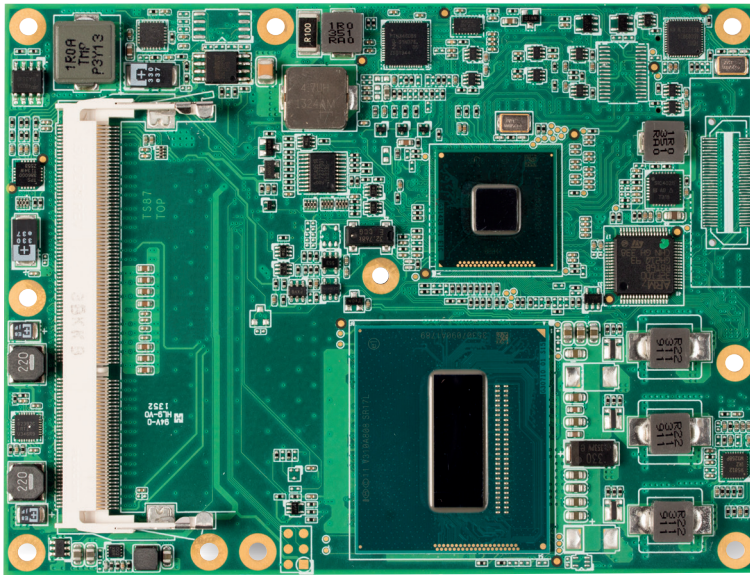


HIGH END PERFORMANCE

conga-TS87

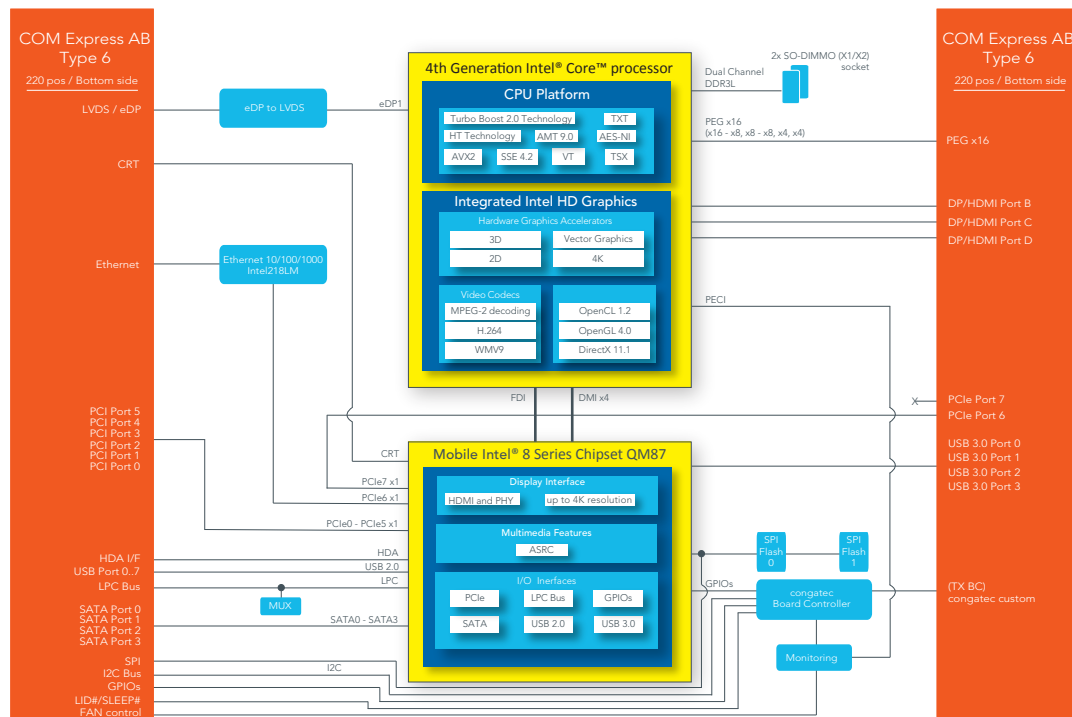


- 4th Gen. Intel® Core™ i7 quad core processor
- 3x DisplayPort 1.2, up to 4k resolution
- COM Express Basic Type 6 module
- Intel® AES-NI for hardware accelerated encryption and decryption

COM  **Express®**

Formfactor	Formfactor COM Express™ Basic (95 x 125 mm) Type 6 Connector Layout									
CPU	Intel® Core™ i7-4700EQ	Quad Core	2.4 GHz	Turbo Boost 3.4 GHz	6M Cache	TDP 47W	AVX2 AES-NI AMT 9.0 TXT			
	Intel® Core™ i5-4400E	Dual Core	2.7 GHz	Turbo Boost 3.3 GHz	3M Cache	TDP 37W	AVX2 AES-NI AMT 9.0 TXT			
	Intel® Core™ i5-4402E	Dual Core	1.6 GHz	Turbo Boost 2.7 GHz	3M Cache	TDP 25W	AVX2 AES-NI AMT 9.0 TXT			
	Intel® Core™ i3-4100E	Dual Core	2.4 GHz		3M Cache	TDP 37W	AES-NI			
	Intel® Core™ i3-4102E	Dual Core	1.6 GHz		3M Cache	TDP 25W	AES-NI			
	Intel® Celeron™ 2000E	Dual Core	2.2 GHz		2MB L3 cache	TDP 37W				
	Intel® Celeron™ 2002E	Dual Core	1.56 GHz		2MB L3 cache	TDP 25W				
	Intel® Turbo Boost Technology Intel® Hyper-Threading Technology (Intel® HT Technology) Intel® Advanced Vector Extensions 2.0 (Intel® AVX2) Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) Integrated dual channel memory controller up to 25.6 GByte/sec. memory bandwidth Intel® HD graphics with dynamic frequency up to 1GHz Intel® Clear Video HD Technology Intel® Virtualization Technology (Intel® VT) Intel® Trusted Execution Technology (Intel® TXT) Intel® Streaming SIMD Extensions 4.2 (Intel® SSE4.2) PCLMULQDQ Instruction Intel® Secure Key Intel® Transactional Synchronization Extensions (Intel® TSX)									
DRAM	2 Sockets SO-DIMM DDR3L@1.35V up to 1600MT/s and 16GByte									
Chipset	Mobile Intel® 8 Series Chipset: Intel® QM87 for Intel® Core™ processors / HM86 @ planned Celeron variants									
Ethernet	Intel® I218-LM GbE LAN Controller with AMT 9.0 support									
I/O Interfaces	7x PCI Express™ GEN. 2.0 lanes 1x PEG GEN 3.0 (8GT/s) 4x Serial ATA® 6 Gb/s RAID 0/1/5/10 support 2x ExpressCard® 4x USB 3.0 (XHCI) 8x USB 2.0 (EHCI) LPC bus I²C bus (fast mode, 400 kHz, multi-master)									
Sound	Digital High Definition Audio Interface with support for multiple audio codecs									
Graphics	Next Generation Intel® HD Graphics with OpenCL 1.2 OpenGL 4.0 and DirectX11.1 support; up to three independent displays: HDMI 1.4, DVI, DP, VGA; High performance hardware MPEG-2 decoding WMV9 (VC-1) and H.264 (AVC) support Blu-ray support @ 40 MBit/s									
LVDS (eDP optional)	Dual channel LVDS transmitter Supports flat panels 2x24 Bit interface VESA mappings resolutions up to 1920x1200 Automatic Panel Detection via EDID/EPI									
Digital Display Interface	3x DS (DVI HDMI) / DisplayPort 1.2a with daisy chaining resolutions up to 4k									
CRT Interface	180 MHz RAMDAC resolutions up to WUXGA (1920x1200 @60Hz)									
congatec Board Controller	Multi Stage Watchdog non-volatile User Data Storage Manufacturing and Board Information Board Statistics BIOS Setup Data Backup I²C bus (fast mode, 400 kHz, multi-master) Power Loss Control									
Embedded BIOS Features	AMI Aptio® UEFI 2.x firmware 8 MByte serial SPI firmware flash									
Security	The conga-TS87 can be optionally equipped with a discrete “Trusted Platform Module” (TPM). It is capable of calculating efficient hash and RSA algorithms with key lengths up to 2,048 bits and includes a real random number generator. Security sensitive applications such as gaming and e-commerce will benefit also with improved authentication, integrity and confidence levels.									
Power Management	ACPI 4.0 with battery support									
Operating Systems	Microsoft® Windows 10 Microsoft® Windows 10 IoT Enterprise Microsoft® Windows 8 Microsoft® Windows 7 Linux Microsoft® Windows® embedded Standard									
Power Consumption	Typ. application: tbd. see manual for full details CMOS Battery Backup									
Temperature	Operating: 0 .. +60°C Storage: -20 .. +80°C									
Humidity	Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.									
Size	95 x 125 mm (3.74” x 4.92”)									

conga-TS87 | Block diagram



conga-TS87 | Order Information

Article	PN	Description
conga-TS87/i7-4700EQ	046804	Intel® Core™ i7-4700EQ quad core processor with 2.4GHz 6MB L2 cache and 1600MT/s dual channel DDR3L memory interface
conga-TS87/i5-4402E	046805	Intel® Core™ i5-4402E dual core processor with 1.6GHz 3MB L2 cache and 1600MT/s dual channel DDR3L memory interface
conga-TS87/i5-4400E	046806	Intel® Core™ i5-4400E dual core processor with 2.7GHz 3MB L2 cache and 1600MT/s dual channel DDR3L memory interface
conga-TS87/i3-4102E	046807	Intel® Core™ i3-4102E dual core processor with 1.6GHz 3MB L2 cache and 1600MT/s dual channel DDR3L memory interface
conga-TS87/i3-4100E	046808	Intel® Core™ i3-4100E dual core processor with 2.4GHz 3MB L2 cache and 1600MT/s dual channel DDR3L memory interface
conga-TS87/2000E	046810	Intel® Celeron™ 2000E dual core processor with 2.2GHz 2MB L3 cache and 1600MT/s dual channel DDR3L memory interface
conga-TS87/2002E	046811	Intel® Celeron™ 2002E dual core processor with 1.56GHz 2MB L3 cache and 1600MT/s dual channel DDR3L memory interface
conga-TS87/HSP-FP-B	046851	Standard heatspreader for high performance COM Express module conga-TS87 with flat heat pipes. All standoffs are with 2.7mm bore hole
conga- TS87/HSP-FP-T	046852	Standard heatspreader for high performance COM Express module conga-TS87 with flat heat pipes. All standoffs are M2.5mm threaded
conga-TS87/CSA-FP-B	046853	Standard active cooling solution for high performance COM Express module conga-TS87 with flat heat pipes 15mm fins 20mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole
conga-TS87/CSA-FP-T	046854	Standard active cooling solution for high performance COM Express module conga-TS87 with flat heat pipes 15mm fins 20mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm threaded
conga-TS87/CSP-FP-B	046855	Standard passive cooling solution for high performance COM Express module conga-TS87 with flat heat pipes 15mm fins and 20mm overall heat sink height. All standoffs are with 2.7 mm bore hole
conga-TS87/CSP-FP-T	046856	Standard passive cooling solution for high performance COM Express module conga-TS87 with flat heat pipes 15mm fins and 20mm overall heat sink height. All standoffs are M2.5mm threaded
DDR3L-SODIMM-1600 (2GB)	068755	DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 2GB RAM
DDR3L-SODIMM-1600 (4GB)	068756	DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 4GB RAM
DDR3L-SODIMM-1600 (8GB)	068757	DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) 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

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