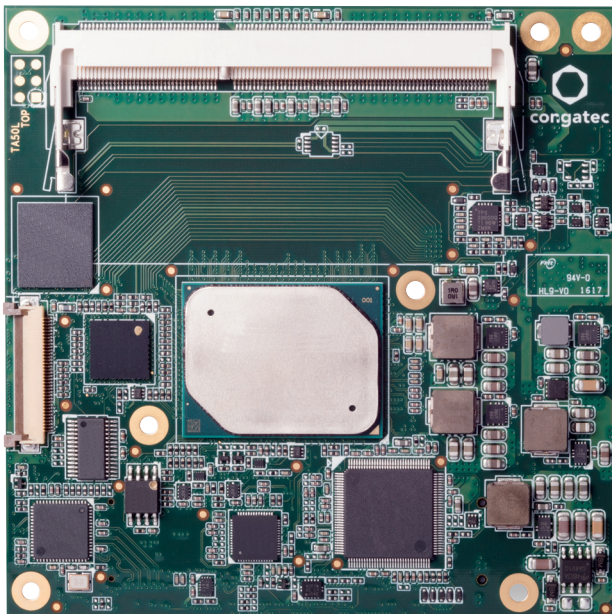


# LOW POWER CONSUMPTION

# conga-TCA5

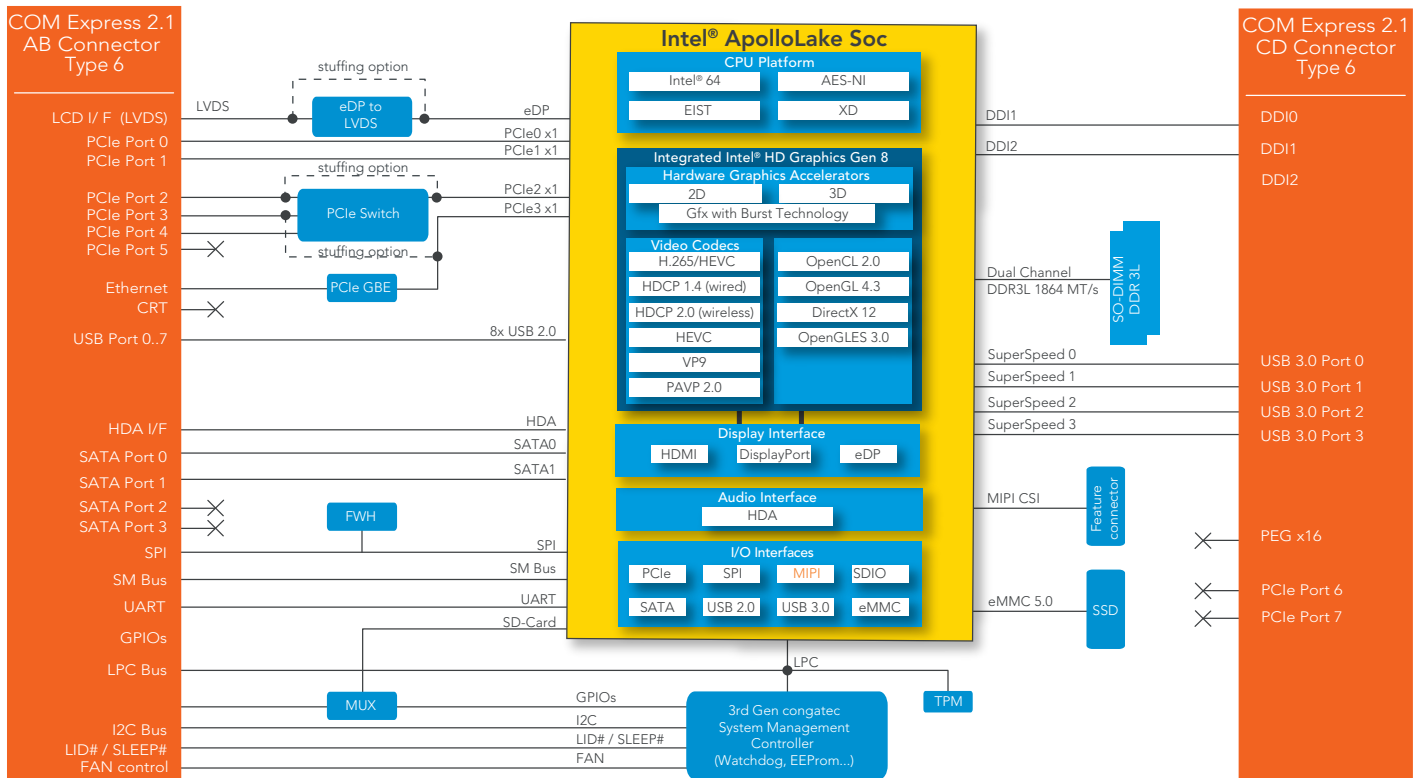


- Intel® Pentium® Quad Core on COM Express
- Enhanced Security Execution
- Time Coordinated Computing E
- up to 3 independent Ultra HD displays

**COM**  **Express®**

Formfactor	Formfactor COM Express® Compact   (95 x 95 mm)   Type 6 Connector Layout					
CPU	Intel® Pentium® N4200	2.50 GHz (Burst)	1.1 GHz Clock	Quad Core	L2 cache 2MB	6W TDP
	Intel® Celeron® N3350	2.40 GHz (Burst)	1.1 GHz Clock	Dual Core	L2 cache 1MB	6W TDP
	Intel® Atom™ E3950	2.00 GHz (Burst)	1.6 GHz Clock	Quad Core	L2 cache 2MB	12W TDP
	Intel® Atom™ E3940	1.80 GHz (Burst)	1.6 GHz Clock	Quad Core	L2 cache 2MB	9W TDP
	Intel® Atom™ E3930	1.80 GHz (Burst)	1.3 GHz Clock	Dual Core	L2 cache 1MB	6.5W TDP
DRAM	2 SO-DIMM sockets for DDR3L memory modules up to 8 GByte with 1867 MT/s   Dual channel memory interface for increased graphics performance					
Chipset	Integrated in SoC					
Ethernet	Intel I210 (Industrial) /I211 (Commercial) Gigabit Ethernet Controller with SDP support					
I/O Interfaces	5x PCIe x1   4x USB 3.0 (XHCI)   8x USB 2.0 (EHCI)   2x SATA III   LPC   SPI   I <sup>2</sup> C bus (fast mode 400 kHz   multi-master)   SDIO 2x UART (RX/TX)s   2x MIPI-CSI					
Mass Storage	eMMC 5.0 onboard flash up to 64 GByte					
Sound	Digital High Definition Audio Interface					
Graphics	Intel® HD Graphics Gen 9   PAVP 2.0   H.265/HEVC   VP9   OpenCL 2.0   OpenGL 4.3   OpenGL ES 3.0   DirectX12   HDCP1.4					
LVDS	Dual channel LVDS transmitter   support for flat panels with 2x24 bit data mapping up to a resolution of 1920x1200@60Hz.					
Digital Display Interface (DDI)	Up to 2x DisplayPort 1.2a or 2x HDMI 1.4b (max. 3840x2160 @ 30Hz)   1x eDP 1.3 (optional)					
congatec Board Controller	Multi Stage Watchdog   non-volatile User Data Storage   Manufacturing and Board Information   Board Statistics   BIOS Setup Data Backup I <sup>2</sup> C bus (fast mode, 400 kHz, multi-master)   Power Loss Control					
Embedded BIOS Features	OEM Logo   OEM CMOS Defaults   LCD Control   Display Auto Detection   Backlight Control   Flash Update   based on AMI Aptio UEFI					
Security	Trusted Platform Module (TPM) optional. Hash and RSA algorithms   key lengths up to 2048 bits   real random number generator					
Power Management	ACPI 5.0 with battery support					
Operating Systems	Microsoft® Windows 10   Microsoft® Windows 8   Microsoft® Windows 7   Linux   Microsoft® Windows Embedded Standard Microsoft® Windows 7 Embedded Compact					
Power Consumption	see user's guide for full details   CMOS Battery Backup					
Temperature	Commercial :	Operating: 0 to +60°C	Storage: -20 to +80°C			
	Industrial:	Operating: -40 to +85°C	Storage: -20 to +80°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-TCA5 | Block diagram



# conga-TCA5 | Order Information

Article	PN	Description
conga-TCA5/i-E3950	048510	COM Express Compact module with Intel® Atom™ E3950 quad core processor with 1.6GHz core frequency up to 2.0GHz, 2MB L2 cache and up to 8GB 1866MT/s DDR3L SODIMM memory support. Industrial grade temperature range from -40°C to 85°C.
conga-TCA5/i-E3940	048511	COM Express Compact module with Intel® Atom™ E3940 quad core processor with 1.6GHz core frequency up to 1.8GHz, 2MB L2 cache and up to 8GB 1866MT/s DDR3L SODIMM memory support. Industrial grade temperature range from -40°C to 85°C.
conga-TCA5/i-E3930	048512	COM Express Compact module with Intel® Atom™ E3930 quad core processor with 1.1GHz core frequency up to 1.8GHz, 2MB L2 cache and up to 8GB 1600MT/s DDR3L SODIMM memory support. Industrial grade temperature range from -40°C to 85°C.
conga-TCA5/i-E3950 PCIe	048513	COM Express Compact module with Intel® Atom™ E3950 quad core processor with 1.6GHz core frequency up to 2.0GHz, 2MB L2 cache and up to 8GB 1866MT/s DDR3L SODIMM memory support. Up to 5 PCI Express x1 lanes through PCI Express switch. Industrial grade temperature range from -40°C to 85°C.
conga-TCA5/N3350	048530	COM Express Compact module with Intel® Celeron™ N3350 dual core processor with 1.1GHz core frequency up to 2.3GHz, 2MB L2 cache and up to 8GB 1600MT/s DDR3L SODIMM memory support.
conga-TCA5/N4200	048531	COM Express Compact module with Intel® Pentium® N4200 quad core processor with 1.5GHz core frequency up to 2.5GHz, 2MB L2 cache and up to 8GB 1866MT/s DDR3L SODIMM memory support.
conga-TCA5/i-CSP-T	048555	Passive cooling solution for COM Express Compact module conga-TCA5 with lidded Intel Atom processor. All standoffs are M2.5mm thread.
conga-TCA5/i-CSP-B	048554	Passive cooling solution for COM Express Compact module conga-TCA5 with lidded Intel Atom processor. All standoffs are with 2.7mm bore hole.
conga-TCA5/i-HSP-T	048551	Standard heatspreader for COM Express Compact module conga-TCA5 with lidded Intel Atom processor. All standoffs are M2.5mm thread.
conga-TCA5/i-HSP-B	048550	Standard heatspreader for COM Express Compact module conga-TCA5 with lidded Intel Atom processor. All standoffs are with 2.7mm bore hole.
conga-TCA5/CSP-T	048557	Passive cooling solution for COM Express Compact module conga-TCA5 with open silicon Intel Pentium and Celeron processor. All standoffs are M2.5mm thread.
conga-TCA5/CSP-B	048556	Passive cooling solution for COM Express Compact module conga-TCA5 with open silicon Intel Pentium and Celeron processor. All standoffs are with 2.7mm bore hole.
conga-TCA5/HSP-T	048553	Standard heatspreader for COM Express Compact module conga-TCA5 with open silicon Intel Pentium and Celeron processor. All standoffs are M2.5mm thread.
conga-TCA5/HSP-B	048552	Standard heatspreader for COM Express Compact module conga-TCA5 with open silicon Intel Pentium and Celeron processor. All standoffs are with 2.7mm bore hole.
DDR3L-SODIMM-1866 (2GB)	068730	DDR3L SODIMM memory module with 1866 MT/s and 4GB RAM
DDR3L-SODIMM-1866 (4GB)	068731	DDR3L SODIMM memory module with 1866 MT/s and 8GB RAM
DDR3L-SODIMM-1866 (8GB)	068732	DDR3L SODIMM memory module with 1866 MT/s and 16GB RAM
DDR3L-SODIMM-1866 (2GB) / i-temp	068733	Industrial DDR3L SODIMM memory module with 1866 MT/s and 2GB RAM
DDR3L-SODIMM-1866 (4GB) / i-temp	068734	Industrial DDR3L SODIMM memory module with 1866 MT/s and 4GB RAM
DDR3L-SODIMM-1866 (8GB) / i-temp	068735	Industrial DDR3L SODIMM memory module with 1866 MT/s and 8GB RAM

## Accessories

conga-TEVAL	065800	Evaluation carrier board for Type 6 COM-Express-modules
conga-LDVI/EPI	011115	LVDS to DVI converter board for digital flat panels with onboard EEPROM
COM-Express-carrier-board-Socket-5	400007	Connector for COM-Express carrier boards   height 5mm   packing unit 4 pieces
COM-Express-carrier-board-Socket-8	400004	Connector for COM-Express carrier boards   height 8mm   packing unit 4 pieces