

# TQMxE40C1

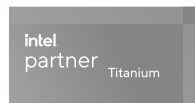
x86 Family



**COM Express® Compact Type 6 Module with Intel Atom® x6000E Series processors ("Elkhart Lake").**

Based on

**COM Express**



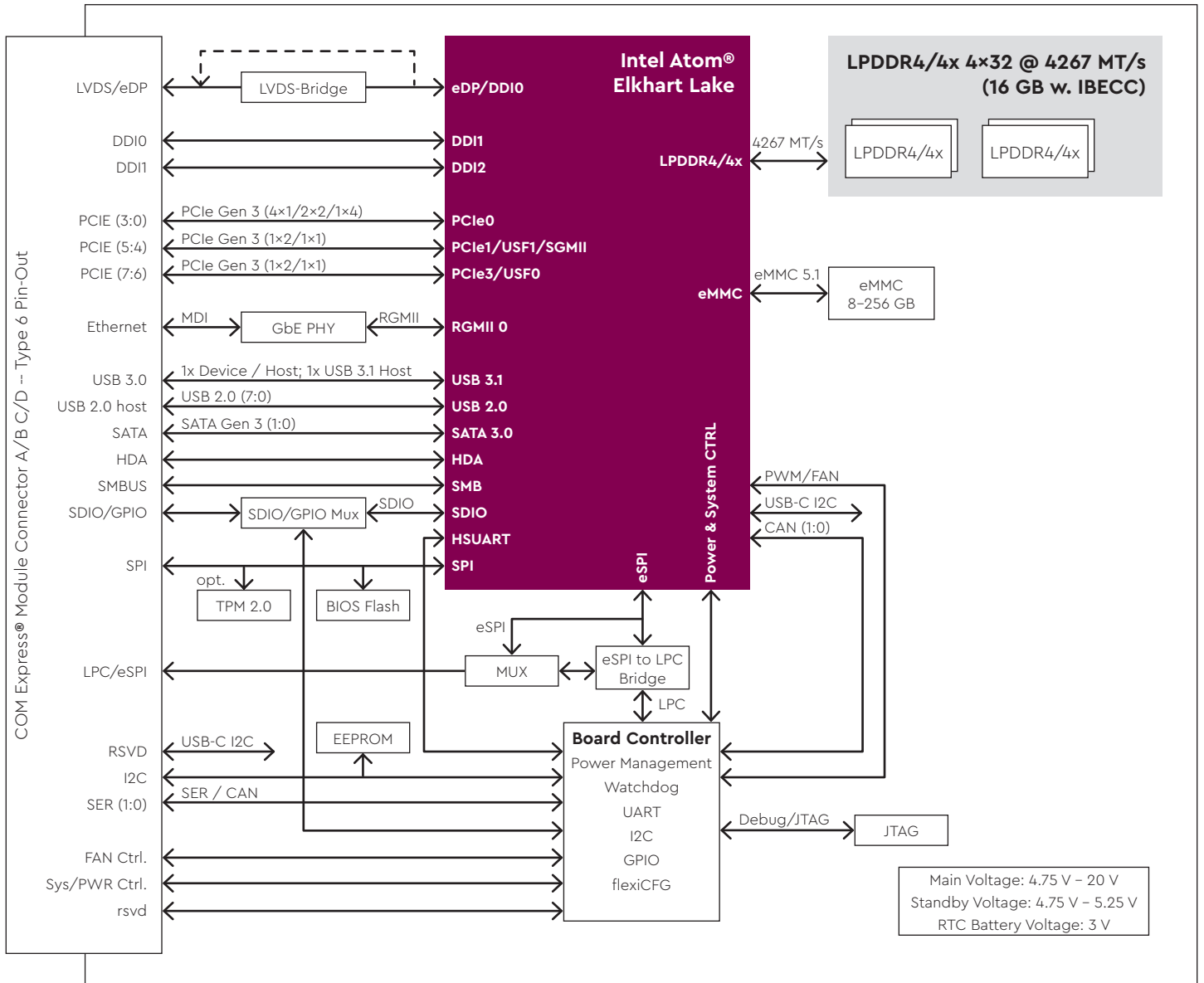
## HIGHLIGHTS

- ▶ 6<sup>th</sup> Generation Intel Atom® x6000E Series processors ("Elkhart Lake")
- ▶ Dual/Quad core computing power with up to 3.0 GHz
- ▶ Up to 16 GB soldered LPDDR4/4x with inband ECC (option)
- ▶ 1x Gbit Ethernet
- ▶ 2x USB 3.2 (Gen2), 8x USB 2.0 and 8x PCIe (Gen3)
- ▶ Triple display support with 2x DP++ (4K) and eDP (4K)/LVDS (Dual Channel)
- ▶ Extended Temperature support from -40°C to +85°C
- ▶ Highest reliability, 24/7 certified
- ▶ On custom request: conformal coating

## TECHNICAL SPECIFICATION

<b>CPU</b>	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	<b>Security components</b>	TPM 2.0 (SLM9670 TPM 2.0) (configuration option)
<b>Memory</b>	Soldered LPDDR4/4x: 4, 8, 16 GB with IBCECC eMMC: 8-256 GB EEPROM: 32-kbit	<b>Others</b>	TQMx86 board controller with watch-dog and flexiCFG Hardware monitor
<b>Graphics</b>	1x eDP (4K @ 60 Hz) or Dual Channel LVDS (18/24 bit) 2x DP++ / Digital Display Interface (DDI) (4K @ 60 Hz)	<b>Peripheral interfaces</b>	2x SATA 3.0 (up to 6 Gb/s) 8x PCIe 3.0 (up to 8 Gb/s) 1x LPC bus / eSPI 1x Intel HD audio (HDA) 1x I2C 2x CAN 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
<b>Interfaces</b>	1x Gbit Ethernet, IEEE 1588 Trigger signal 2x USB 3.2 (Gen 2) 8x USB 2.0	<b>Power supply</b>	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)
		<b>Environment</b>	Standard temperature: 0°C ...+60°C Extended temperature: -40°...+85°C
		<b>Form factor/ dimensions</b>	COM Express® Compact, Type 6, 95 mm x 95 mm

## BLOCK DIAGRAM TQMxE40C1



## ORDERING INFORMATION

<b>TQMxE40C1-AA</b>	Intel Atom® x6425RE, 8 GB LPDDR4x, 32 GB eMMC, LVDS, TPM 2.0, -40°C...+85°C
<b>TQMxE40C1-AB</b>	Intel Atom® x6414RE, 8 GB LPDDR4x, 32 GB eMMC, LVDS, TPM 2.0, -40°C...+85°C
<b>TQMxE40C1-AC</b>	Intel Atom® x6212RE, 4 GB LPDDR4x, 16 GB eMMC, LVDS, TPM 2.0, -40°C...+85°C
<b>TQMxE40C1-AD</b>	Intel Atom® x6425E, 16 GB LPDDR4x, 0 eMMC, LVDS, TPM 2.0, -40°C...+85°C
<b>TQMxE40C1-AE</b>	Intel Atom® x6413E, 8 GB LPDDR4x, 0 eMMC, LVDS, TPM 2.0, -40°C...+85°C
<b>TQMxE40C1-AF</b>	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)

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