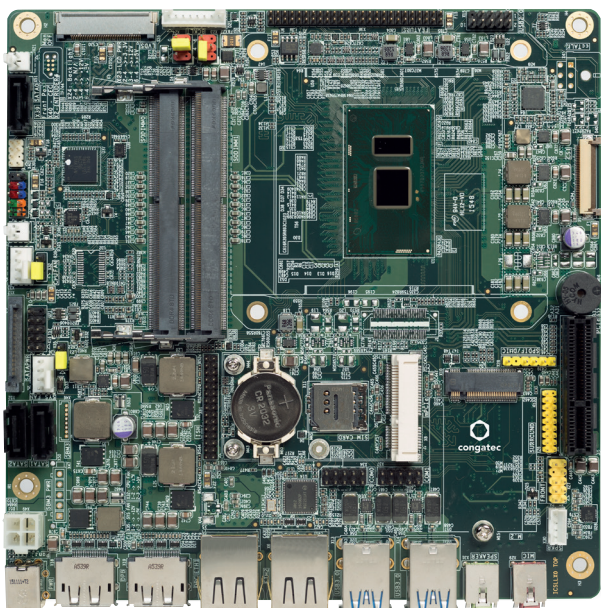


# INDUSTRIAL THIN MINI-ITX

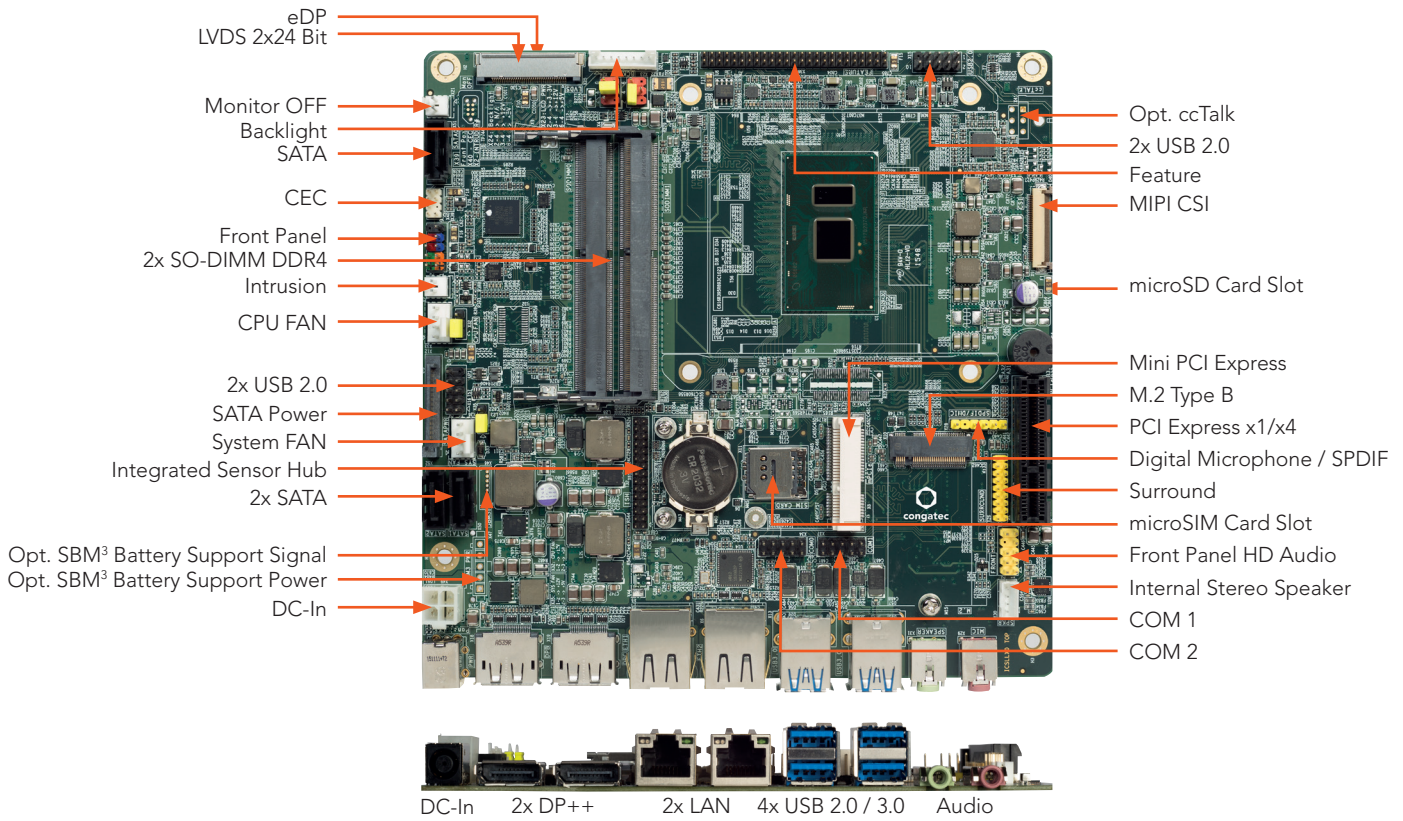
## conga-IC170



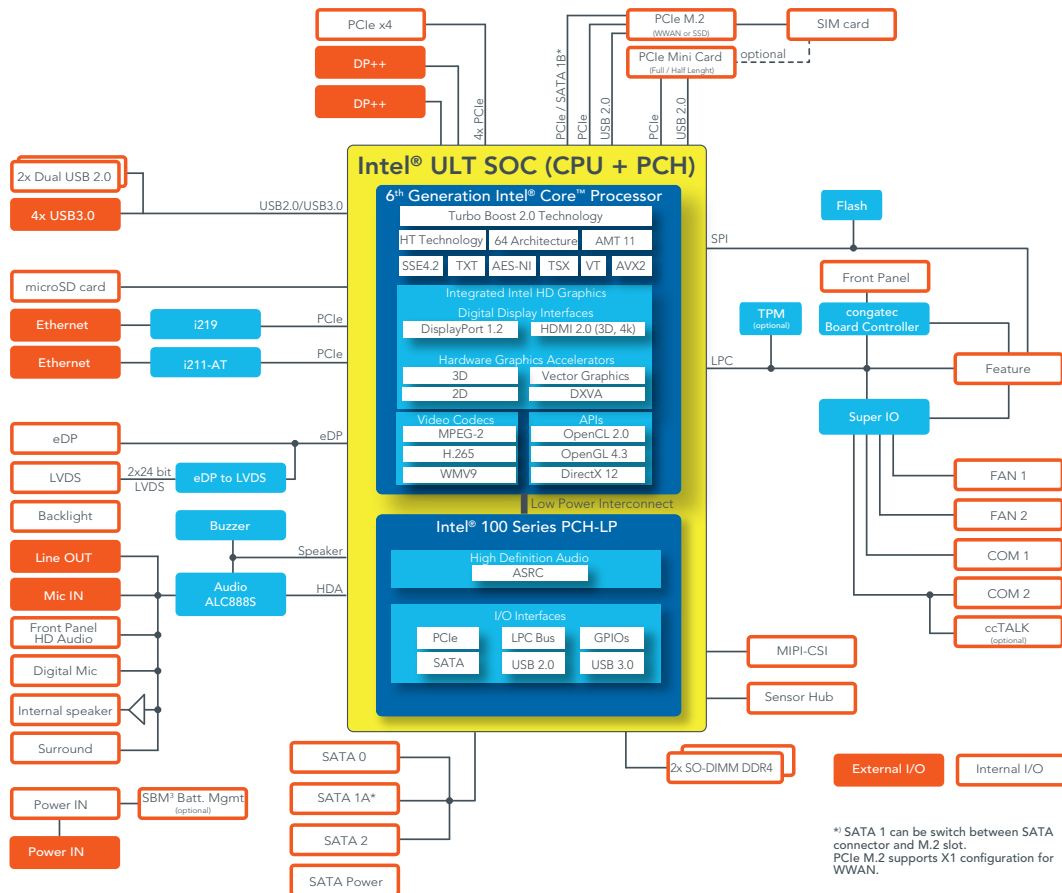
- Highest Performance Thin Mini-ITX board
- 6<sup>th</sup> Generation Intel® Core™ Mobile SOC U-Processors
- Improved Graphics Performance with HD500 Series
- Wide Range Power Input 12-24 Volt
- congatec embedded Board Controller Features

Formfactor	Industrial Thin Mini-ITX   170 x 170 x 20 mm <sup>3</sup>					
CPU	Intel® Core™ i7-6600U	2.6 GHz Dual Core	Turbo Boost 3.4 GHz	4 MB Cache	TDP 15W config. to 7.5W	Intel HD Graphics 520
	Intel® Core™ i5-6300U	2.4 GHz Dual Core	Turbo Boost 3.0 GHz	3 MB Cache	TDP 15W config. to 7.5W	Intel HD Graphics 520
	Intel® Core™ i3-6100U	2.3 GHz Dual Core		3 MB Cache	TDP 15W	Intel HD Graphics 520
	Intel® Celeron® 3955U	2.0 GHz Dual Core		2 MB Cache	TDP 15W	Intel HD Graphics 510
	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 25.6 GByte/sec. memory bandwidth   Integrated Intel® HD Graphics 500 series with dynamic frequency up to 1.05 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 i218LM (with AMT support); 1x Intel Gigabit Ethernet Controller i210/i211					
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: HDMI 1.4, DVI, DisplayPort 1.2   High performance hardware MPEG-2 decoding   WMV9 (VC-1) and H.264 (AVC) support Blu-ray support @ 40 MBit/s					
Graphic Interfaces	1x 24-bit Dual Channel LVDS Interface or eDP (x4) and 2x DisplayPort					
Internal Connectors	1x PCIe x4 slot (gen.3)   1x full/half-size Mini PCIe slot   M.2 type B 2242 connector   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 microphone (SPDIF)   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)					
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	The conga-IC170 can be optionally equipped with a discrete "Trusted Platform Module 2.0". It is capable of calculating efficient hash and RSA algorithms with key lengths up to 2048 bits and includes a real random number generator. Security sensitive applications such as gaming and e commerce will benefit also with improved authentication, integrity and confidence levels.					
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   Microsoft® Windows 8   Microsoft® Windows 7   Linux   Microsoft® Windows® 7/8 embedded Standard					
Power Consumption	Typ. application: tbd.   see manual for full details					
Temperature:	Operating: 0 .. +60°C					
Humidity Operating:	Operating: 10 - 90% r. H. non cond.					
Size	170 x 170 x 20 mm <sup>3</sup>					

# conga-IC170 | Connectors



# conga-IC170 | Block diagram

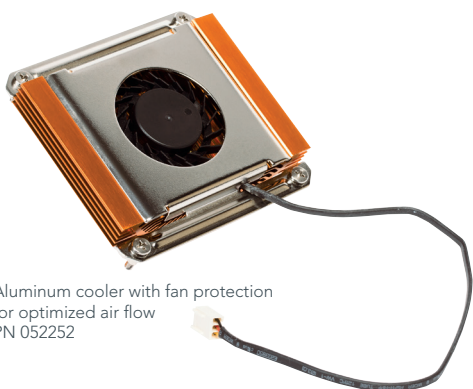


\* SATA 1 can be switch between SATA connector and M.2 slot. PCIe M.2 supports X1 configuration for WWAN.

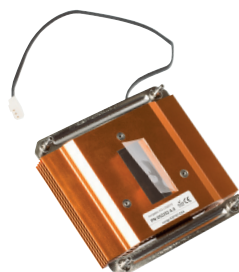
# conga-IC170 | Order Information

conga-IC170	PN	Description
conga-IC170/i7-6600U	052703	Thin Mini-ITX board based on 6 <sup>th</sup> Gen Intel® Core™ i7-6600U dual core processor 2.2 GHz, 4 MB cache, 2133 MT/s dual channel DDR4 SODIMM memory interface
conga-IC170/i5-6300U/	052700	Thin Mini-ITX board based on 6 <sup>th</sup> Gen Intel® Core™ i5-6300U dual core processor 2.4 GHz, 3 MB cache, 2133 MT/s dual channel DDR4 SODIMM memory interface
conga-IC170/i3-6100U	052701	Thin Mini-ITX board based on 6 <sup>th</sup> Gen Intel® Core™ i3-6100U dual core processor 2.3 GHz, 3 MB cache, 2133 MT/s dual channel DDR4 SODIMM memory interface
conga-IC170/3955U	052702	Thin Mini-ITX board based on 6 <sup>th</sup> Gen Intel® Celeron® 3955U dual core processor 2 GHz, 2 MB cache, 2133 MT/s dual channel DDR4 SODIMM memory interface

Accessories	PN	Description
conga-IC87/CSA	052252	Active cooling solution for conga-IC97 and with 12V fan and Thin Mini-ITX height
conga-IC87/Retention Frame	052254	Retention frame for standard cooling (PN: 052252) for conga-IC97
conga-IC87/IO Shield-Standard	052256	IO shield for conga-IC97 with Standard Mini-ITX height
conga-IC87/IO Shield - Thin	052257	IO shield for conga-IC97 with Thin Mini-ITX height
DDR4-SODIMM-2400 (4GB)	68790	4 GByte DDR4 SODIMM memory module 2400 MT/s
DDR4-SODIMM-2400 (8GB)	68791	8 GByte DDR4 SODIMM memory module 2400 MT/s
DDR4-SODIMM-2400 (16GB)	68792	16 GByte DDR4 SODIMM memory module 2400 MT/s
conga-Thin MITX/eDP to DP Adapter	52231	eDP to standard DisplayPort evaluation adapter for congatec Thin Mini-ITX boards
conga-Thin MITX/eDP to HDMI Adapter	52232	eDP to standard HDMI evaluation adapter for congatec Thin Mini-ITX boards
conga-Thin MITX/LVDS Adapter	52233	LVDS pin header evaluation adapter for congatec Thin Mini-ITX boards
PS65	10000145	65 Watt power supply, 19V, 3.42 A, plug 7.4x5.1x12.5mm
PS90	10000146	90 Watt power supply, 19V, 4.74 A, plug 7.4x5.1x12.5mm
cab-ThinMini-ITX-UART	14000121	UART cable with 9pin DSUB connector for congatec Thin Mini-ITX family
cab-ThinMini-ITX-eDP 1-1	14000129	eDP 1-1 cable for congatec Thin Mini-ITX family. Both sides are with 40pin ACES eDP connector plug.
cab-ThinMini-ITX-LVDS-OE	14000125	LVDS cable with open end for congatec Thin Mini-ITX family. Can be used also for eDP with open end.
cab-ThinMini-ITX-BKLT	14000127	Backlight cable for congatec Thin Mini-ITX family
cab-DP to HDMI Passive	14000128	Passive DisplayPort to HDMI cable
cab-ThinMini-ITX-USB20-Single	14000122	Single USB 2.0 cable for congatec Thin Mini-ITX family
cab-ThinMini-ITX-USB20-Twin	14000123	Dual USB 2.0 cable for congatec Thin Mini-ITX family
SATA III cable 30cm, straight/straight	48000029	SATA III cable with 30cm length, shielded, end connectors straight/straight
SATA III cable 30cm, down/straight	48000030	SATA III cable with 30cm length, shielded, end connectors down/straight
cab-ThinMini-ITX-SATA-Power	14000120	SATA power cable for congatec Thin Mini-ITX family. One end 15 pin SATA connector to to 3x15 pin SATA connector
LE910 Mini PCIe		4G / LTE Mini PCI Express card
HE910 Mini PCIe		3G / UMTS / HSPA+ Mini PCI Express card
SSD 256		256 GByte Intel® SSD Pro 2500 Series (16nm, MLC)
SSD 128		128 GByte Intel® SSD Pro 2500 Series (16nm, MLC)



Aluminum cooler with fan protection for optimized air flow  
PN 052252



Bottom view with phase change material  
PN 052252



Solid retention frame to be mounted at the bottom side of the board  
PN 052254

© 2016 congatec AG. All rights reserved.

All data is for information purposes only. Although all the information contained within this document is carefully checked, no guarantee of correctness is implied or expressed. Product names, logos, brands, and other trademarks featured or referred are the property of their respective trademark holders. These trademark holders are not affiliated with congatec AG. Rev. Feb 3, 2016 CE

\* limited longevity



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.