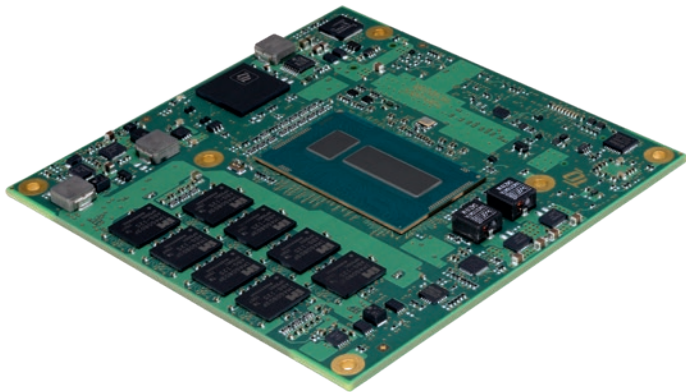


TQMx50UC

x86 Family



COM Express® Compact Type 6 Module with Intel® Core™ (5th Generation) 5000U series („Broadwell-U“).

Based on

COM Express

intel Technology
Provider
Platinum 2018

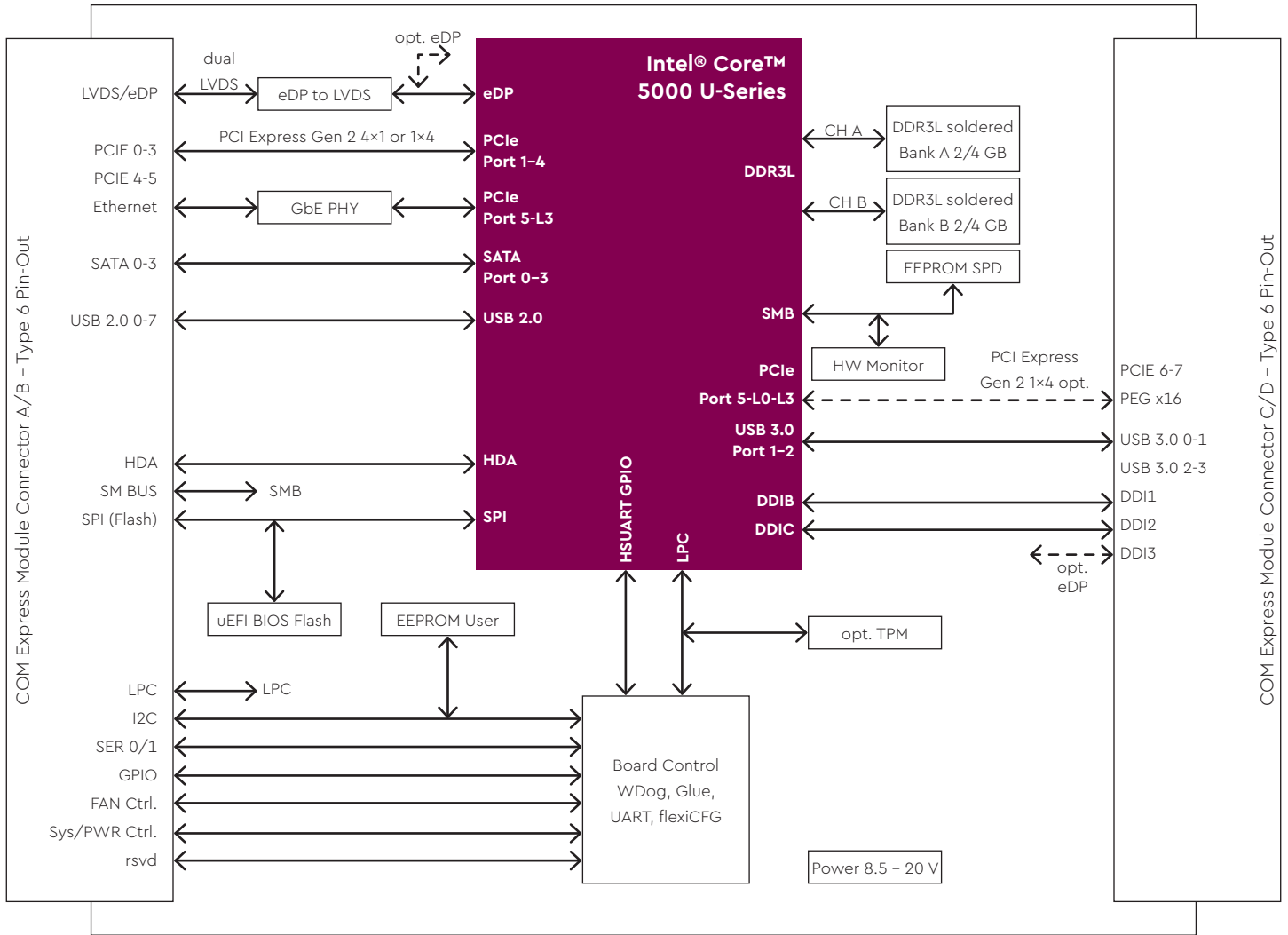
HIGHLIGHTS

- ▶ Intel® Core™ 5000U series („Broadwell-U“) with up to 3.2 GHz/4 MB cache
- ▶ Up to 16 GB DDR3L on board memory
- ▶ Best Performance-per-Watt ratio (15 W TDP)
- ▶ Feature-rich uEFI BIOS with easy-config, multisetup and touch support
- ▶ TQMx86 board controller with flexible customization options (flexiCFG)
- ▶ TPM 1.2/2.0
- ▶ iRTC (highly accurate industrial real time clock)
- ▶ "Green ECO-Off" (minimum of standby power)
- ▶ Watchdog und thermal management
- ▶ Highest reliability, 24/7 certified
- ▶ Rugged design/Conformal coating capability
- ▶ Quality Made-in-Germany

TECHNICAL SPECIFICATION

CPU	Intel® Core™ 5000U series („Broadwell-U“) i7-5650U: 2x 2.2 GHz/3.2 GHz Turbo, 4 MB Cache, HD6000 i5-5350U: 2x 1.8 GHz/2.9 GHz Turbo, 3 MB Cache, HD6000 i3-5010U: 2x 2.1 GHz, 3 MB Cache, HD5500 Celeron® 3765U: 2x 1.9GHz/no Turbo, 2MB Cache, 5 th Gen HD graphics Hyper-Threading and Virtualization support 15 W TDP max. (configurable down to 9.5/10 W)	Interfaces	1x Gbit ethernet (Intel® i218-LM) with IEEE1588 2x USB 3.0 (with USB 2.0 backward compatibility) 8x USB 2.0 (incl. USB 3.0 ports) 4x SATA Gen 3 (up to 6 Gb/s) 4x PCIe 2.0 (up to 5 Gb/s) (4 × 1 or 1 × 4) 1x LPC bus 1x Intel® HD audio (HDA) 1x I2C, (2nd I2C optional) (master/slave capable) 1x SMBus 1x SPI (for external uEFI BIOS flash) 2x Serial Port (Rx/Tx, legacy compatible) 8x GPIO
Memory	DDR3L-1600: 4 GB, 8 GB, 16 GB, soldered down EEPROM: 32-kbit (24LC32)	Power supply	Voltage: 8.5 V – 20 V 5 V Standby (optional) 3 V battery/GoldCAP on carrier (optional) Power: typ. 10 W/max. 18 W (Green ECO-Off: < 0.1 W)
Graphics	Three independent display outputs: 2x Digital Display Interface/DP++ with up to 4K @ 60 Hz LVDS Interface (18/24-bit, Single/Dual Channel), up to 4K (optional eDP 1.3 with 4 lanes instead of LVDS) Intel® Quick Sync Video and Wireless Display support	Environment	Temperature: 0°C...+60°C -40°C...+85°C (on request)
Additional components and controller	TPM (SLB9660 TPM 1.2, alternatively SLB9665 TPM 2.0) TQMx86 board controller with watchdog and flexiCFG Industrial real time clock (iRTC) with high accuracy Hardware monitor for thermal management	Form factor/ dimensions	COM Express™ Compact, type 6, PICMG COM.0 R2.1 95 mm x 95 mm

BLOCK DIAGRAM TQMX50UC



ORDERING INFORMATION

TQMx50UC-AD	Intel® Celeron® 3765U (2x 1.9GHz, 2MB Cache, HD Gfx), 4GB DDR3L-1600, Standard-Temp. 0..+60°C
TQMx50UC-AA	Intel® Core™ i3-5010U (2x 2.1GHz, 3MB Cache, HD5500 Gfx), 4GB DDR3L-1600, Standard-Temp. 0..+60°C
TQMx50UC-AB	Intel® Core™ i5-5350U (2x 1.8GHz / 2.9GHz Turbo, 3MB Cache, HD6000 Gfx), 4GB DDR3L-1600, TPM, Standard-Temp. 0..+60°C
TQMx50UC-AC	Intel® Core™ i7-5650U (2x 2.2GHz / 3.2GHz Turbo, 4MB Cache, HD6000 Gfx), 8GB DDR3L-1600, TPM, Standard-Temp. 0..+60°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
STKx50UC	Starterkit Set with Mainboard MB-COME6-1, Module (TQMx50UC-xx) (please specify exact Version), Cooling solution (Heat spreader), Accessories

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