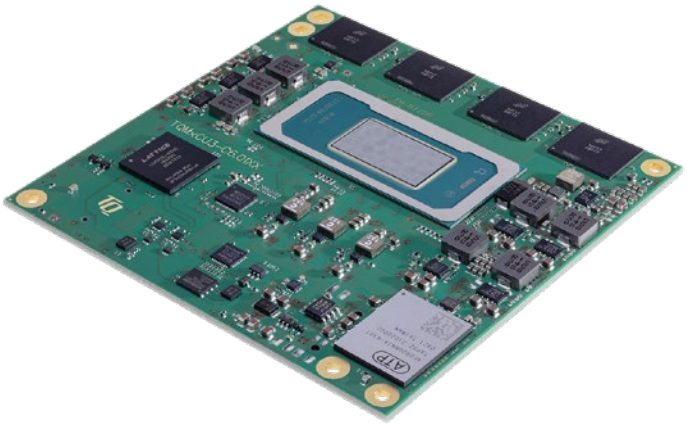
# TQMxCU3-C6

## x86 Family



**COM Express® Compact Module with Intel® Core™ Ultra Processors (Series 3) ("Panther Lake")**

## HIGHLIGHTS

- High-performance COM Express Compact module for industrial and embedded applications
- Intel® Core™ Ultra Series 3 processors (Intel Panther Lake)
- Intel® Arc Graphics or Intel Graphics
- AI-ready solution with comprehensive I/O and connectivity
- COM Express® Type 6 Rev. 3.1
- Robust and reliable industrial design with extended temperature support

Based on

COM Express®

intel partner

## TECHNICAL SPECIFICATION

### Supported CPUs

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|---|---|
| **Intel Core Ultra Series 3 C-Temp. use condition** | H484 12Xe CT:<br>Intel® Core™ Ultra X9 processor 388H<br>Intel® Core™ Ultra X7 processor 358HR<br>Intel® Core™ Ultra X7 processor 368H<br>Intel® Core™ Ultra X7 processor 358H<br>Intel® Core™ Ultra 5 processor 338H<br>H484 4Xe CT:<br>Intel® Core™ Ultra 9 processor 386H<br>Intel® Core™ Ultra 7 processor 366H<br>Intel® Core™ Ultra 7 processor 356H<br>Intel® Core™ Ultra 5 processor 336H<br>H404 4Xe CT:<br>Intel® Core™ Ultra 7 processor 365<br>Intel® Core™ Ultra 7 processor 355<br>Intel® Core™ Ultra 5 processor 335<br>Intel® Core™ Ultra 5 processor 325<br>Intel® Core™ Ultra 5 processor 332<br>Intel® Core™ Ultra 5 processor 322 |
| **Intel Core Ultra Series 3 I-Temp. use condition (available from Q4/26)** | H484 4Xe ET:<br>Intel® Core™ Ultra 7 processor 366HRE<br>Intel® Core™ Ultra 5 processor 336HRE<br>H404 4Xe ET:<br>Intel® Core™ Ultra 7 processor 365RE<br>Intel® Core™ Ultra 5 processor 335RE |
| **Memory/ DRAM** | LPDDR5x: 16 / 32 / 64 GB<br>(with up into 8533 MT/s) |

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| **Graphics** | Intel® Arc Graphics with up to 12 Xe cores or Intel Graphics with up to 4 Xe cores<br>Up to 4 independent display outputs:<br>Up to 3x DDI (DP 1.4b / HDMI 2.1) (up to 8K)<br>1x Dual-channel LVDS or eDP (1.4b) (up to 4K) |
| **AI support** | Integrated NPU, Built-in Intel® Arc™ GPU<br>Intel Deep Learning Boost, OpenVINO support |
| **Mass storage** | NVMe BGA SSD, PCIe Gen4 x2 (on-board option), up to 1 TB capacity |
| **Networking** | 1x 2.5 Gigabit Ethernet (Intel® I226)<br>supporting TSN – Time Sensitive Networking<br>(on selected product variants) |

### Interfaces

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| **USB** | Up to 4x USB 3.2 Gen2 (up to 10 Gb/s),<br>1x shared with DDI; 8x USB 2.0 |
| **PCIe/ PEG** | Up to 16 PCIe lanes (with up to 16Gb/s per lane)<br>PCIe **x1/ x1/ x2**** or x1/x1/x1/x1 or x2 /x2 or x4 (Gen4)<br>PCIe x1/ x1/ x2 or x1/x1/x1/x1 or x2 /x2 or **x4**** (Gen4)<br>PEG*: **x8**** or x4 /x4 (Gen5 capable)<br>* only with CPUs supporting 20x PCIe<br>** default configuration |
| **Audio** | HDA (digital audio interface) |
| **Serial ports** | 2x UART |
| **Other interfaces** | eSPI/LPC, I2C, SMBus, SPI, 8x GPIO<br>2x MIPI-CSI (1x 2 lanes / 1x 4 lanes) (optional) |

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| **Security** | 1x TPM 2.0 (SLB9672) (opt.) / firmware TPM |
| **Additional Components/ Controller** | TQMx86 board controller with watchdog<br>Hardware monitor for thermal mananagement |
| **Power Supply** | Voltage:<br>12 V (8,5...20 V DC), 3 V battery<br>Power consumption:<br>typ. 12...45 W / max. 90 W (preliminary) |

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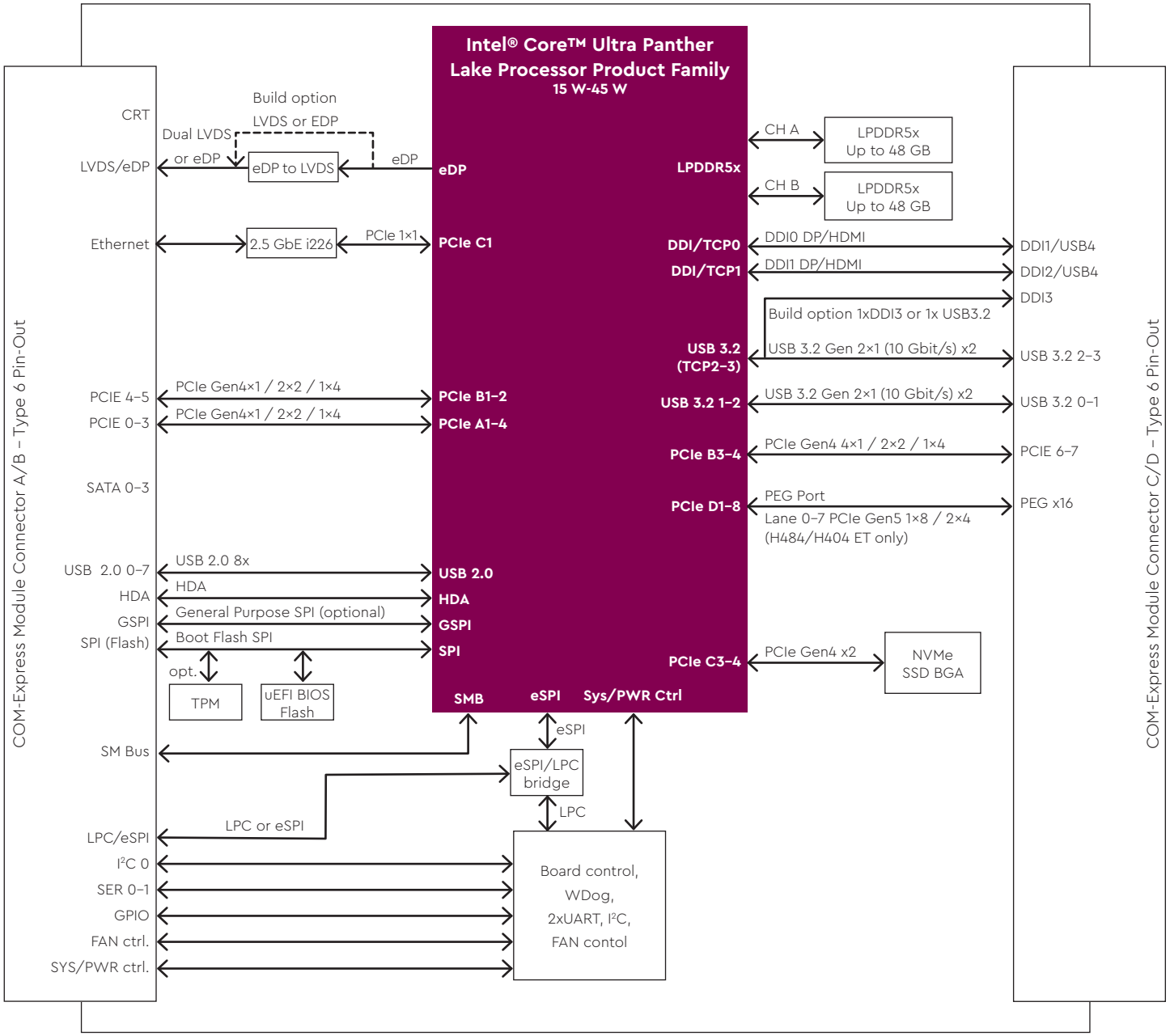
| **Environment conditions** | Standard temperature: 0 °C ... +60 °C<br>(Tjunction CPU: max. +100 °C)<br>Industrial temperature: -40 °C...+85 °C (opt.)<br>(Tjunction CPU: max. +100 °C)<br>Storage temperature: -40 °C ... +85 °C |
| **Formfactor/ Dimensions** | COM Express Compact, Type 6, Rev. 3.1<br>95 mm x 95 mm |
| **Operating systems** | Microsoft Windows 11 IoT Enterprise LTSC<br>BSP for Linux (Yocto/ Ubuntu) |

## BLOCK DIAGRAM TQMXCU3-C6




## ORDERING INFORMATION

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

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