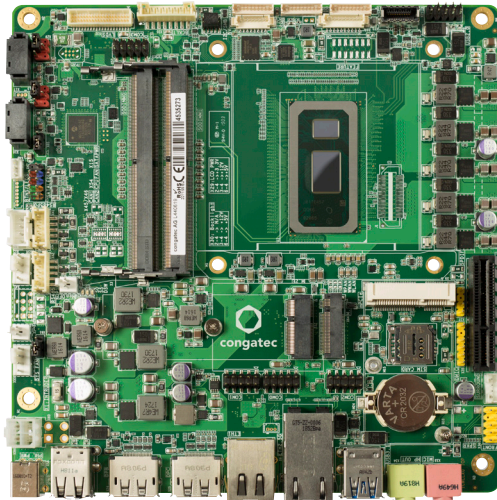


# INDUSTRIAL THIN MINI-ITX BOARD

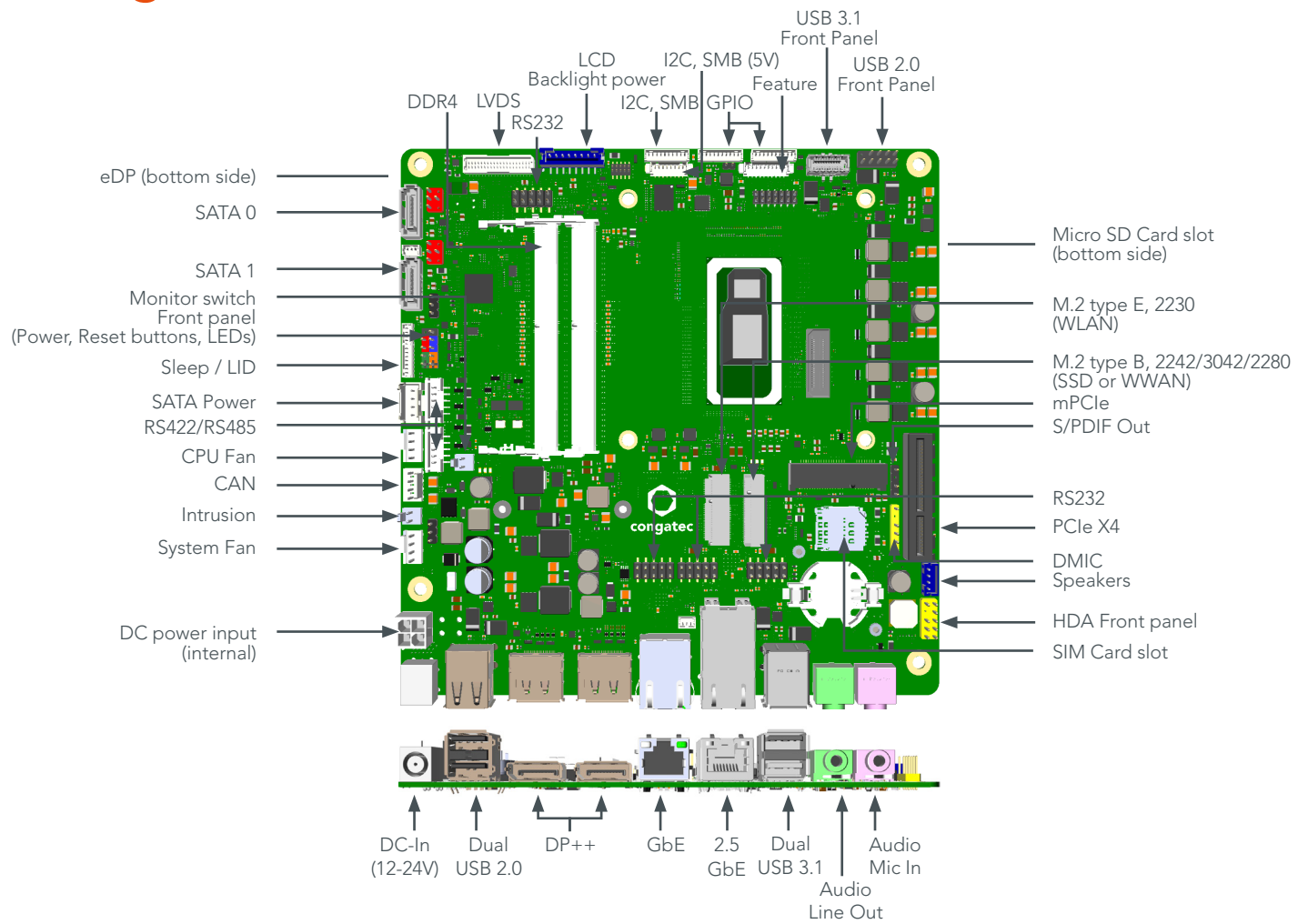
## conga-IC370



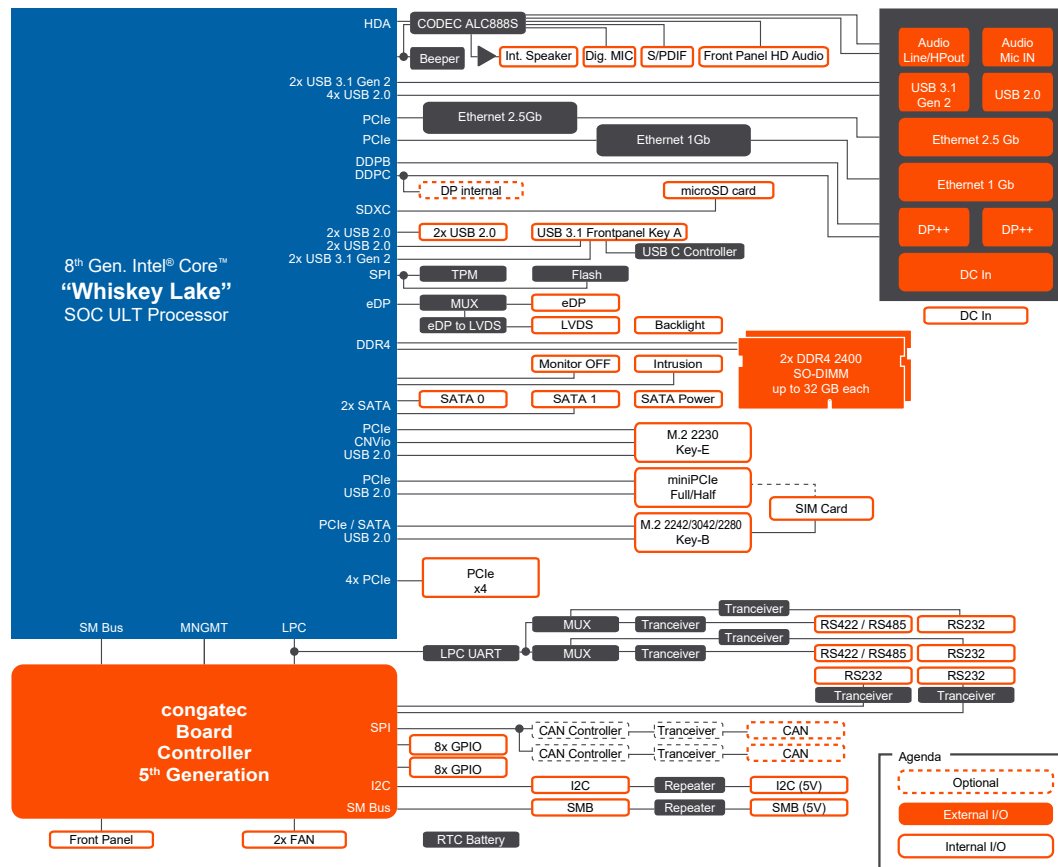
- Highest Performance Thin Mini-ITX board
- 8<sup>th</sup> Generation Intel® Core™ Mobile Low Power U-Processors with up to 4 cores
- Gen 9 Intel Graphics; up to 24EU
- Options for 2<sup>nd</sup> internal display
- Wide Range Power Input 12-24 Volt
- congatec embedded Board Controller Features

Formfactor	Industrial Thin Mini-ITX Single Board Computer   170 x 170 mm
CPU	Intel® Core™ i3-8145U 3.90 GHz (Burst)   2.1 GHz Clock Dual Core, 4 Threads L2 cache 4MB 15W TDP (configurable to 10/25W) Intel® Core™ i7-8565U 4.60 GHz (Burst)   1.8 GHz Clock Quad Core, 8 Threads L2 cache 8MB 15W TDP (configurable to 10/25W)
DRAM	Dual channel DDR4 up to 2400 MT/s   2x SO-DIMM   up to 2x 32 Gbyte
Chipset	Integrated Intel® 300 Series
Ethernet	Intel Gigabit Ethernet (with AMT support)   Intel 2.5 Gigabit Ethernet (with opt. TSN support)
Sound	High Definition Audio Interface   Realtek ALC888S-VD Audio Codec
Graphics	Intel Gen. 9 Graphics   24 EU
Internal Connectors	LVDS 24bit Dual (or opt. eDP)   opt. internal DP (shared with external DP++)   Backlight (power/control)   2x SATA/eSATA/SATADOM (6Gbs) with support for VCC pin 7 and 8   SATA power   Dual USB 2.0   USB 3.1 Gen. 2 Front panel connector (Key-A)   monitor off   front panel HD audio internal stereo speaker   SPDIF header   2x COM ports (RS232/422/485)   2x COM ports (RS232)   opt. 2x CAN   2x 8Bit general purpose I/O opt. Feature connector (Mgmt. pins)   I <sup>2</sup> C/SM Bus   Front panel (power switch, LEDs, reset,...)   Intrusion (case open)   CPU fan   system fan internal power DC-In (12-24 V)
Expansion Slots	PCIe slot (PCIe x4)   miniPCIe card slot full/half-size (PCIe/USB/opt. SIM)   M.2 key B size 2242/3042/2280 (PCIe x2/USB/SATA/SIM/Intel® Optane™)   M.2 key E size 2230 (PCIe/CNVio/USB)   microSIM card slot   microSD card slot
External Connectors (Frontpanel)	1x DC-In (12-24 V)   2x USB 3.1 Gen.2 (10 Gbs)   2x DisplayPort DP++   1x LAN Gbit   1x LAN 2.5 Gbit   2x USB 2.0   Audio In   Line Out
congatec embedded Controller	Multi Stage Watchdog   non-volatile User Data Storage   Manufacturing and Board Information   Board Statistics   I <sup>2</sup> C bus (fast mode, 400 kHz, multi-master)   Power Loss Control   Hardware Health Monitoring   POST Code redirection
Embedded BIOS	AMI Aptio® 2.X (UEFI) BIOS   SM-BIOS   BIOS Update   Logo Boot   Quiet Boot   HDD Password
Security	Trusted Platform Module (TPM 2.0)   Secure Root of Trust   Secure Memory Encryption   Secure Encrypted Virtualization
Power Specification	Power Supply 12-24V   Power Management   ACPI S3/S4/DeepS5   Wake on time from S5   FAN monitored & controlled see user's guide for full details
Operating Systems	Microsoft® Windows 10 (64bit only)   Microsoft® Windows 10 IoT Enterprise (64bit only)   Linux
Temperature:	Operating: 0 .. 60°C   Storage: -20 .. +70°C
Operating:	Operating: 10 .. 90% r. H. non cond.   Storage: 5 .. 95% r.H. non cond.
Size	170 x 170 x 20 mm (Thin Mini-ITX)

# conga-IC370 | Connectors



# conga-IC370 | Block diagram



# conga-IC370 | Order Information

Article	PN	Description
conga-IC370/i7-8565U	053001	Thin Mini-ITX board based on 8th Gen Intel® Core™ i7-8565U quad core processor with 1.8GHz up to 4.6GHz, 8 MB Intel® Smart Cache, 2400 MT/s dual channel DDR4 SODIMM memory interface
conga-IC370/i3-8145U	053003	Thin Mini-ITX board based on 8th Gen Intel® Core™ i3-8145U dual core processor with 2.1 GHz up to 3.9GHz, 4 MB Intel® Smart Cache, 2400 MT/s dual channel DDR4 SODIMM memory interface

Accessories		Description
ICx/CSA	052252	Active cooling solution for conga-IC97, conga-IC170, conga-IC175 and conga-IC370 con with 12V fan and Thin Mini-ITX height, to be used with conga-ICx/Retention Frame PN 052254.
ICx/CSP	052260	Passive cooling for conga-IC97, conga-IC170, conga-IC175 and conga-IC370, 85L*85W*27H (mm) / 165 g, Aluminum, to be used with conga-ICx/Retention Frame PN 052254.
ICx/Retention Frame	052254	Retention frame for standard cooling for conga-IC97, conga-IC170, conga-IC175, conga-IA5 and cona-IC370
ICx IO Shield Standard Size	tbd	IO shield for conga-IC370 with Standard Mini-ITX height. Neutral marking.
ICx IO Shield Thin Size	tbd	IO shield for conga-IC370 with Thin Mini-ITX height. Neutral marking.
DDR4-SODIMM-2400 (4GB)	068790	DDR4 SODIMM memory module with 2400 MT/s and 4GB RAM
DDR4-SODIMM-2400 (8GB)	068791	DDR4 SODIMM memory module with 2400 MT/s and 8GB RAM
DDR4-SODIMM-2400 (16GB)	068792	DDR4 SODIMM memory module with 2400 MT/s and 16GB RAM
cab-ThinMini-ITX-UART RS232	144000121	UART cable with 9pin DSUB RS232 connector for conga-IC370
cab-ThinMini-ITX-UART RS422	tbd	UART cable with 9pin DSUB RS422 connector for conga-IC370
cab-ThinMini-ITX-UART RS485	tbd	UART cable with 9pin DSUB RS485 connector for conga-IC370
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	tbd	Sata power cable for conga-IC370
cab-DP to HDMI Passive	14000128	Passive DisplayPort to HDMI cable
eDP to DP Adapter	052231	eDP to standard DisplayPort evaluation adapter for congatec Thin Mini-ITX, 3.5" and SMARC 2.0.
eDP to HDMI Adapter	052232	eDP to standard HDMI evaluation adapter for congatec Thin Mini-ITX boards and 3.5"
cab-ThinMini-ITX-BKLT	tbd	Backlight cable for conga-IC370
Power Supply Unit 90W; 19V / 4.74A	10000146	PSU, 90W; 19V / 4.74A, Plug 7.4x5.1 / 12.5mm length (PSU for all congatec Thin-Mini ITX)
InternPower-adapter	tbd	Internal Power cable (4 pinMini-Fit to standard PSU #10000145)