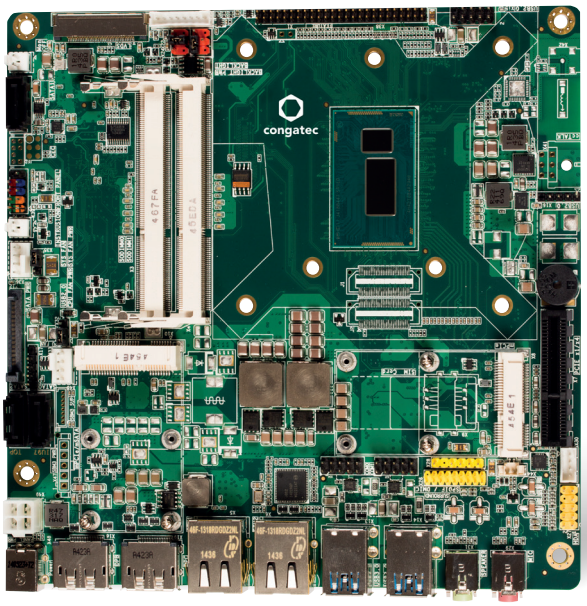
INDUSTRIAL THIN MINI-ITX

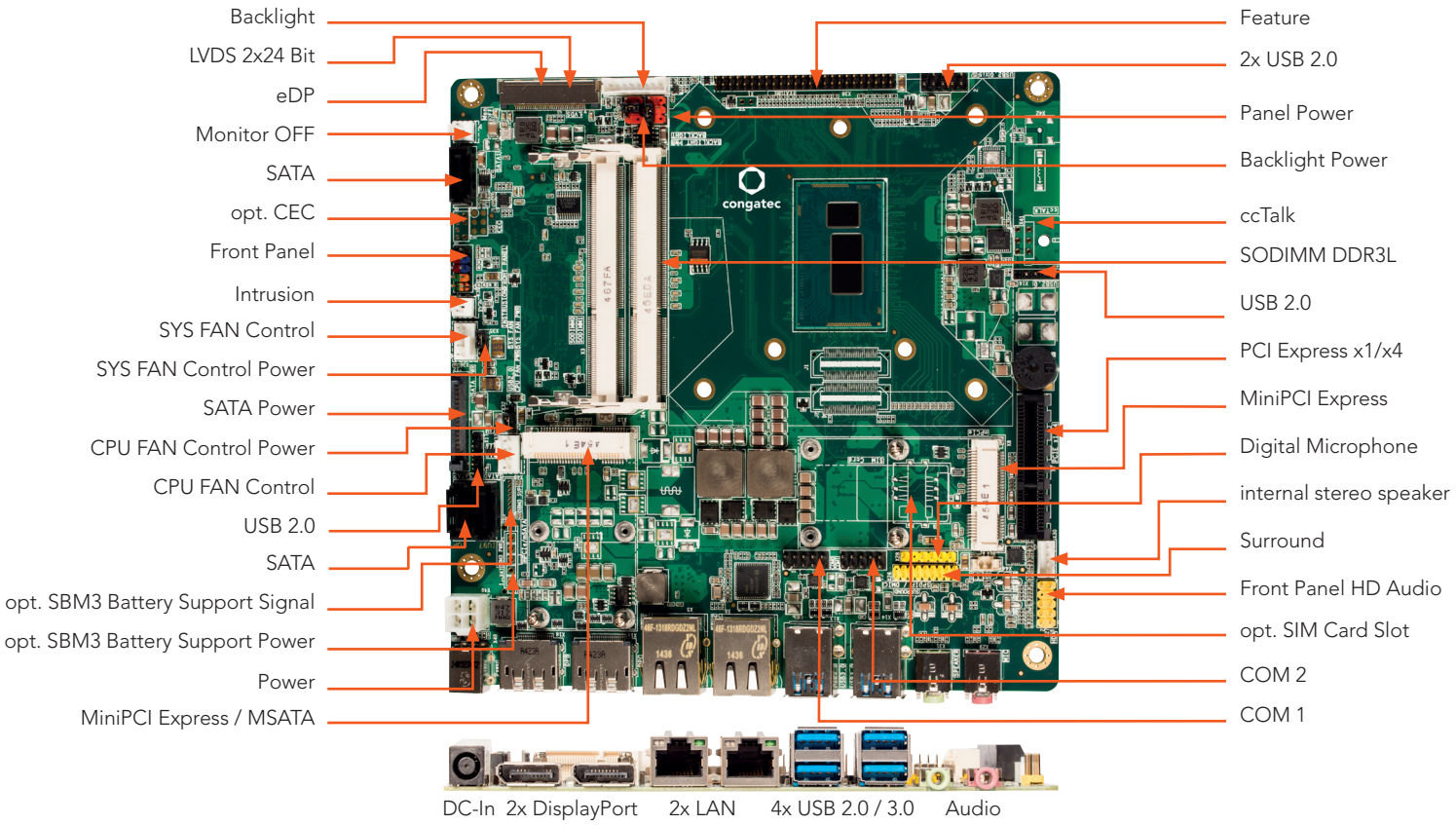
conga-IC87



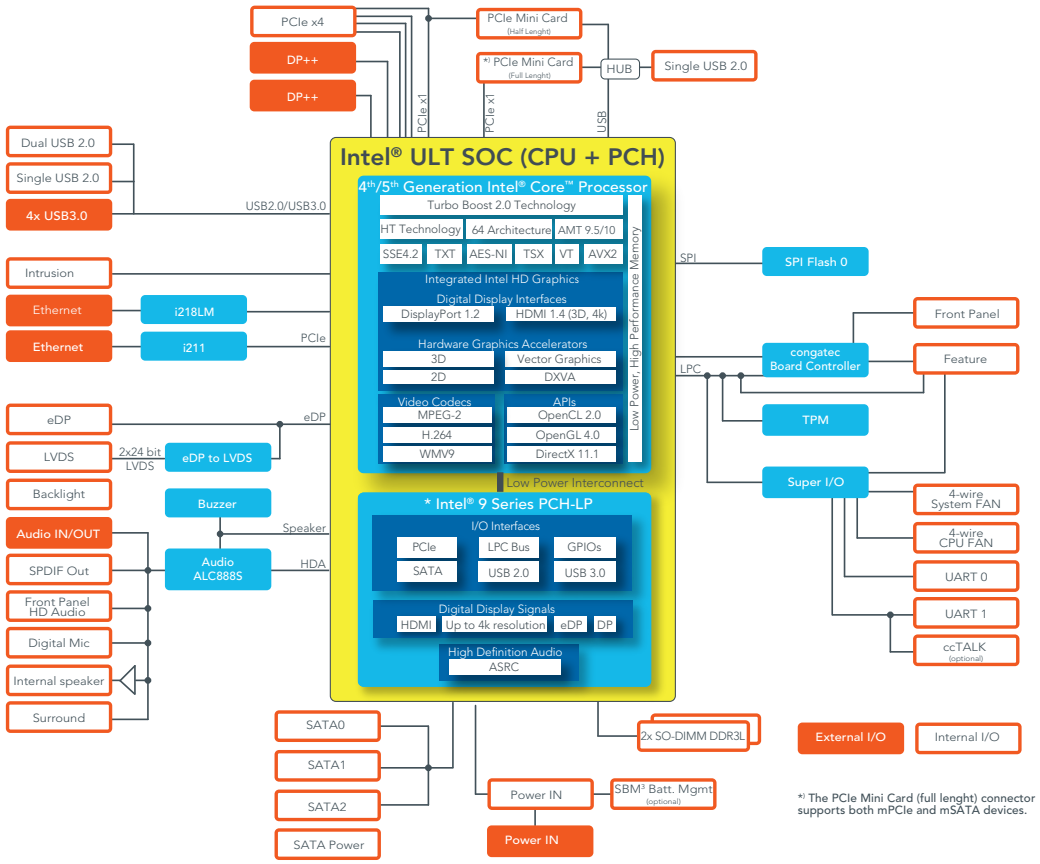
- Highest Performance Thin Mini-ITX board
- 4th Generation Intel® Core™ Mobile SOC U-Processors
- Wide Range Power Input 12-24 Volt
- congatec embedded Board Controller Features

Formfactor	Industrial Thin-Mini-ITX | 170 x 170 mm
CPU	Intel® Core™ i7-4650U 1.7 GHz Dual Core Turbo Boost 3.3 GHz 4 MB Cache TDP 15W Intel® Core™ i5-4300U 1.9 GHz Dual Core Turbo Boost 2.9 GHz 3 MB Cache TDP 15W Intel® Core™ i3-4010U 1.7 GHz Dual Core 3 MB Cache TDP 15W Intel® Celeron® 2980U 1.6 GHz Dual Core 3 MB Cache TDP 15W Intel® Turbo Boost Technology | Intel® Hyper-Threading Technology (Intel® HT Technology) | Intel® Advanced Vector Extensions 2.0 (Intel® AVX2), Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) | Integrated dual channel memory controller | up to 25.6 GByte/sec. memory bandwidth | Integrated Intel® HD Graphics 5000 series with dynamic frequency up to 1.1 GHz | Intel® Clear Video HD Technology Intel® Virtualization Technology (Intel® VT) | Intel® Trusted Execution Technology (Intel® TXT) | Intel® Streaming SIMD Extensions 4.2 (Intel® SSE4.2) PCLMULQDQ Instruction | Intel® Secure Key | Intel® Transactional Synchronization Extensions (Intel® TSX)
DRAM Memory	Support for 2x SO DIMM Socket (dual channel DDR3L up to 1600 MT/s) | max. 16GB
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 Generation Intel® HD Graphics with OpenCL 1.2 | OpenGL 4.0 and DirectX11.1 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.2) | 1x Full/Half-size Mini PCIe Slot shared with PCIe x1 slot | 1x Full/Half-size Mini PCIe Slot (shared with mSATA) | 3x SATA (6G) | 1x mSATA (SATA-III; 600) | 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 1x Serial Port COM1 (opt. as ccTALK) | 1x Serial Port COM2 | 1x Feature connector - congatec custom (8 Bit General Purpose I/O) | 1x Frontpanel (Power Switch, LEDs, Reset) | 1x Intrusion (Case Open) | 1x FAN CPU | 1x FAN System | 1x internal power header (12-19V) | 1x opt. battery header signal + power (SBM3) | 1x opt. CEC | 1x opt. SIM Card Slot
congatec embedded Controller	Multi-Stage Watchdog | non-volatile User Data Storage | Manufacturing and Board Information | Board Statistics | BIOS Setup Data Backup I²C bus (fast mode | 400 kHz | multi-master) | Power Loss Control
External Connectors (Frontpanel)	2x DisplayPort dp++ | Audio In | Line Out | 2x LAN RJ45 | 4x USB 3.0/2.0 | 1x PCIe x4 (via extension card) | 1x DC-In (external input)
Embedded BIOS	AMI Aptio® 2.X (UEFI) BIOS; SM-BIOS | BIOS Update | Logo Boot | Quiet Boot | HDD Password
Security	The conga-IC87 can be optionally equipped with a discrete "Trusted Platform Module" (TPM 1.2). It is capable of calculating efficient hash and RSA algorithms with key lengths up to 2,048 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 12V - 24V | 2 x FAN (CPU | system) monitored & controlled
Operating Systems	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 mm (6.7" x 6.7")

conga-IC87 | Connectors



conga-IC87 | Block diagram



conga-IC87 | Order Information

Article	PN	Description
conga-IC87/i7-4650U	052201	Thin Mini-ITX board based on 4th Gen Intel® Core™ i7-4650U dual core processor with 1.7GHz, 4MB L2 cache and 1600MT/s dual channel DDR3L SODIMM memory interface
conga-IC87/i5-4300U	052202	Thin Mini-ITX board based on 4th Gen Intel® Core™ i5-4300U dual core processor with 1.9GHz, 3MB L2 cache and 1600MT/s dual channel DDR3L SODIMM memory interface
conga-IC87/i3-4010U	052203	Thin Mini-ITX board based on 4th Gen Intel® Core™ i3-4010U dual core processor with 1.7GHz, 3MB L2 cache and 1600MT/s dual channel DDR3L SODIMM memory interface
conga-IC87/2980U	052204	Thin Mini-ITX board based on Intel® Celeron® 2980U dual core processor with 1.6GHz, 2MB L2 cache and 1600MT/s dual channel DDR3L SODIMM memory interface
conga-IC87/i7-4650U KIT	052211	Thin Mini-ITX single kit box based on 4th Gen Intel® Core™ i7-4650U dual core processor with 1.7GHz, 4MB L2 cache and 1600MT/s dual channel DDR3L SODIMM memory interface. The single package kit includes IO shield, one SATA drive cable, one SATA power cable and a quick-start guide
conga-IC87/i5-4300U KIT	052212	Thin Mini-ITX single kit box based on 4th Gen Intel® Core™ i5-4300U dual core processor with 1.9GHz, 3MB L2 cache and 1600MT/s dual channel DDR3L SODIMM memory interface. The single package kit includes IO shield, one SATA drive cable, one SATA power cable and a quick-start guide
conga-IC87/i3-4010U KIT	052213	Thin Mini-ITX single kit box based on 4th Gen Intel® Core™ i3-4010U dual core processor with 1.7GHz, 3MB L2 cache and 1600MT/s dual channel DDR3L SODIMM memory interface
conga-IC87/2980U KIT	052214	Thin Mini-ITX single kit box based on Intel® Celeron® 2980U dual core processor with 1.6GHz, 2MB L2 cache and 1600MT/s dual channel DDR3L SODIMM memory interface. The single package kit includes IO shield, one SATA drive cable, one SATA power cable and a quick-start guide

Accessories

conga-IC97/CSA	052252	Active cooling solution for conga-IC87 and with 12V fan and Thin Mini-ITX height
conga-IC87/Retention Frame	052254	Retention frame for standard cooling (PN: 052252) for conga-IC87
conga-IC87/IO Shield-Standard	052256	IO shield for conga-IC87 with Standard Mini-ITX height
conga-IC87/IO Shield - Thin	052257	IO shield for conga-IC87 with Thin Mini-ITX height
DDR3L-SODIMM-1600 (2GB)	068755	DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 2GB RAM
DDR3L-SODIMM-1600 (4GB)	068756	DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 4GB RAM
DDR3L-SODIMM-1600 (8GB)	068757	DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 8GB RAM
conga-Thin MITX/eDP to DP Adapter	052231	eDP to standard DisplayPort evaluation adapter for congatec Thin Mini-ITX boards
conga-Thin MITX/eDP to HDMI Adapter	052232	eDP to standard HDMI evaluation adapter for congatec Thin Mini-ITX boards
conga-Thin MITX/LVDS Adapter	052233	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, straigth/straight	48000029	SATA III cable with 30cm length, shielded, end connectors straigth/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)

© 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. May 3, 2016 MR

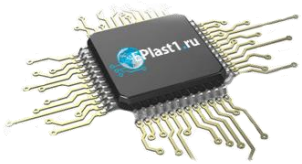
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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