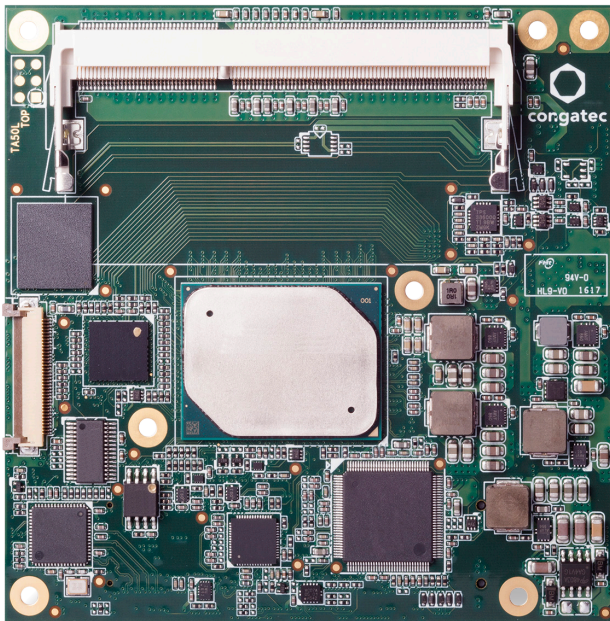


# LOW POWER CONSUMPTION

## conga-TCA5



- Intel® Pentium® Quad Core on COM Express
- Enhanced Security Execution
- 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 2MB	6W TDP	
	Intel® Atom™ x7-E3950	2.00 GHz (Burst)   1.6 GHz Clock	Quad Core	L2 cache 2MB	12W TDP	
	Intel® Atom™ x5-E3940	1.80 GHz (Burst)   1.6 GHz Clock	Quad Core	L2 cache 2MB	9.5W TDP	
	Intel® Atom™ x5-E3930	1.80 GHz (Burst)   1.3 GHz Clock	Dual Core	L2 cache 2MB	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					
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   opt. 2x MIPI-CSI					
Mass Storage	opt. eMMC 5.0 onboard flash up to 64 GByte					
Sound	Digital High Definition Audio Interface					
Graphics	Intel® HD Graphics 500 with support for 4k Ultra HD displays   DirectX 12   OpenGL 4.4   OpenCL 2.0   OpenGL ES 3.0   HDCP 1.4 (wired), HDCP 2.0 (wireless)   Video decode hardware acceleration including support for 4kp60 HEVC (H.265), H.264, MVC, VP8, VP9, VC-1, WMV9, JPEG/MJPEG   Video encode hardware acceleration including support for 4kp30 HEVC (H.265), H.264, MVC, VP8, JPEG/MJPEG.					
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 DDI (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 10 IoT Enterprise   Microsoft® Windows 10 IoT Core   Linux   Yocto					
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

