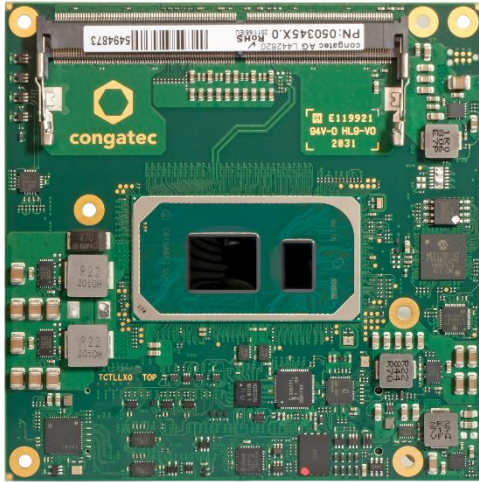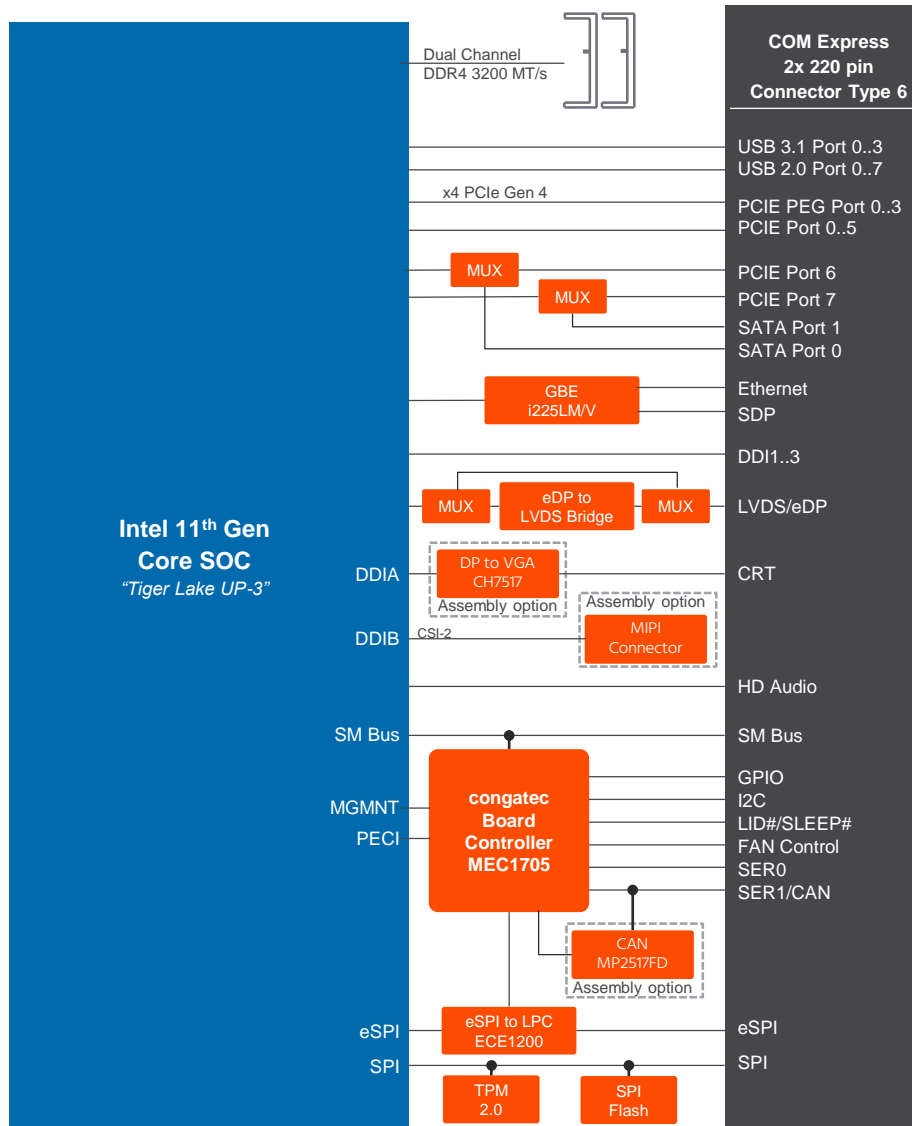# QUAD CORE COMPACT
conga-TC570

- COM Express Compact Type 6

- Intel® Tiger Lake-UP3 high performing and low power Intel® Core™ processor

- Embedded/Industrial use condition

- Extended temperature options available

- PCI Express Gen 4

- Integrated high performance Xe (Gen 12) graphics with 96 EU

- AI/DL Instruction Sets including VNNI

COM✦Express®

Formfactor	COM Express® Compact, (95 x 95 mm) | Type 6 connector pinout				
CPU	**General Embedded Versions**				
	Intel® Core™ i7-1185G7E Processor	4 Cores / 8 Threads	12 MB cache	Int. Graphics with 96 EU	12-28W TDP
	Intel® Core™ i5-1145G7E Processor	4 Cores / 8 Threads	8 MB cache	Int. Graphics with 80 EU	12-28W TDP
	Intel® Core™ i3-1115G4E Processor	2 Cores / 4 Threads	6 MB cache	Int. Graphics with 48 EU	12-28W TDP
	Industrial Versions				
	Intel® Core™ i7-1185GRE Processor	4 Cores / 8 Threads	12 MB cache	Int. Graphics with 96 EU	12-28W TDP
	Intel® Core™ i5-1145GRE Processor	4 Cores / 8 Threads	8 MB cache	Int. Graphics with 80 EU	12-28W TDP
	Intel® Core™ i3-1115GRE Processor	2 Cores / 4 Threads	6 MB cache	Int. Graphics with 48 EU	12-28W TDP
DRAM	Up to 2 SO-DIMM sockets for DDR4 memory modules up to 32 GByte each (64 GByte total) with 3200 MT/s				
Graphics	Integrated Xe (Gen 12) graphics engine with up to 96 EU (Execution Units) | Supporting 4 independent display units (4x 4k/2x 8K) | Enhanced media (AV1/12b) with up to 2 Vdbox | Next Gen IPU6 with DPHY2.1 | HDMI 2.0/2.1 | DP 1.4				
Display	3x DP/HDMI/DP++ | eDP/LVDS | VGA (optional)				
Ethernet	1x 2,5GbE TSN Ethernet via Intel® i225				
I/O Interfaces	8x PCIe Gen3 | PEG support x4 (PCIe Gen4) 4x USB 3.1 Gen 2 | 8x USB 2.0 2x SATA III (6Gb/s) | SPI | 2x UART | 8x GPIO				
Audio	HDA interface				
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	OEM Customization | Flash Update | based on AMI Aptio UEFI				
Security	Trusted Platform Module (TPM 2.0)				
Power Management	ACPI 5.0 with battery support				
Operating Systems	tbd				
Power Consumption	See user's guide for full details				
Temperature	Industrial: Operating: -40 to +85°C Storage: -40 to +85°C Commercial: Operating: 0 to +60°C Storage: -40 to +85°C				
Humidity	Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.				
Size	95 x 95 mm				

Intel 11th Gen Core SOC
"Tiger Lake UP-3"

Dual Channel
DDR4 3200 MT/s

x4 PCIe Gen 4

MUX
MUX

GBE i225LM/V

MUX
eDP to LVDS Bridge
MUX

DP to VGA CH7517
Assembly option

DDIA

DDIB   CSI-2

Assembly option
MIPI Connector

SM Bus

congatec Board Controller MEC1705

MGMNT
PECI

CAN MP2517FD
Assembly option

eSPI

eSPI to LPC ECE1200

SPI

TPM 2.0

SPI Flash

COM Express 2x 220 pin Connector Type 6

USB 3.1 Port 0..3
USB 2.0 Port 0..7
PCIE PEG Port 0..3
PCIE Port 0..5
PCIE Port 6
PCIE Port 7
SATA Port 1
SATA Port 0
Ethernet
SDP
DDI1..3
LVDS/eDP
CRT

HD Audio
SM Bus
GPIO
I2C
LID#/SLEEP#
FAN Control
SER0
SER1/CAN

eSPI
SPI

Note: Assembly options on request only

conga-TC570 | Order Information

Article	PN	Description
conga-TC570/i7-1185G7E	050300	COM Express Type 6 Compact module based on Intel® Core™ i7-1185G7E 4-core processor with 1.8GHz up to 4.4GHz turbo boost, 12MB cache, Intel® Iris® Xe Graphics with 96EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Commercial temperature range.
conga-TC570/i5-1145G7E	050301	COM Express Type 6 Compact module based on Intel® Core™ i5-1145G7E 4-core processor with 1.5GHz up to 4.1GHz turbo boost, 8MB cache, Intel® Iris® Xe Graphics with 80EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Commercial temperature range.
conga-TC570/i3-1115G4E	050302	COM Express Type 6 Compact module based on Intel® Core™ i3-1115G4E 2-core processor with 2.2GHz up to 3.9GHz turbo boost, 6MB cache, Intel® Iris® Xe Graphics with 48EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Commercial temperature range.
conga-TC570/i7-1185GRE	050310	COM Express Type 6 Compact module based on Intel® Core™ i7-1185GRE 4-core processor with 1.8GHz up to 4.4GHz turbo boost, 12MB cache, Intel® Iris® Xe Graphics with 96EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Industrial temperature range.
conga-TC570/i5-1145GRE	050311	COM Express Type 6 Compact module based on Intel® Core™ i5-1145GRE 4-core processor with 1.5GHz up to 4.1GHz turbo boost, 8MB cache, Intel® Iris® Xe Graphics with 80EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Industrial temperature range.
conga-TC570/i3-1115GRE	050312	COM Express Type 6 Compact module based on Intel® Core™ i3-1115GRE 2-core processor with 2.2GHz up to 3.9GHz turbo boost, 6MB cache, Intel® Iris® Xe Graphics with 48EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Industrial temperature range.
conga-TC570/CSA-HP-B	050350	Standard active cooling solution for high performance COM Express module conga-TC570 with integrated heat pipes, 25.5mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-TC570/CSA-HP-T	050351	Standard active cooling solution for high performance COM Express module conga-TC570 with integrated heat pipes, 25.5mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm thread.
conga-TC570/CSP-HP-B	050352	Standard passive cooling solution for high performance COM Express module conga-TC570 with integrated heat pipes, 24.3mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-TC570/CSP-HP-T	050353	Standard passive cooling solution for high performance COM Express module conga-TC570 with integrated heat pipes, 24.3mm overall heat sink height. All standoffs are M2.5mm thread.
conga-TC570/HSP-HP-B	050354	Standard heatspreader for high performance COM Express module conga-TC570 with integrated heat pipes, 11mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-TC570/HSP-HP-T	050355	Standard heatspreader for high performance COM Express module conga-TC570 with integrated heat pipes, 11mm overall heat sink height. All standoffs are M2.5mm thread.
conga-TEVAL/COMe 3.0	65810	Evaluation Carrier Board for COM Express Type 6 modules.

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