

conga-TCA3 COM Express® module

conga-TCA3

COM Express Compact Type 6

3rd Generation Intel® Atom™ / Celeron®

Low Power 5 to 10 Watt

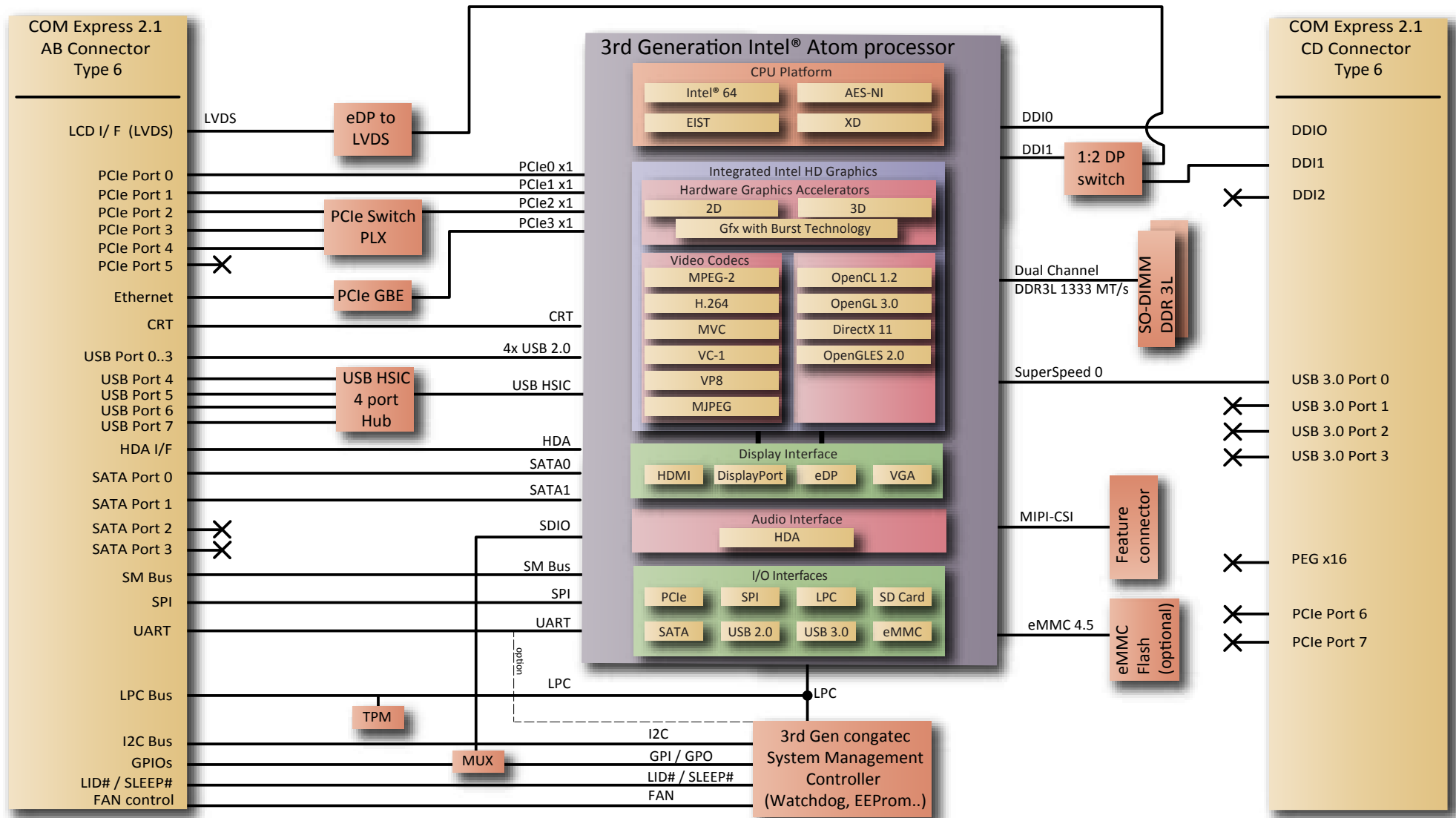
Intel® HD Graphics Generation 7

Industrial Temperature Range



Formfactor	Formfactor COM Express™ Compact, (95 x 95 mm), Type 6 Connector Layout
CPU	Intel® Atom™ E3845 quad core processor, 1.91GHz, 2MB L2 cache and 10W TDP Intel® Atom™ E3827 dual core processor, 1.75GHz, 1MB L2 cache and 8W TDP Intel® Atom™ E3826 dual core processor, 1.46GHz, 1MB L2 cache and 7W TDP Intel® Atom™ E3825 dual core processor, 1.33GHz, 1MB L2 cache and 6W TDP Intel® Atom™ E3815 single core processor, 1.46GHz, 512kB L2 cache and 5W TDP Intel® Celeron J1900 quad core processor, 2 GHz, 2MB L2 cache and 10W TDP Intel® Celeron N2930 quad core processor, 1.83 GHz, 2MB L2 cache and 7.5W TDP Intel® Celeron N2807 dual core processor, 1.58 GHz, 1MB L2 cache and 4.5W TDP
DRAM	2 SO-DIMM sockets for DDR3L memory modules up to 8 GByte with 1333MT/s Dual channel memory interface for increased graphics performance.
Chipset	Integrated in SoC
Ethernet	Intel I210 Gigabit Ethernet
I/O Interfaces	Up to 5x PCIe x1, 8x USB 2.0, 1x USB 3.0, LPC, SPI, I²C bus (fast mode 400 kHz, multi-master), SDIO
Sound	Digital High Definition Audio Interface
Graphics	Intel® HD Graphics Gen 7, Full hardware acceleration for MPEG2, H.264, DirectX11, OCL 1.1, OGL 3.2, WMV9 and VC1
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 1.1 (max. 2560x1600) or HDMI 1.4a (max. 1920x1200)
CRT Interface	320 MHz RAMDAC, resolutions up to 2560x1600
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	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 2,048 bits, real random number generator
Power Management	ACPI 5.0 with battery support
Operating Systems	Microsoft® Windows® 8, Microsoft® Windows® 7, Linux, Microsoft® Windows® Embedded Standard, Microsoft® Windows® 7 Embedded Compact
Power Consumption	Typ. application: 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: -45 to +85°C
Humidity Operating:	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-TCA3 - Block diagram



conga-TCA3 - Order information

Article	PN	Description
conga-TCA3/E3845	047300	COM Express module with Intel® Atom™ E3845 quad core processor with 1.91GHz, 2MB L2 cache, dual channel 1333MT/s DDR3L memory interface
conga-TCA3/E3827	047301	COM Express module with Intel® Atom™ E3827 dual core processor with 1.75GHz, 1MB L2 cache, dual channel 1333MT/s DDR3L memory interface
conga-TCA3/E3826	047302	COM Express module with Intel® Atom™ E3826 dual core processor with 1.46GHz, 1MB L2 cache, dual channel 1066MT/s DDR3L memory interface
conga-TCA3/E3825	047303	COM Express module with Intel® Atom™ E3825 dual core processor with 1.33GHz, 1MB L2 cache, single channel 1066MT/s DDR3L memory interface
conga-TCA3/E3815	047304	COM Express module with Intel® Atom™ E3815 single core processor with 1.46GHz, 512kB L2 cache, single channel 1066MT/s DDR3L memory interface
conga-TCA3/J1900	047305	COM Express module with Intel® Celeron J1900 quad core processor with 2.0 GHz, 2MB L2 cache, dual channel 1333MT/s DDR3L memory interface
conga-TCA3/N2930	047307	COM Express Type 6 Compact module with Intel® Celeron® N2930 quad core processor with 1.83GHz, 2MB L2 cache, 1333MT/s dual channel DDR3L memory interface.
conga-TCA3/N2807	047308	COM Express Type 6 Compact module with Intel® Celeron® N2807 dual core processor with 1.58GHz, 1MB L2 cache, 1333MT/s single channel DDR3L memory interface.
conga-TCA3/HSP-T	047350	Standard heatspreader for COM Express module conga-TCA3. All standoffs are M2.5 thread.
conga-TCA3/HSP-B	047351	Standard heatspreader for COM Express module conga-TCA3. All standoffs are 2.7mm bore hole.
conga-TCA3/CSP-T-HF	047352	Standard passive cooling solution for COM Express module conga-TCA3 with 10mm fins. All standoffs are M2.5mm thread.
conga-TCA3/CSP-B-HF	047353	Standard passive cooling solution for COM Express module conga-TCA3 with 10mm fins. All standoffs are 2.7mm bore hole.
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 1600MT/s (PC3L-12800S) and 4GB RAM

Engineering Tools / Accessories for COM Express®		
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-carrierboard-Socket-5	400007	Connector for COM-Express carrier boards, height 5mm, packing unit 4 pieces
COM-Express-carrierboard-Socket-8	400004	Connector for COM-Express carrier boards, height 8mm, packing unit 4 pieces

© 2014 congatec AG. All rights reserved. All data is for information purposes only. Although all the information contained within this document is carefully checked, no guarantee of correctness is implied or expressed. The products may include software. Use of the software is subject to the terms and conditions set out in the respective owner's license agreements, which are available at www.congatec.com and/or upon request. Product names, logos, brands, and other trademarks featured or referred to within this datasheet, or the congatec website, are the property of their respective trademark holders. These trademark holders are not affiliated with congatec AG, our products, or our website.
Rev. March 21, 2014 KS