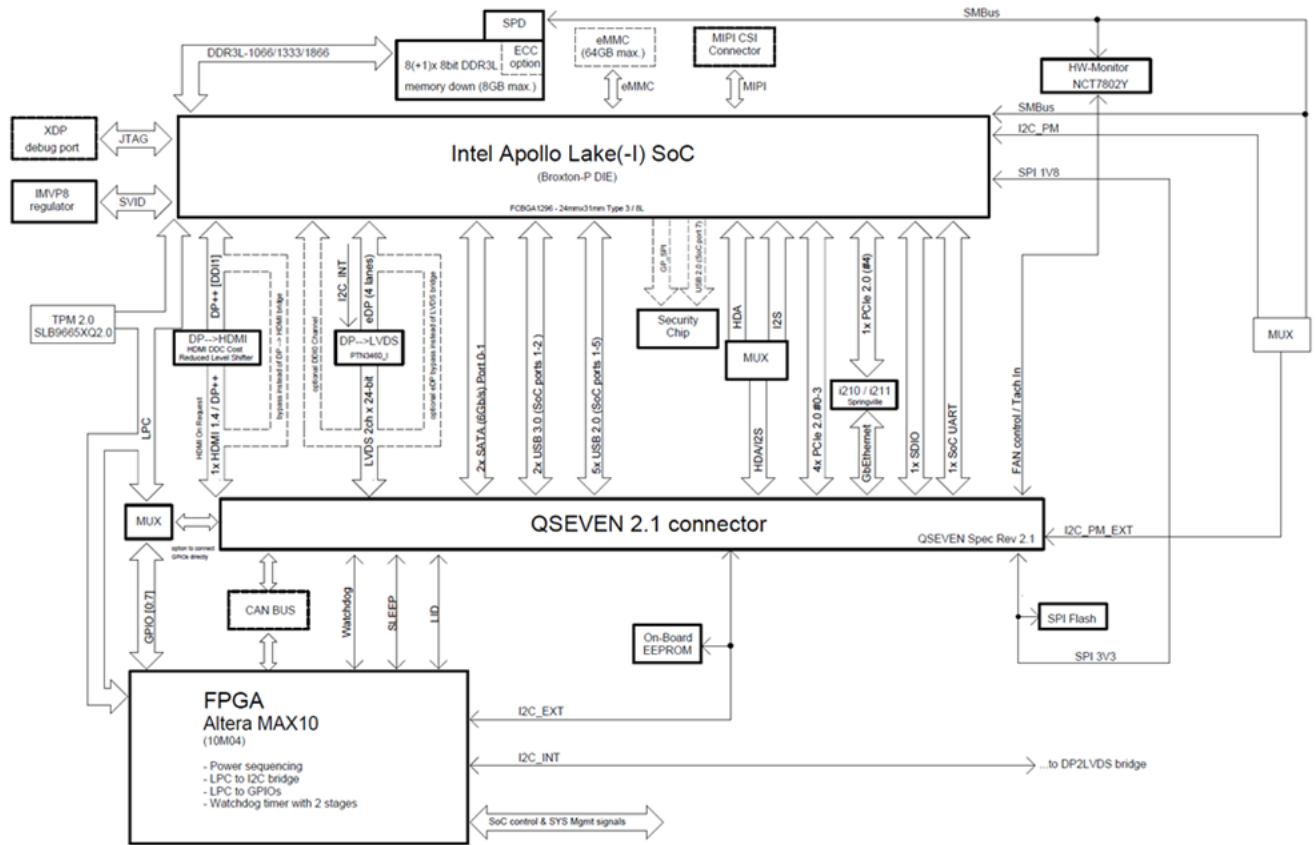
▶ TECHNICAL INFORMATION

COMPLIANCE	Qseven® Specifications 2.1
DIMENSIONS (H x W x D)	Standard Size, 70 x 70 mm
CPU	Intel Atom® x7-E3950, 4C, 1.6 / 2.0 GHz, 12 W TDP Intel Atom® x5-E3940, 4C, 1.6 / 1.8 GHz, 9.5 W TDP Intel Atom® x5-E3930, 2C, 1.3 / 1.8 GHz, 6.5 W TDP Intel® Pentium® N4200, 4C, 1.1 / 2.5 GHz, 6 W TDP Intel® Celeron® N3350, 2C, 1.1 / 2.4 GHz, 6 W TDP
CHIPSET	-
MAIN MEMORY	Up to 8 GByte DDR3-1867 (-1600) memory down (ECC for Atom-versions)
GRAPHICS CONTROLLER	Intel® HD Gfx Gen9
ETHERNET CONTROLLER	Intel® I210IT/ I211AT
ETHERNET	10 / 100 / 1000 MBit Ethernet
STORAGE	2x SATA 6Gb/s
FLASH ONBOARD	Up to 32 GByte eMMC 5.0
PCI Express® SUPPORT	4x PCIe 2.0
PANEL SIGNAL	1x DP ++ (on request HDMI), 1x LVDS dual channel (on request eDP + DP)
USB	2x USB 3.0 (incl. USB 2.0), 4x USB 2.0, alternatively USB #1 as OTG
SERIAL	1x Serial Interface (RX, TX, RTS, CTS)
SPECIAL FEATURES	Trusted Platform Module TPM 2.0 (On-request) Security Chip (Kontron APPROTECT security solution based on Wibu-Systems CodeMeter®) Industrial Temperature Grade versions
FEATURES ON REQUEST	eMMC 5.0 Flash onboard (up to 64 GByte SLC, up to 128 GByte MLC), eDP + DP instead of LVDS, HDMI instead of DP
BIOS	AMI Aptio V
OPERATING SYSTEM	Windows® 10, Enterprise, Linux
POWER SUPPLY	5V power supplies
TEMPERATURE	Qseven-Q7AL: Commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating Qseven-Q7ALi E2: Industrial temperature: -40 °C to +85 °C operating, -40 °C to +85 °C non-operating
HUMIDITY	93 % relative Humidity at 40 °C, non-condensing (according to IEC 60068-2-78)

▶ CPU VARIANTS

CPU	x7-E3950	x5-E3940	x5-E3930	N4200	N3350
CORES	4	4	2	4	2
FREQUENCY BASE	1.60 GHz	1.60 GHz	1.30 GHz	1.10 GHz	1.10 GHz
FREQUENCY BURST	2.00 GHz	1.80 GHz	1.80 GHz	2.50 GHz	2.40 GHz
TDP	12 W	9.5 W	6.5 W	6 W	6 W
CACHE	2 MByte L2 Cache	2 MByte L2 Cache	2 MByte L2 Cache	2 MByte L2 Cache	2 MByte L2 Cache

BLOCK DIAGRAM



VARIANTS

PART NO.	CPU	RAM	FLASH	DISPLAY	LAN	TPM	SECURITY CHIP	TEMPERATURE
81002-0400-16-5	E3940	4 GByte DDR3L	-	LVDS, DP++	1x	yes	no	industrial
81002-0832-16-5	E3940	8 GByte DDR3L	32 GByte eMMC	LVDS, DP++	1x	yes	no	industrial
81002-0832-16-7	E3940	8 GByte DDR3L	32 GByte eMMC	LVDS, DP++	1x	yes	no	industrial
81001-0408-11-4	N3350	4 GByte DDR3L	8 GByte eMMC	LVDS, DP++	1x	yes	no	commercial
81001-0832-11-4	N4200	8 GByte DDR3L	32 GByte eMMC	LVDS, DP++	1x	yes	no	commercial

► CARRIER

ARTICLE	PART NO.	DESCRIPTION
Qseven EVALUATION CARRIER	81199-0000-00-0	Qseven Evaluation Carrier 2.1

► COOLING

ARTICLE	PART NO.	DESCRIPTION
HSP Qseven-Q7AL2	81004-0000-99-1	Heatspreader for Qseven-Q7AL
HSP Qseven-Q7AL2i E2	81005-0000-99-1	Heatspreader for Qseven-Q7ALi, industrial temperature

► GLOBAL HEADQUARTERS

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