

TQMxCU1-HPCM (preliminary)

x86 Family



COM-HPC® Mini Module with Intel® Core™ Ultra Processors (Series 1)

Based on

COM+HPC®



HIGHLIGHTS

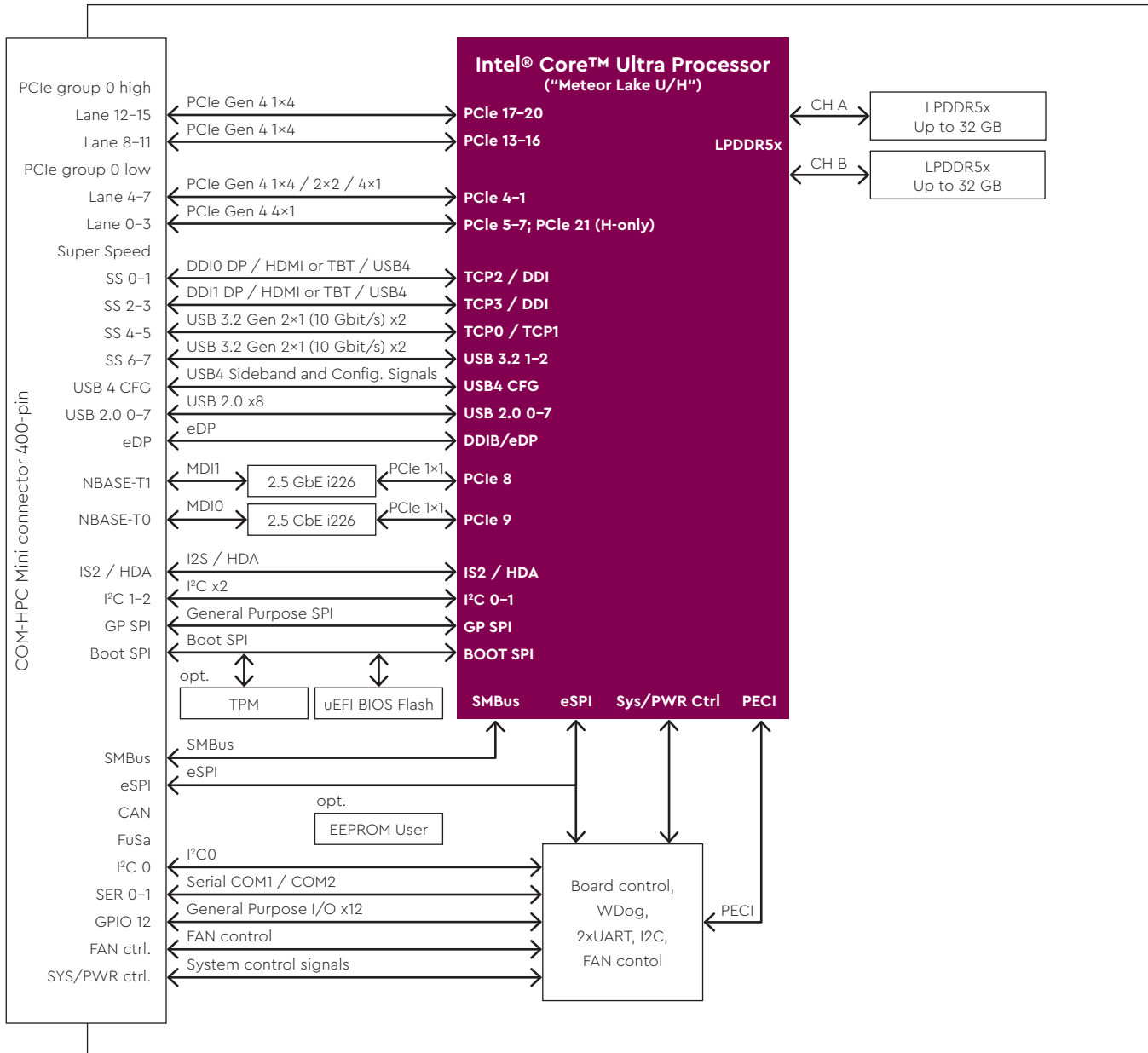
- ▶ Intel® Core™ Ultra 7 and Intel® Core™ Ultra 5 with 15 W / 28 W TDP (Codename: "Meteor Lake U/H")
- ▶ New Chiplet-Technology for optimized high-speed interconnect and improved power efficiency
- ▶ Up to 16 CPU Cores based on Intel® Hybrid-Technology with various combinations of Performance-Cores and Efficient-Cores
- ▶ Deliver stunning graphics and AI-focused performance
- ▶ High-bandwidth extendability through up to 16 PCIe Gen4/5 lanes
- ▶ High-speed peripheral and network interfaces with USB 3.2 Gen2 (10 Gb/s) and 2x 2.5 Gigabit Ethernet
- ▶ USB 4 / USB-C support
- ▶ COM-HPC® Mini formfactor for extremely compact integration

TECHNICAL SPECIFICATION

CPU	Intel® Core™ Ultra 7 Processor 165H (6P+8E, up to 5 GHz / 128 EU / 24 MB / 28 W) Intel® Core™ Ultra 7 Processor 155H (6P+8E, up to 4.8 GHz / 128 EU / 24 MB / 28 W) Intel® Core™ Ultra 5 Processor 135H (4P+8E, up to 4.6 GHz / 128 EU / 18 MB / 28 W) Intel® Core™ Ultra 5 Processor 125H (4P+8E, up to 4.5 GHz / 112 EU / 18 MB / 28 W) Intel® Core™ Ultra 7 Processor 165U (2P+8E, up to 4.9 GHz / 64 EU / 12 MB / 15 W) Intel® Core™ Ultra 7 Processor 155U (2P+8E, up to 4.8 GHz / 64 EU / 12 MB / 15 W) Intel® Core™ Ultra 5 Processor 135U (2P+8E, up to 4.4 GHz / 64 EU / 12 MB / 15 W) Intel® Core™ Ultra 5 Processor 125U (2P+8E, up to 4.3 GHz / 64 EU / 12 MB / 15 W)
Memory	LPDDR5x: 16 / 32 / 64 GB EEPROM: 32 kbit (24AA32) (option)
Graphics	2x DDI (DP 1.4b / HDMI 2.1) (up to 2x8K) 1x eDP 1.4b
AI support	Integrated NPU, Built-in Intel® Arc™ GPU Intel Deep Learning Boost, OpenVINO support

Additional components and controller	1x TPM 2.0 (SLB9672) (opt.) / firmware TPM TQMx86 board controller Hardware monitor for thermal management
Interfaces	2x 2.5 Gigabit Ethernet (Intel® i226) 4x USB 3.2 Gen2 (up to 10 Gb/s) 8x USB 2.0 Four PCIe groups with up to 16 PCIe lanes - PCIe x4 - PCIe x4 - PCIe x1/x1/x1/x1 or x2/x2 or x4 - PCIe x1/x1/x1/(x1) 2x SATA (multiplexed with PCIe) COM-HPC Mini Super-Speed Config1 + Config2 Support (incl. USB4/USB-C) HDA, eSPI, I2C, 2x UART, SMBus, div. 12x GPIO
Power supply	Voltage: 12 V, 3 V battery Power: typ. 10...35 W / max. 78 W (preliminary)
Environment	Standard temperature: 0°C...+60°C
Form factor/ dimensions	COM-HPC® Mini 95 mm x 70 mm

BLOCK DIAGRAM TQMXCU1-HPCM



ORDERING INFORMATION

Standard configurations are listed on the website. Custom specific configurations on request.

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