

TQMxE39C1

x86 Family



COM Express® Compact Type 6 Module with Intel Atom® x5/x7 E3900 ("Apollo Lake-I") and soldered DDR3L with ECC support.

Based on



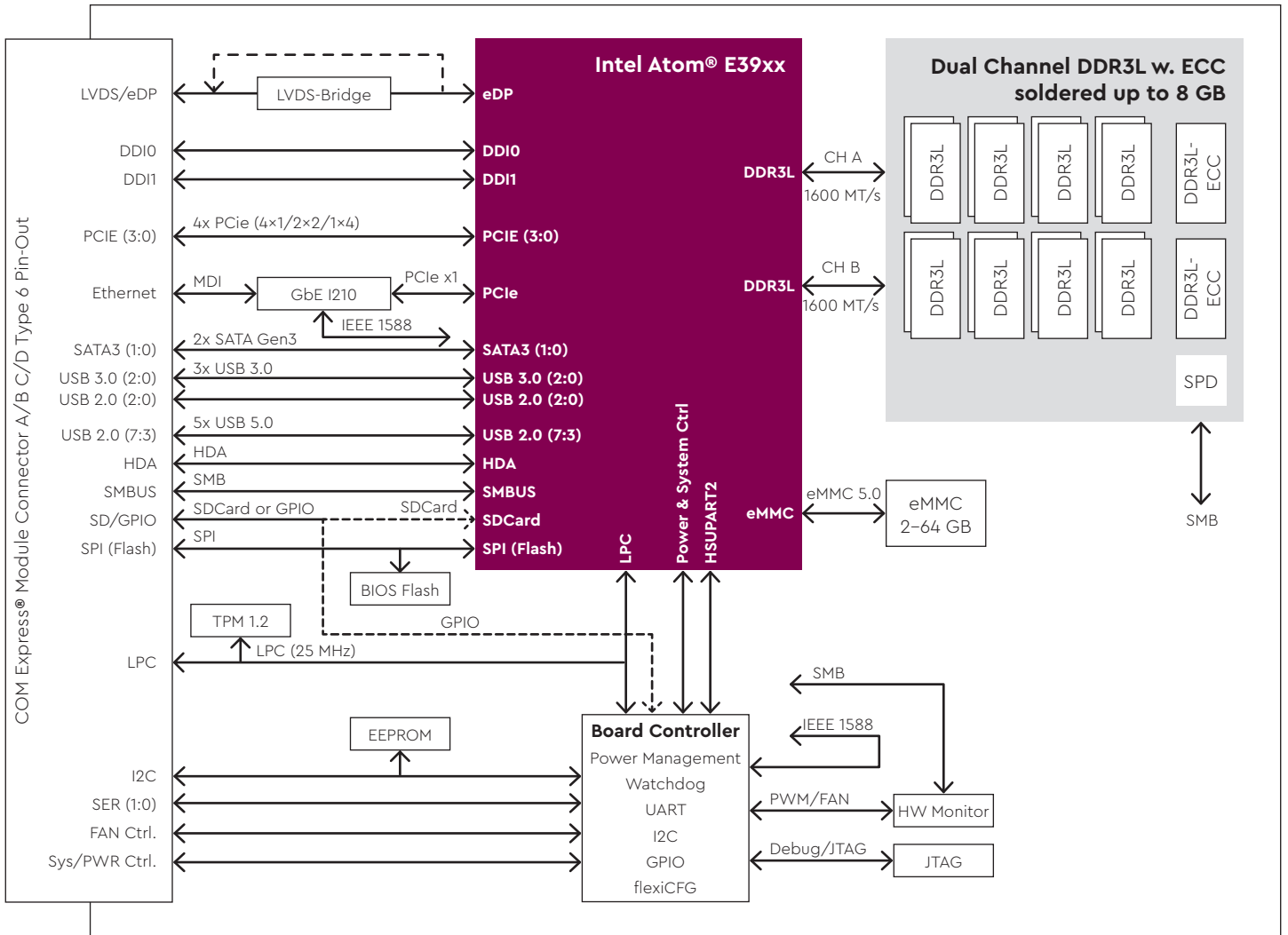
HIGHLIGHTS

- ▶ Intel Atom® x5/x7 E3900 series ("Apollo Lake-I")
- ▶ Dual/Quad core computing power with up to 2.5 GHz
- ▶ 4/8 GB DDR3L (dual channel), soldered, ECC
- ▶ High-speed interconnected with Gigabit Ethernet, 8x USB (3.0/2.0) and up to 4 PCIe lanes
- ▶ Triple display support (up to 4K UHD) and eDP/LVDS
- ▶ Up to 64 GB eMMC Flash, soldered
- ▶ Extended temperature support
- ▶ Watchdog und thermal management
- ▶ Highest reliability, 24/7 certified
- ▶ Conformal coating (on request) and optimized cooling solutions for ruggedized applications

TECHNICAL SPECIFICATION

CPU	Intel Atom® x5/x7 E3900 ("Apollo Lake-I") Atom® x5-E3930 2x 1.3/1.8 GHz, 6.5 W Atom® x5-E3940 4x 1.6/1.8 GHz, 9.5 W Atom® x7-E3950 4x 1.6/2.0 GHz, 12 W	Peripheral interfaces	2x SATA 3.0 (up to 6Gb/s), eSATA capable 4x PCIe 2.0 (up to 5 Gb/s) 1x LPC bus 1x Intel® HD audio (HDA) 1x I2C (master/slave capable) 1x SMBus 1x SPI (for external uEFI BIOS flash) 2x Serial port (Rx/Tx, legacy compatible) (4 wire optional through TQ flexiCFG) 1x SD card interface/on request: 8x GPIO (multiplexed)
Memory	DDR3L: 4/8 GB ECC, Dual Channel, ECC eMMC: 8-64 GB EEPROM: 32-kbit (24LC32)	Power supply	Voltage: 4.75 V - 20 V 4.75 V - 20 V Standby (optional) 3 V Battery for RTC Power: typ. 3 - 8 W/max. 14 W (Green ECO-Off: < 0.1 W)
Graphics	2x Digital Display Interface (DDI) for DP 1.2a, HDMI 1.4b 1x eDP 1.4/Dual Channel LVDS	Environment	Extended temperature: -40°C...+85°C
Interfaces	1x Gbit Ethernet (Intel® i210) (external IEEE1588 sync optional through TQ flexiCFG) 3x USB 3.0 5x USB 2.0	Form factor/dimensions	COM Express® Compact, Type 6, 95 mm x 95 mm
Security components	TPM (SLB9660 TPM 1.2, alternatively SLB9665 TPM 2.0) (on request)		
Others	TQMx86 board controller with watchdog and flexiCFG Hardware monitor		

BLOCK DIAGRAM TQMxE39C1



ORDERING INFORMATION

TQMxE39C1-AA	Intel Atom x7-E3950 (4x 1.6/2.0 GHz, 2 MB Cache, 12 W TDP), 8 GB DDR3L, ECC, LVDS, 0 GB eMMC, SDCard, Industrial-Temp. -40..+85°C
TQMxE39C1-AC	Intel Atom x5-E3930 (2x 1.3/1.8 GHz, 2 MB Cache, 6.5 W TDP), 4 GB DDR3L, ECC, eDP, 0 GB eMMC, SDCard, Industrial-Temp. -40..+85°C
TQMxE39C1-AB	Intel Atom x5-E3940 (4x 1.6/1.8 GHz, 2 MB Cache, 9.5 W TDP), 8 GB DDR3L, ECC, LVDS, 0 GB eMMC, SDCard, Industrial-Temp. -40..+85°C
Other configurations on request	

Evaluation platform MB-COME6-1

Mainboard for COM Express® Compact/Basic, Type 6 Interfaces: 2x DP++, eDP/LVDS, 2x Gb ethernet, 2x USB 3.0, 3x USB 2.0, 3x COM, Audio, mini PCIe, mSATA, 2,5" SSD, CFast, riser extension with 2x PCIe and USB, fan, debug, 170 mm x 170 mm

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