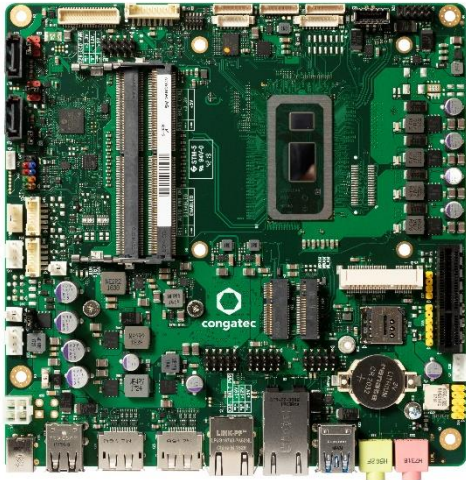


INDUSTRIAL THIN MINI-ITX BOARD

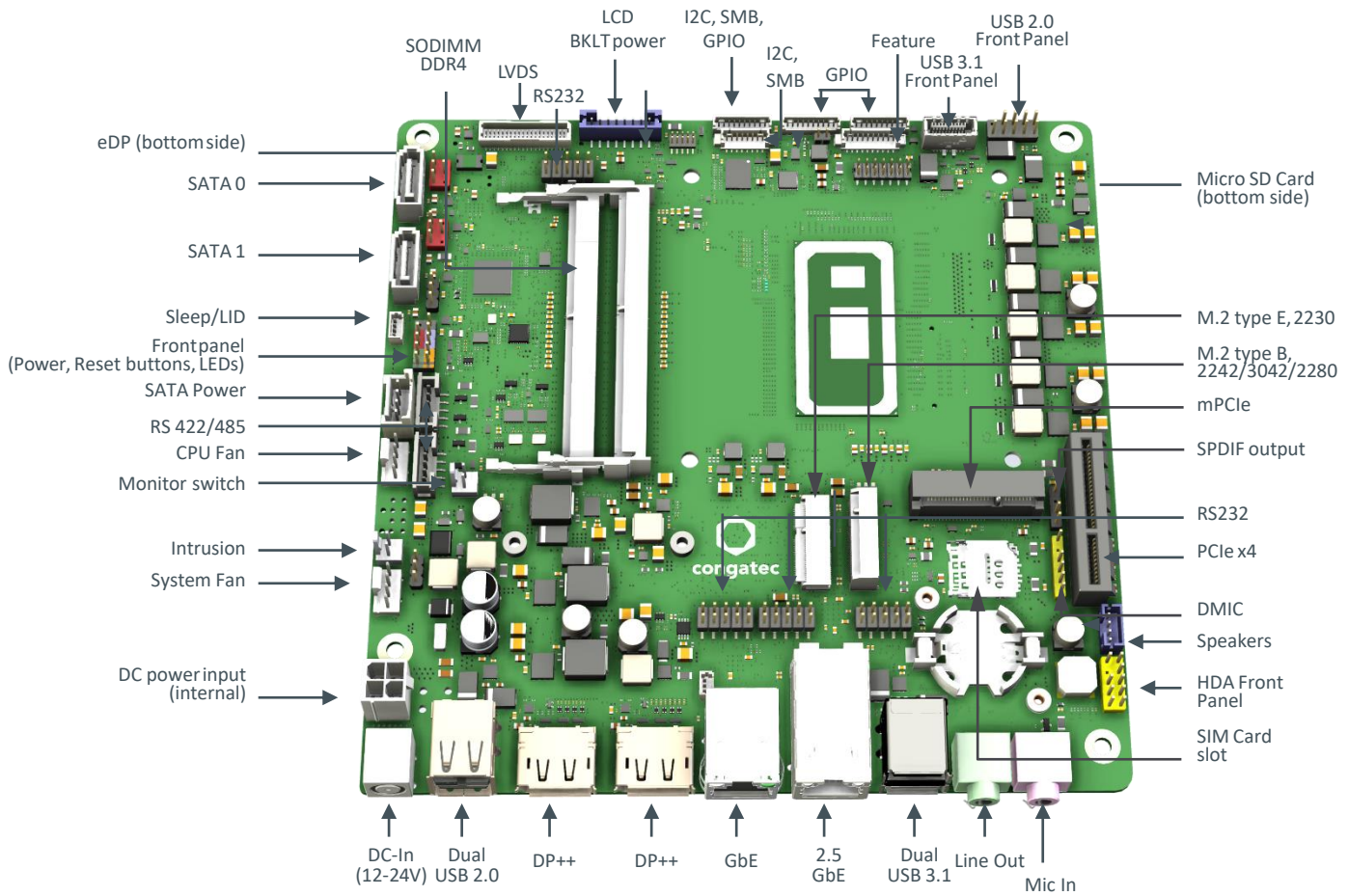
conga-IC370



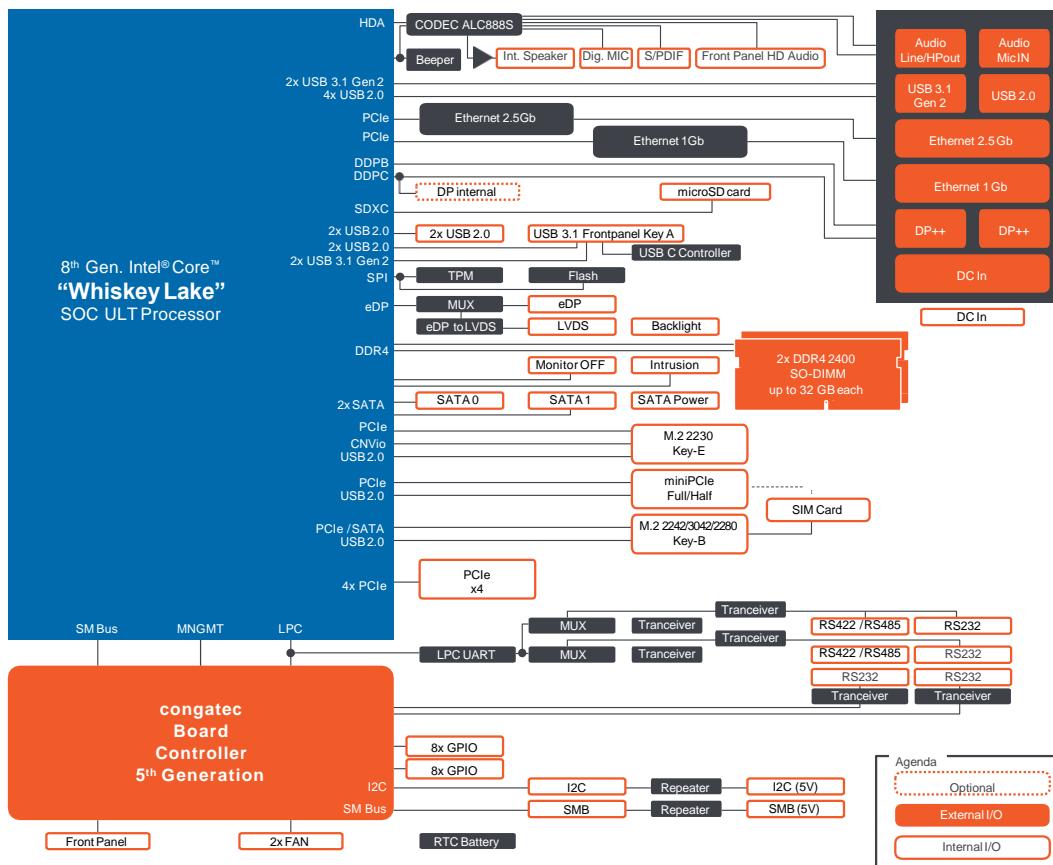
- Highest Performance Thin Mini-ITX Board
- 8th Generation Intel® Core™ SOC processors with up to 4 cores
- Intel® UHD-Graphics 610/620, up to 24 Execution Units
- Up to 64 GByte dual channel DDR4 2400 MT/s
- Flexible internal and external Video interfaces
- Wide Range Power Input 12 – 24V
- congatec embedded Board Controller Features

Formfactor	Industrial Thin Mini-ITX 170 x 170 x 20 mm ³																				
CPU	<table border="0"> <tr> <td>Intel® Core™ i7-8665UE</td> <td>4 Cores 8 Threads</td> <td>1.7 GHz 4.4 GHz (turbo)</td> <td>8 MB Cache</td> <td>15 W TDP (12.5-25W cTDP)</td> </tr> <tr> <td>Intel® Core™ i5-8365UE</td> <td>4 Cores 8 Threads</td> <td>1.6 GHz 4.1 GHz (turbo)</td> <td>6 MB Cache</td> <td>15 W TDP (12.5-25W cTDP)</td> </tr> <tr> <td>Intel® Core™ i3-8145UE</td> <td>2 Cores 4 Threads</td> <td>2.2 GHz 3.9 GHz (turbo)</td> <td>4 MB Cache</td> <td>15 W TDP (12.5-25W cTDP)</td> </tr> <tr> <td>Intel® Celeron® 4305UE</td> <td>2 Cores 2 Threads</td> <td>2.0 GHz</td> <td>2 MB Cache</td> <td>15 W TDP</td> </tr> </table>	Intel® Core™ i7-8665UE	4 Cores 8 Threads	1.7 GHz 4.4 GHz (turbo)	8 MB Cache	15 W TDP (12.5-25W cTDP)	Intel® Core™ i5-8365UE	4 Cores 8 Threads	1.6 GHz 4.1 GHz (turbo)	6 MB Cache	15 W TDP (12.5-25W cTDP)	Intel® Core™ i3-8145UE	2 Cores 4 Threads	2.2 GHz 3.9 GHz (turbo)	4 MB Cache	15 W TDP (12.5-25W cTDP)	Intel® Celeron® 4305UE	2 Cores 2 Threads	2.0 GHz	2 MB Cache	15 W TDP
Intel® Core™ i7-8665UE	4 Cores 8 Threads	1.7 GHz 4.4 GHz (turbo)	8 MB Cache	15 W TDP (12.5-25W cTDP)																	
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Intel® Celeron® 4305UE	2 Cores 2 Threads	2.0 GHz	2 MB Cache	15 W TDP																	
DRAM	Dual channel DDR4 up to 2400 MT/s 2x SO-DIMM up to 2x 32 GByte																				
Chipset	Integrated in SoC																				
Ethernet	Intel® 2.5GbE with TSN support under Linux / Intel® 1GbE with AMT support (AMT with i7 or i5 only)																				
Sound	High Definition Audio Interface Realtek ALC888S-VD Audio Codec																				
Graphics	Intel® UHD-Graphics 610/620 Graphics, up to 24 Execution Units																				
Expansion Sockets	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) M.2 key E size 2230 (PCIe/CNVi/USB) microSIM card slot microSD card slot																				
Internal Connectors	LVDS 24bit Dual channel or 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 HDA front panel HD audio internal stereo speaker SPDIF header 2x COM ports (RS232/422/485) 2x COM ports (RS232) 2x 8Bit general purpose I/O opt. Feature connector (Mgmt. pins) I ² C/SM Bus Front panel (power switch, LEDs, reset,...) Intrusion (case open) CPU fan system fan internal power DC-In (12-24 V)																				
External Connectors (Front Panel)	1x DC-In (12-24 V) 2x USB 3.1 Gen.2 (10 Gb/s) 2x DisplayPort DP++ 1x LAN Gbit 1x LAN 2.5 Gbit 2x USB 2.0 Audio In Line Out																				
congatec embedded Board Controller	Multi Stage Watchdog non-volatile User Data Storage Manufacturing and Board Information Board Statistics I ² C bus (fast mode, 400 kHz, multi-master) Power Loss Control Hardware Health Monitoring POST Code redirect																				
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/S5/DeepS5/S5e Wake on time from S3/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 Temperature: 0 to +60°C Storage Temperature: -20 to +70°C																				
Extended Temperature	Screening service on request: -25 to +80°C (burn-in & cold-soak) -40 to +85°C (burn-in & cold-soak)																				
Humidity	Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.																				
Size	170 x 170 x 20 mm ³																				

conga-IC370 | Connectors



conga-IC370 | Block diagram



conga-IC370 | Order Information

Article	PN	Description
conga-IC370/i7-8665UE	053001	Thin Mini-ITX board based on Intel® Core™ i7-8665UE quad core processor with 1.7GHz, 8MB Intel® Smart Cache, Intel® UHD Graphics 620 and 2400MT/s dual channel DDR4 memory interface (Whiskey Lake)
conga-IC370/i5-8365UE	053002	Thin Mini-ITX board based on Intel® Core™ i5-8365UE quad core processor with 1.6GHz, 6MB Intel® Smart Cache, Intel® UHD Graphics 620 and 2400MT/s dual channel DDR4 memory interface (Whiskey Lake-UE)
conga-IC370/i3-8145UE	053003	Thin Mini-ITX board based on Intel® Core™ i3-8145UE dual core processor with 2.2GHz, 4MB Intel® Smart Cache, Intel® UHD Graphics 620 and 2400MT/s dual channel DDR4 memory interface (Whiskey Lake-UE)
conga-IC370/4305UE	053005	Thin Mini-ITX board based on Intel® Celeron® 4305UE dual core processor with 2.0GHz, 2MB Intel® Smart Cache, Intel® UHD Graphics 610 and 2133MT/s dual channel DDR4 memory interface (Whiskey Lake-UE)
ICx/CSA	052252	Active cooling solution for conga-IC97/170/175/370 with 12V fan and Thin Mini-ITX height, to be used with conga-ICx/Retention Frame PN 052254
ICx/Retention Frame	052254	Retention frame for ICx/CSA 052252
conga-IC370 IO Shield Standard Size	053060	IO shield for conga-IC370 with Standard Mini-ITX height
conga-IC370 IO Shield Thin Size	053061	IO shield for conga-IC370 with Thin Mini-ITX height.
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
DDR4-SODIMM-2666 (32GB)	068806	DDR4 SODIMM memory module with 2666 MT/s and 32GB RAM
cab-ThinMini-ITX-LVDS, 1:1	14000129	edP cable, configuration 1:1, micro-coax, length = 300 mm, for conga-IC370
cab-LVDS SHDR-40V, Open End	14000254	Cable for LVDS Panel with JST SHDR-40V connector and Open End, 50cm, for conga-IC370
cab-Backlight ZHR-8, Open End	14000127	Cable for Backlight connector and Open End, 30cm, for conga-IC370
cab-LVDS SHDR-40V FI-X30HL, 50cm	14000256	Cable for LVDS with JST SHDR-40V and JAE FI-X30HL connectors, 50cm, for Panel AUO G170EG01 (Article 10000132), for conga-IC370
cab-ThinMini-ITX-BKLT 0511460600	14000272	Cable for Backlight with JST PHR-8 and Molex 51146-0600 connectors, 50cm for Panel 17" LVDS Panel G170EG01 V.1AUO (Article 10000132), for conga-IC370
conga-Thin MITX/eDP to DP Adapter	052231	eDP to standard DisplayPort evaluation adapter, for conga-IC370
conga-Thin MITX/eDP to LVDS Adapter	052234	eDP to LVDS evaluation adapter, for conga-IC370
cab-ThinMini-ITX-RS232	14000121	RS232 cable with 9pin DSUB, for conga-IC370
cab-ThinMini-ITX-RS422	14000257	RS422 cable with 9pin DSUB, for conga-IC370
cab-ThinMini-ITX-RS485	14000258	RS485 cable with 9pin DSUB, for conga-IC370
cab-ThinMini-ITX-USB20-Twin	14000123	USB2.0 cable – Twin, 20cm, for conga-IC370
USB C to internal USB 3.1 cable, right-angled, 45cm	14000265	Cable adapter from internal USB 3.1 connector to USB type C (right-angled), approx. 45cm, for conga-IC370
cab-PicoITX-GPIO Cable	14000151	GPIO Cable, Open end, 15 cm, for conga-IC370
SATA Data Cable	48000030	SATA III cable, 30 cm, with data transfer rate of up to 6 Gbps, Connector: down / straight, for conga-IC370
cab-ThinMini-ITX-Front Panel	14000273	Cable adapter for Front Panel (Power button, Reset button, Power LED, SATA LED), length 15cm, for conga-IC370

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