

TQMxE40M

x86 Family



COM Express® Mini Type 10 Module with Intel Atom® x6000E Series processors ("Elkhart Lake").

Based on

COM Express



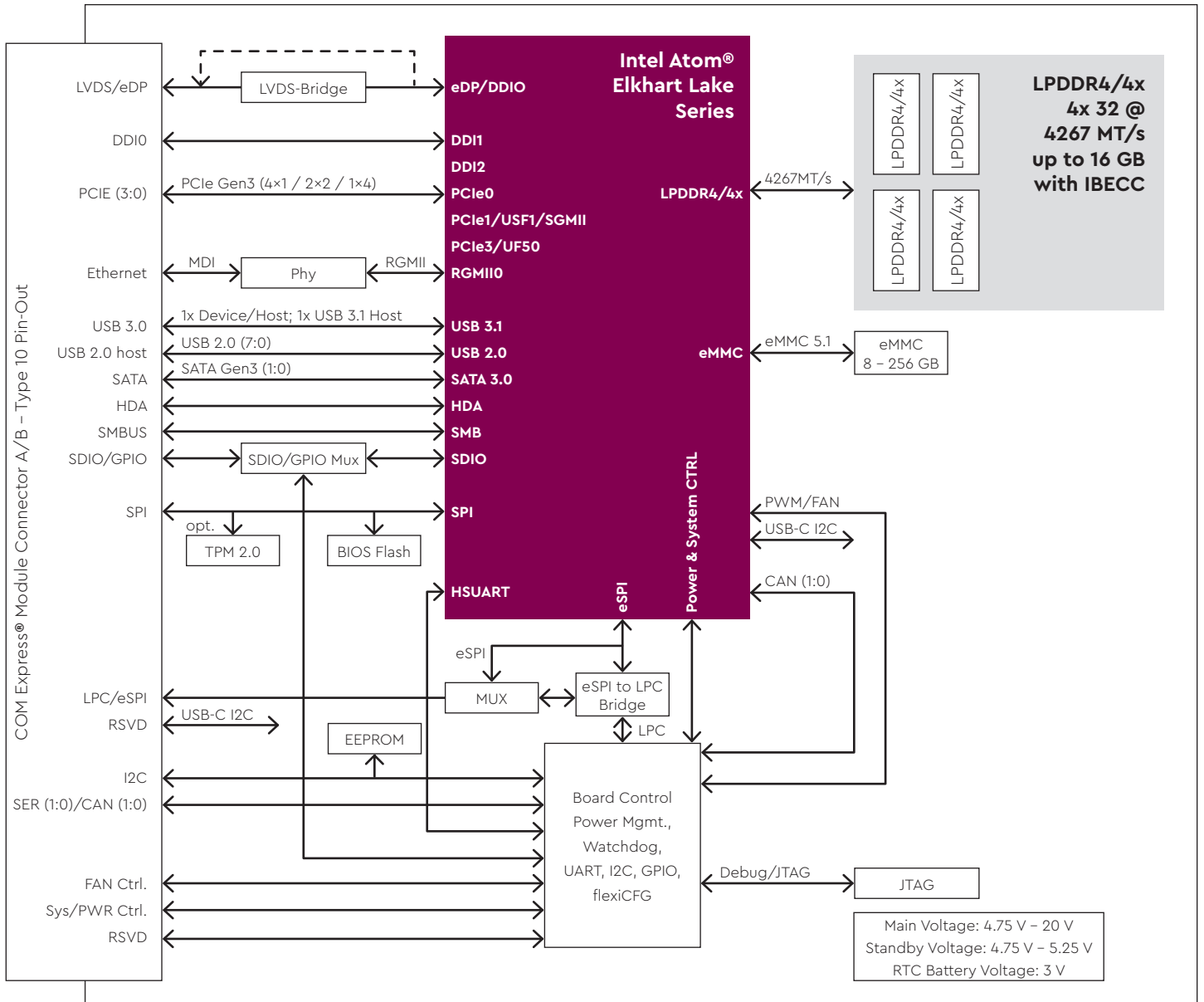
HIGHLIGHTS

- ▶ 6th Generation Intel Atom® x6000E Series processors ("Elkhart Lake")
- ▶ Dual/Quad core computing power with up to 3.0 GHz
- ▶ Up to 16 GB LPDDR4/4x soldered with inband ECC (option)
- ▶ 1x Gbit Ethernet
- ▶ 2x USB 3.2 (Gen2) and 8x USB 2.0
- ▶ Up to 4 PCIe lanes (Gen3)
- ▶ Dual Display support with DP (4K) and eDP (4K) or LVDS (Single Channel)
- ▶ Up to 256 GB eMMC Flash, soldered
- ▶ Extended temperature support from -40°C...+85°C

TECHNICAL SPECIFICATION

CPU	Intel Atom® x6000E x6211E (2-Core, 1.3/3.0 GHz, 1.5 MB, 16 EU, Turbo, 6 W TDP) x6413E (4-Core, 1.5/3.0 GHz, 1.5 MB, 16 EU, Turbo, 9 W TDP) x6425E (4-Core, 2.0/3.0 GHz, 1.5 MB, 32 EU, Turbo, 12 W TDP) x6212RE (2-Core, 1.2 GHz, 1.5 MB, 16 EU, 24/7, RT, 6 W TDP) x6414RE (4-Core, 1.5 GHz, 1.5 MB, 16 EU, 24/7, RT, 9 W TDP) x6425RE (4-Core, 1.9 GHz, 1.5 MB, 32 EU, 24/7, RT, 12 W TDP) Intel® Pentium® and Celeron® N and J Series processors on request	
Memory	LPDDR4/4x: 4, 8, 16 GB with IBECC	
eMMC	8 – 256 GB	
EEPROM	32-kbit	
Graphics	1x eDP (4K @ 60 Hz) or Single Channel LVDS (18/24 bit) 1x DP++ / Digital Display Interface (DDI) (4K @ 60 Hz)	
Interfaces	1x Gbit Ethernet, IEEE 1588 Trigger signal 2x USB 3.2 (Gen2) 8x USB 2.0	
Security components	TPM 2.0 (SLM9670 TPM 2.0) (configuration option)	
Others	TQMx86 board controller with watch-dog and flexiCFG Hardware monitor	
Peripheral interfaces	2x SATA 3.0 (up to 6 Gb/s) 4x PCIe 3.0 (up to 8 Gb/s) 1x LPC/eSPI 1x Intel HD audio (HDA) 1x I2C 1x SMBus 1x SPI (for external uEFI BIOS flash) 2x Serial port (2x Rx/Tx, 2x RTS/CTS optional through TQ flexiCFG)/2x CAN 1x SD card/8x GPIO	
Power supply	Main Voltage: 4.75 V – 20 V Standby Voltage: 4.75 V – 5.25 V RTC Battery Voltage: 3 V Power: typ. 3 – 8 W/max. 14 W (Green ECO-Off: < 0.1 W)	
Environment	Standard temperature: 0°C...+60°C Extended temperature: -40°C...+85°C	
Form factor/ dimensions	COM Express® Mini, type 10, 84 mm x 55 mm	

BLOCK DIAGRAM TQMxE40M



ORDERING INFORMATION

TQMxE40M-AA	Intel Atom® x6425RE, 8 GB LPDDR4x, 32 GB eMMC, eDP, TPM 2.0, -40°C...+85°C
TQMxE40M-AB	Intel Atom® x6414RE, 8 GB LPDDR4x, 32 GB eMMC, LVDS, TPM 2.0, -40°C...+85°C
TQMxE40M-AC	Intel Atom® x6212RE, 4 GB LPDDR4x, 16 GB eMMC, eDP, TPM 2.0, -40°C...+85°C
TQMxE40M-AD	Intel Atom® x6425E, 16 GB LPDDR4x, 0 eMMC, LVDS, TPM 2.0, -40°C...+85°C
TQMxE40M-AE	Intel Atom® x6413E, 8 GB LPDDR4x, 0 eMMC, eDP, TPM 2.0, -40°C...+85°C
TQMxE40M-AF	Intel Atom® x6211E, 8 GB LPDDR4x, 32 GB eMMC, LVDS, TPM 2.0, -40°C...+85°C

Other configurations on request (incl. Intel® Celeron® N6211, J6413, Intel® Pentium® N6415, J6426)

TQ-Systems GmbH

Mühlstraße 2 | Gut Delling | 82229 Seefeld | Germany
 Tel.: +49 8153 9308-0 | info@tq-group.com | tq-group.com

tq-embedded.com