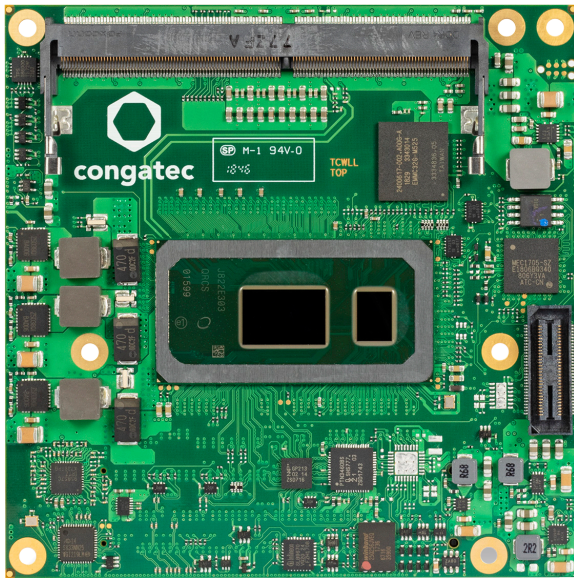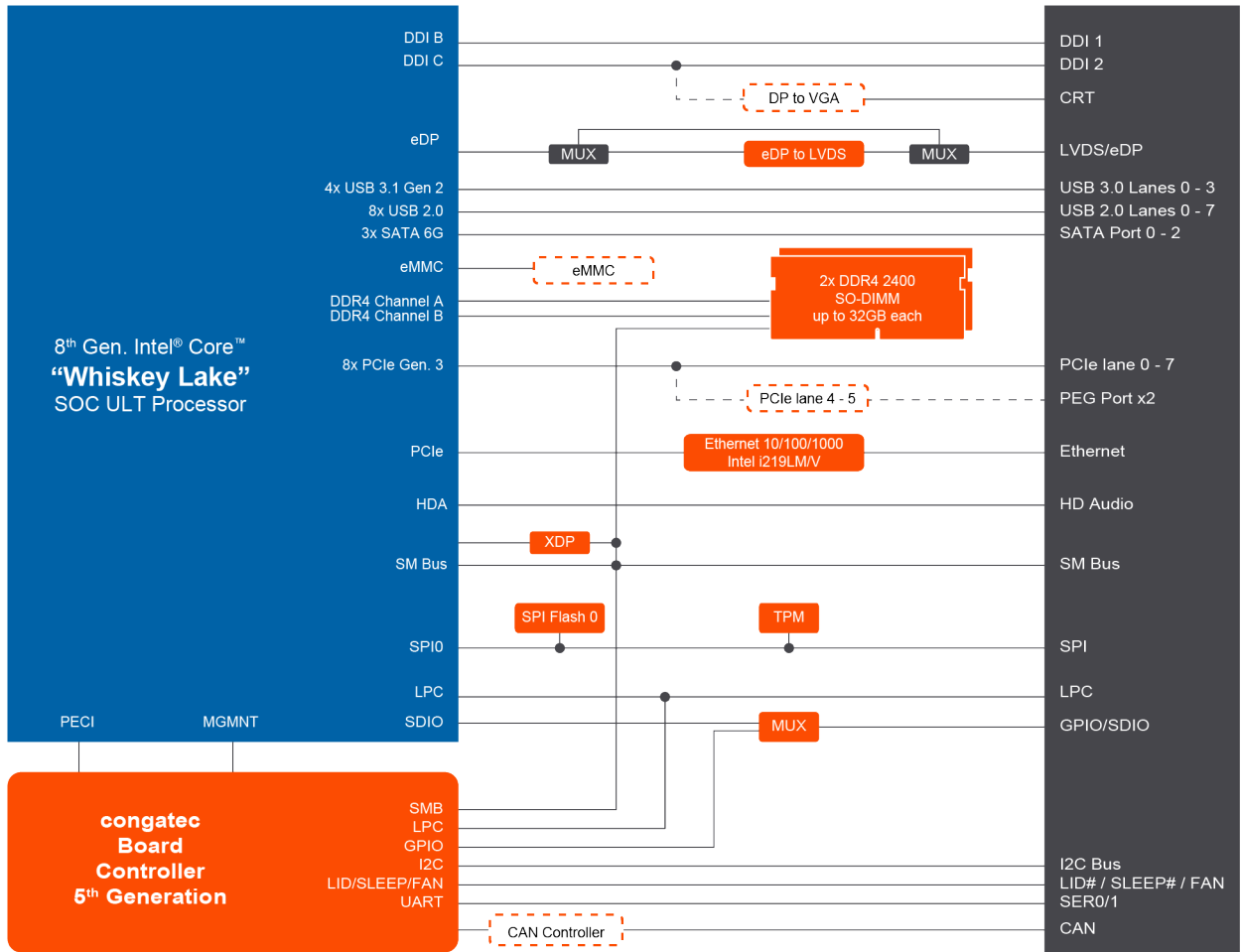# QUAD CORE COMPACT
conga-TC370

- 8th Generation Intel® Core™ SOC processor up to 4 cores
- Configuration of display mode by software (LVDS/eDP)
- Low power consumption (TDP 15W, cTDP 10W)
- Up to 64 GByte dual channel DDR4 2400 MT/s
- Optional eMMC 5.1 on board mass storage
- Trusted Platform Module (TPM 2.0)
- COM Express Compact Type 6 module 95x95 mm²

COM✦Express®

Formfactor	COM Express® Compact, (95 x 95 mm), Type 6 Connector Layout				
CPU	Intel® Core™ i7-8665UE	4.40 GHz (Burst) | 1.7 GHz Clock	Quad Core, 8 Threads	L2 cache 8MB	15W TDP (configurable to 10/25W
	Intel® Core™ i5-8365UE	4.10 GHz (Burst) | 1.6 GHz Clock	Quad Core, 8 Threads	L2 cache 6MB	15W TDP (configurable to 10/25W
	Intel® Core™ i3-8145UE	3.90 GHz (Burst) | 2.2 GHz Clock	Dual Core, 4 Threads	L2 cache 4MB	15W TDP (configurable to 10/25W
	Intel® Celeron® 4305UE	2.00 GHz (Burst) | 2.0 GHz Clock	Dual Core, 2 Threads	L2 cache 2MB	15W TDP
DRAM	Dual channel DDR4 up to 2.400 MT/s | 2x SO-DIMM | max. 2x 32 Gbyte				
Chipset	Integrated Intel® 300 Series				
Ethernet	1x Gigabit Ethernet | Intel i219LM				
Sound	Digital High Definition Audio Interface with support for multiple audio codecs				
Graphics	Intel® Gen9 HD Graphics Engine with OpenCL 2.1, OpenGL 4.5 and DirectX12 (for Windows 10) support | up to three independent displays | High performance hardware MPEG-2 decoding | WMV9 (VC-1) and H.265 (HEVC) support Blu-ray support @ 40 MBit/s | HEVC and VP9 encoding				
Display Interface	2x DDI | 18/24bit single/dual channel LVDS or eDP | optional VGA interface | LVDS interface with optional eDP overlay. Configuration of display mode by software				
I/O Interfaces	8x PCI Express Gen 3.0 lanes | 3x Serial ATA Gen 3 (can be configured as RAID) | 4x USB 3.1 Gen 2 | 8x USB 2.0 | LPC bus (no DMA) | I²C bus (fast mode, 400 kHz, multi-master) | 2x UART				
Storage	optional eMMC 5.1 on board mass storage				
congatec Board Controller	Multi Stage Watchdog | non-volatile User Data Storage | Manufacturing and Board Information | Board Statistics | I²C bus (fast mode, 400 kHz, multi-master) | Power Loss Control | Hardware Health Monitoring | POST Code redirection				
Embedded BIOS Features	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 Management	ACPI compliant with battery support | Suspend to RAM (S3) support | S5 enhanced support | Intel AMT 12.0 support				
Operating Systems	Microsoft® Windows 10 (64bit only) | Microsoft® Windows 10 IoT Enterprise (64bit only) | Linux				
Power Consumption	See user's guide for full details				
Temperature	Operating: 0 .. +60°C Storage: -20 .. +70°C				
Humidity	Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.				
Size	95 x 95 mm (3.74" x 3.74")				

conga-TC370 | Block diagram

8th Gen. Intel® Core™
"Whiskey Lake"
SOC ULT Processor

congatec Board Controller 5th Generation

Left labels	Right labels
DDI B	DDI 1
DDI C	DDI 2
	CRT
eDP	LVDS/eDP
4x USB 3.1 Gen 2	USB 3.0 Lanes 0 - 3
8x USB 2.0	USB 2.0 Lanes 0 - 7
3x SATA 6G	SATA Port 0 - 2
eMMC	
DDR4 Channel A	
DDR4 Channel B	
8x PCIe Gen. 3	PCIe lane 0 - 7
	PEG Port x2
PCIe	Ethernet
HDA	HD Audio
SM Bus	SM Bus
SPI0	SPI
LPC	LPC
SDIO	GPIO/SDIO
PECI	
MGMNT	
SMB	I2C Bus
LPC	LID# / SLEEP# / FAN
GPIO	SER0/1
I2C	CAN
LID/SLEEP/FAN	
UART	

DP to VGA

MUX   eDP to LVDS   MUX

eMMC

2x DDR4 2400
SO-DIMM
up to 32GB each

PCIe lane 4 - 5

Ethernet 10/100/1000
Intel i219LM/V

XDP

SPI Flash 0   TPM

MUX

CAN Controller

- - - - Optional - Not available by default

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