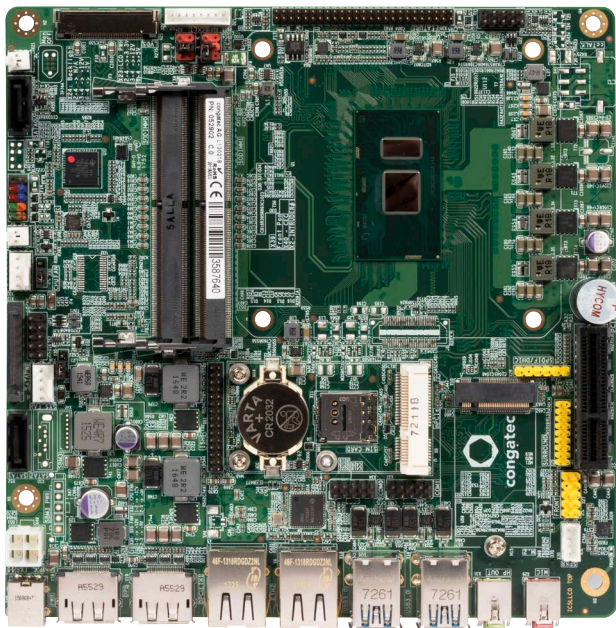


# INDUSTRIAL THIN MINI-ITX

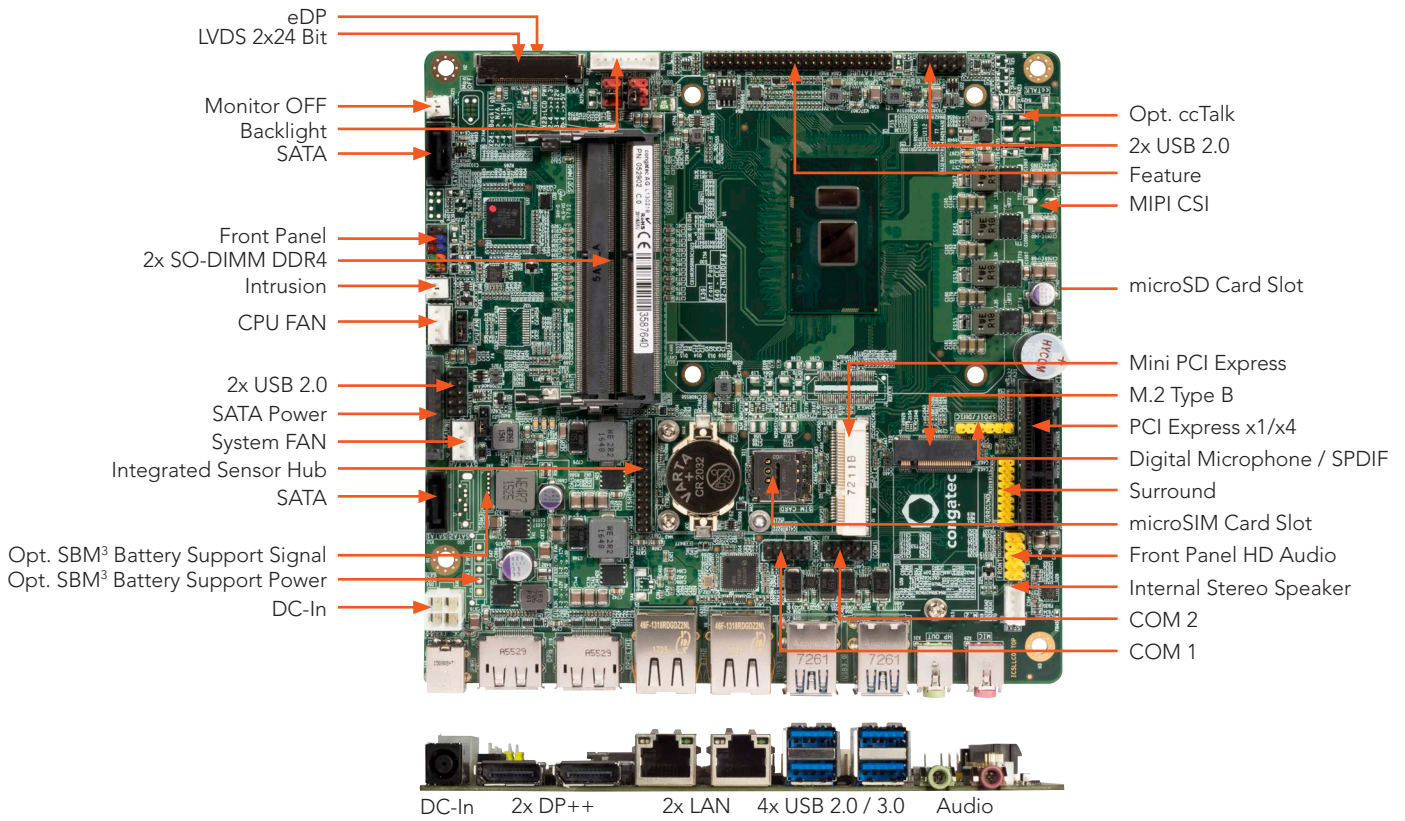
## conga-IC175



- Highest Performance Thin Mini-ITX board
- 7<sup>th</sup> Generation Intel® Core™ Mobile SOC U-Processors
- Improved Graphics Performance with HD600 Series
- Ready for Intel® Optane™ memory technology on M.2
- Wide Range Power Input 12-24 Volt
- congatec embedded Board Controller Features

Formfactor	Industrial Thin Mini-ITX   170 x 170 x 20 mm <sup>3</sup>						
CPU	Intel® Core™ i7-7600U	2.8 GHz Dual Core	Turbo Boost 3.9 GHz	4 MB Cache	15W TDP	7.5W cTDP	Intel® HD Graphics 620
	Intel® Core™ i5-7300U	2.6 GHz Dual Core	Turbo Boost 3.5 GHz	3 MB Cache	15W TDP	7.5W cTDP	Intel® HD Graphics 620
	Intel® Core™ i3-7100U	2.4 GHz Dual Core		3 MB Cache	15W TDP	7.5W cTDP	Intel® HD Graphics 620
	Intel® Celeron® 3965U	2.2 GHz Dual Core		2 MB Cache	15W TDP	10W cTDP	Intel® HD Graphics 610
	Intel® Turbo Boost Technology   Intel® Hyper-Threading Technology (HT)   Intel® Advanced Vector Extensions 2.0 (AVX2)   Intel® Advanced Encryption Standard New Instructions (AES-NI)   Integrated dual channel memory controller up to 34.1 GByte/sec. memory bandwidth   Integrated Intel® HD Graphics 600 series with dynamic frequency up to 1.15 GHz   Intel® Clear Video HD Technology   Intel® Virtualization Technology (VT)Intel® Trusted Execution Technology (TXT)   Intel® Streaming SIMD Extensions 4.2 (SSE4.2)   PCLMULQDQ Instruction   Intel® Secure Key Intel® Transactional Synchronization Extensions (TSX)						
DRAM Memory	Support for 2x SO DIMM Socket (dual channel DDR4 up to 2133 MT/s)   max. 2x 16 GByte						
Ethernet	Dual LAN Gbit / 100 Mbit / 10 Mbit; 1x Intel Gigabit Ethernet PHY i219LM (with AMT support); 1x Intel Gigabit Ethernet Controller i211 (i210 optional)						
Sound	High Definition Audio Interface   Realtek ALC 888S   7.1-channel						
Graphics	Next gen Intel® HD Graphics with OpenCL 2.0   OpenGL 4.X and DirectX12 support   up to three independent displays: DDI, DVI, DisplayPort 1.2   High performance hardware MPEG-2 decoding   WMV9 (VC-1) and H.264 (AVC) support						
Graphic Interfaces	1x 24-bit Dual Channel LVDS Interface or eDP (x4) and 2x DisplayPort (DP++)						
Internal Connectors	1x PCIe x4 slot (gen.3)   1x full/half-size Mini PCIe slot   M.2 key B 2242/3042 connector (2x PCIe lanes for Intel® Optane™ key) 3x SATA (6G), one shared with M.2   1x SATA power   4x USB 2.0   1x LVDS (2x24 bit)   1x Embedded DisplayPort (x4) 1x backlight (power & control)   1x monitor off   1x surround   1x front panel HD audio   1x Digital MIC or S/PDIF   1x internal stereo speaker 2x serial port (COM2 opt. as ccTALK)   1x feature connector (8 Bit general purpose I/O)   connector for Integrated Sensor Hub 1x front panel (power switch, LEDs, reset)   1x intrusion (case open)   1x fan CPU   1x fan system   1x internal power header (12-24 V)   1x CEC 1x microSIM card slot   1x microSD card slot   1x opt. battery header signal + power (SBM3)   1x I <sup>2</sup> C Bus						
congatec embedded Controller	Multi-Stage watchdog   Non-volatile user data storage   Manufacturing and board information   Board statistics   BIOS setup data backup I <sup>2</sup> C bus (fast mode, 400 kHz, multi-master)   Power loss control						
External Connectors (Rearpanel)	2x DisplayPort DP++   Audio In   Line Out   2x LAN RJ45   4x USB 3.0/2.0   1x DC-In (12-24 V)						
Embedded BIOS	AMI Aptio® 2.X (UEFI) BIOS; SM-BIOS   BIOS Update   Logo Boot   Quiet Boot   HDD Password						
Security	Discrete "Trusted Platform Module" (TPM 2.0) on board						
Power Specification	Power Management   ACPI S3/S4/DeepSx   Wake on time from S5   Power Supply 12-24 V   2 x fan (CPU / system) monitored & controlled						
Operating Systems	Microsoft® Windows 10 (64bit only)   Microsoft® Windows 10 IoT Enterprise (64bit only)   Linux						
Power Consumption	See manual for full details						
Temperature	Operating Temperature: 0 to +60°C			Storage Temperature: -20 to +70°C			
Humidity	Operating: 10 to 90% r. H. non cond.			Storage: 5 to 95% r. H. non cond.			
Size	170 x 170 x 20 mm <sup>3</sup>						

# conga-IC175 | Connectors



# conga-IC175 | Block diagram

