

# INDUSTRIAL PICO-ITX

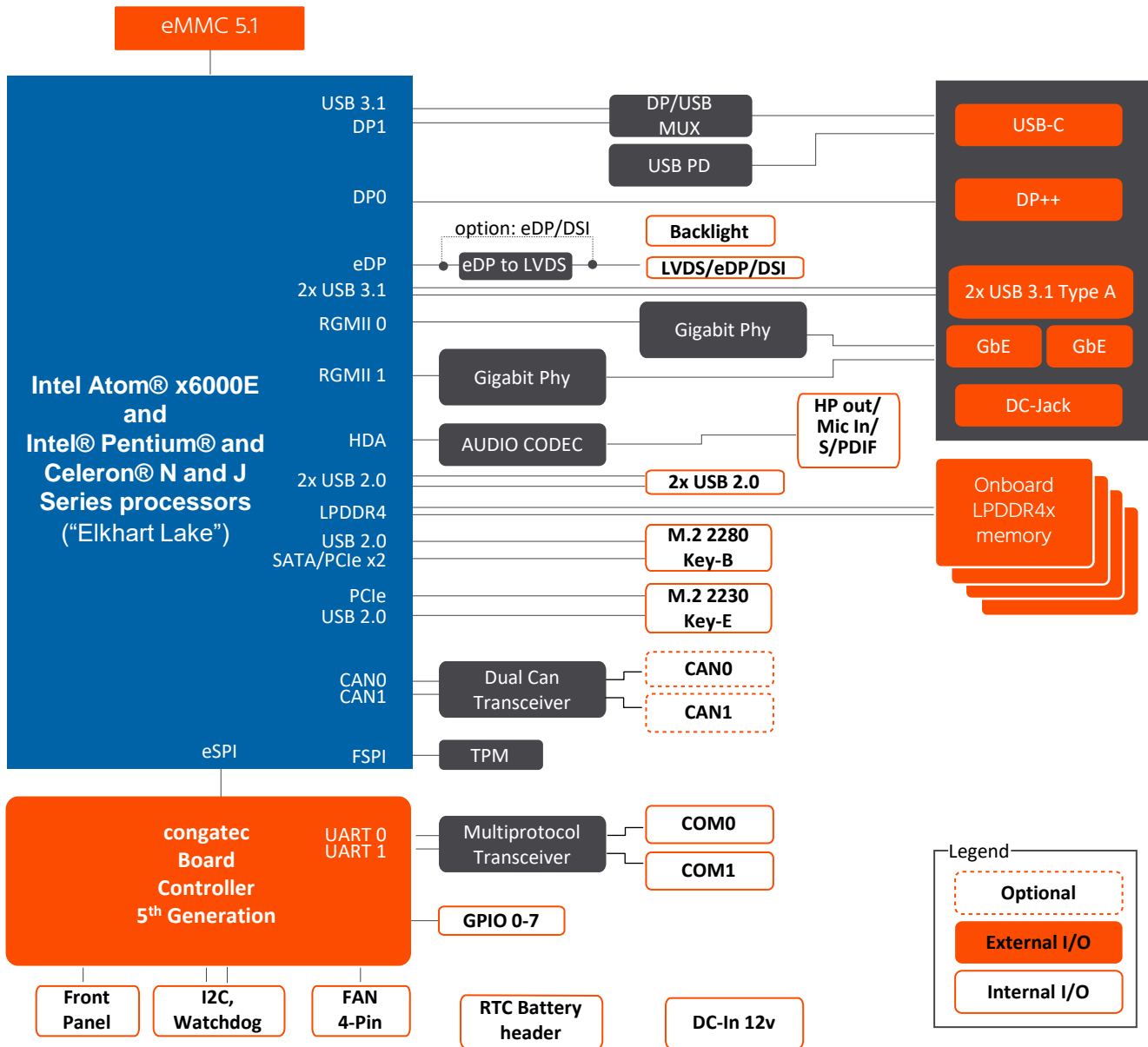
## conga-PA7



- Pico-ITX SBC based on Intel Atom® x6000E Series and Intel® Pentium® and Celeron® J and N Series processors
- High performance Intel® UHD Graphics (Gen11)
- Options for Industrial Temperature Range -40°C to 85°C
- Options for Time Sensitive Networking and Time Coordinated Computing for improved Realtime Capability
- Up to 4.267 MT/s Memory Support

|                                  |  |                                     |               |                                   |           |                     |
|----------------------------------|--|-------------------------------------|---------------|-----------------------------------|-----------|---------------------|
| <b>Form Factor</b>               | Pico-ITX Single Board Computer   100 x 72 mm   |                                     |               |                                   |           |                     |
| <b>CPU</b>                       | Processor  | TDP                                 | Cores/Threads | Base Frequency/max. Turbo         | Gfx Gen11 | Intel Use Condition |
|                                  | J6413  | 10W                                 | 4 / 4         | 1.8 GHz / 3.0 GHz                 | 16 EU     | PC Client           |
|                                  | J6426  | 10W                                 | 4 / 4         | 2.0 GHz / 3.0 GHz                 | 32 EU     | PC Client           |
|                                  | x6211E   | 6W                                  | 2 / 2         | 1.3 GHz / 3.0 GHz                 | 16 EU     | Embedded            |
|                                  | x6413E   | 9W                                  | 4 / 4         | 1.5 GHz / 3.0 GHz                 | 16 EU     | Embedded            |
|                                  | x6425E   | 12W                                 | 4 / 4         | 2.0 GHz / 3.0 GHz                 | 32 EU     | Embedded            |
|                                  | x6212RE  | 6W                                  | 2 / 2         | 1.2 GHz / ---                     | 16 EU     | Industrial          |
|                                  | x6414RE  | 9W                                  | 4 / 4         | 1.5 GHz / ---                     | 16 EU     | Industrial          |
|                                  | x6425RE  | 12W                                 | 4 / 4         | 1.9 GHz / ---                     | 32 EU     | Industrial          |
| <b>DRAM</b>                      | up to 4 Channels onboard LPDDR4x with up to 4,267 MT/s   max. system capacity 16 GB  |                                     |               |                                   |           |                     |
| <b>Chipset</b>                   | Integrated in SoC  |                                     |               |                                   |           |                     |
| <b>Ethernet</b>                  | 2x LAN Gbit / 100 Mbit / 10 Mbit with TSN support and Out-Of-Band Management   2x real-time trigger  |                                     |               |                                   |           |                     |
| <b>Mass Storage</b>              | eMMC 5.1 onboard flash up to 64 GB (optional up to 128 GB)   |                                     |               |                                   |           |                     |
| <b>Audio</b>                     | Intel® HD Audio  |                                     |               |                                   |           |                     |
| <b>Graphics</b>                  | Intel® UHD Graphics (Gen11)  |                                     |               |                                   |           |                     |
| <b>Internal Connectors</b>       | 2x USB 2.0   1x LVDS 18/24bit or eDP (opt) or MIPI-DSI (opt)   1x Backlight power connector (5V, 12V)   1x Audio Connector (HP/Line Out, MIC In, S/PDIF, opt. DMIC)   1x Power In (+12V)   2x COM (RS232/422/485)   1x Fan Connector with PWM   3x Feature Connector   1x M.2 key ID B type 2280 (2 PCIe lanes/SATA, USB 2.0)   1x M.2 key ID E (1 PCIe lane, USB 2.0)   2x CAN (opt.) |                                     |               |                                   |           |                     |
| <b>External Connectors</b>       | 1x DisplayPort DP++   2x LAN RJ45   1x USB 3.1 Gen2 Type C (with Power Delivery and DP)   2x USB 3.1 Gen2 Type A   1x DC-In  |                                     |               |                                   |           |                     |
| <b>congatec Board controller</b> | Multistage watchdog   non-volatile user data storage   manufacturing and board Information   board statistics   fast mode and multi-master I <sup>2</sup> C bus   power loss control   |                                     |               |                                   |           |                     |
| <b>Embedded BIOS Feature</b>     | AMI Aptio® UEFI firmware   32 Mbyte serial SPI with congatec Embedded BIOS features   OEM Logo   OEM CMOS Defaults LCD Control   Display Auto Detection   Backlight Control   Flash Update   |                                     |               |                                   |           |                     |
| <b>Security</b>                  | TPM 2.0  |                                     |               |                                   |           |                     |
| <b>Power Management</b>          | ACPI 5.0 compliant   Smart Battery Management  |                                     |               |                                   |           |                     |
| <b>Operating Systems</b>         | Microsoft® Windows 10   Microsoft® Windows 10 IoT Enterprise   Linux   Android   Yocto   RTS Hypervisor  |                                     |               |                                   |           |                     |
| <b>Power Consumption</b>         | tbd.   see manual for full details   |                                     |               |                                   |           |                     |
| <b>Temperature Range</b>         | Commercial:  | Operating Temperature: 0 to +60°C   |               | Storage Temperature: -20 to +85°C |           |                     |
|                                  | Industrial:  | Operating Temperature: -40 to +85°C |               | Storage Temperature: -40 to +85°C |           |                     |
| <b>Humidity</b>                  | Operating:   | 10 to 90% r. H. non cond.           |               |                                   |           |                     |
|                                  | Storage:   | 5 to 95% r. H. non cond.            |               |                                   |           |                     |
| <b>Size</b>                      | 100 x 72 mm (approx. 3.9 x 2.8")   |                                     |               |                                   |           |                     |

# conga-PA7 | Block Diagram



Note: \* Assembly options on request only