

# COM Express® Compact Module

## Industrial Temperature

### conga-CAx

Extended Temperature Range  
-40° .. +85°C

Compact COM Express™ Module  
with best Performance per Watt Ratio

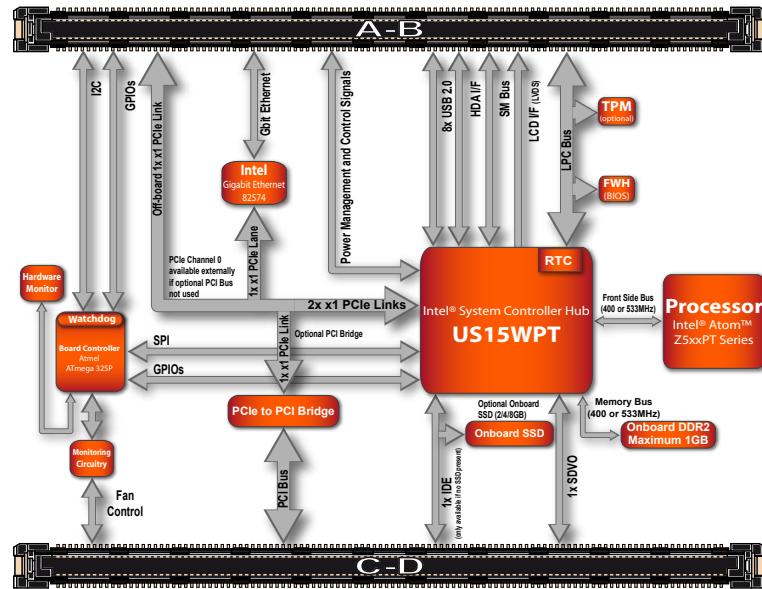
congatec Embedded BIOS,  
Flat Panel Detection, ...



<b>Formfactor</b>	<b>COM Express™ Compact, (95 x 95 mm), Type II Connector Layout</b>
<b>CPU</b>	Intel® Atom™ processor Z520PT 1.33 GHz, 400 MHz FSB and memory bus speed, 512k cache, 45 nm, with Hyper-Threading Technology and Intel® Virtualization Technology, industrial temperature Intel® Atom™ processor Z510PT 1.1 GHz, 400 MHz FSB and memory bus speed, 512k cache, 45 nm with Hyper-Threading Technology, industrial temperature
<b>DRAM</b>	Up to 1 GByte on-board DDR2 400/533 MHz
<b>Chipset</b>	Intel® System Controller Hub US15WPT, industrial temperature
<b>Ethernet</b>	Intel® Gigabit Ethernet 82574L Controller
<b>I/O Interfaces</b>	1x EIDE (UDMA-66/100), PCI bus Rev. 2.3, LPC bus, 8x USB 2.0, I²C bus, up to 2 PCI Express links optional
<b>Mass Storage</b>	Onboard IDE Solid State Disk up to 8GB
<b>Sound</b>	Intel® High Definition Audio (Intel® HD Audio)
<b>Graphics</b>	Intel® Graphics Media Accelerator 500 (Intel® GMA 500), up to 256 MByte frame buffer supporting Direct X 9.0E and Open GL 2.0
<b>Video Decode Acceleration</b>	Full hardware acceleration for MPEG2, MPEG4, H.264, WMV9 and VC1
<b>Motion Video Support</b>	Single channel 112MHz LVDS transmitter, support for flat panels with 1x18 and x24 bit data mapping up to resolutions of 1366x768 pixel Single channel SDVO interface, supports resolutions up to 1280x1024 pixel Dual independent display support
<b>congatec Board Controller</b>	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
<b>Embedded BIOS Features</b>	OEM Logo, OEM CMOS Defaults, LCD Control, Display Auto Detection, Backlight Control, Flash Update, based on AMIBIOS8™
<b>Power Management</b>	ACPI 3.0 with battery support
<b>Operating Systems</b>	Microsoft® Windows 7, Microsoft® Windows XP, Microsoft® Windows CE 6.0, Microsoft® Windows® Embedded Compact 7, Microsoft® Windows® embedded Standard, Linux
<b>Power Consumption</b>	Typ. application 5 Watt
<b>Temperature</b>	Operating: -40 to +85°C Storage: -40 to +85°C, extended temperature
<b>Humidity</b>	Operating: 10 to 90% r. H. non cond. Storage: 5 to 95% r. H. non cond.
<b>Size</b>	95 x 95 mm (3¾" x 3¾")

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Rev. July 28, 2014 MD

# Block Diagram a-CAX



# Order Information conga-CAX

Article	PN	CPU-Z510PT	CPU-Z520PT	PCI Bus	PCIe ext.	IDE ext.	SSD onboard
conga-CAX/Z510PT-1GB	061115	✓		✓		✓	
conga-CAX/520PT-1GB	061120		✓	✓		✓	
conga-CAX/520PT-1G SSD2/PCIe	061140		✓		✓		✓

Article	PN	Description
conga-CAX/HSP-B	061790	Heatspreader, Standoff with 2.7mm bore hole
conga-CAX/HSP-T	061795	Heatspreader, Standoff with M2.5mm thread

Engineering Tools / Accessories for COM Express*		
conga-CEVAL	065749	Evaluation carrier board for COM-Express-modules
conga-Cdebug	047854	COM-Express debugging platform. Including cable for COM, PS/2 and VGA.
conga-CKIT	064714	COM-Express-Starterkit, incl. conga-CEVAL, conga-CDEBUG, conga-FPA1 (PN: 024241), Dual DVI-D ADD2 card, Power supply, USB-Stick, ... Without COM Express-module
conga-MCB/COM Express	020715	Mini Carrier Board for COM Express with smart battery manager interface for mobile applications.
conga-MCB/COM Express Cable Kit	14000040	Complete cable kit for the COM Express mini carrier board
conga-LDVI/EPI	011115	LVDS to DVI converter board for digital flat panels with onboard EEPROM
conga-HDMI/Display Port adapter	500014	The conga-HDMI/DisplayPort adapter is used to convert the chipset graphic ports Port-B, Port-C and Port-D to the HDMI or DisplayPort Interface
DVI-D ADD2 Card	058500	ADD2 display adapter card with single DVI-D digital output. Suitable for all Intel based platforms that support Serial Digital Display Outputs (SDVO) on the standard, x16 PCI Express Graphics (PEG) port.
Dual DVI-D ADD2 Card	013226	ADD2 display adapter card with dual independent DVI-D output. Suitable for all Intel based platforms that support Serial Digital Display Outputs (SDVO) on the standard, x16 PCI Express Graphics (PEG) port.
conga-FPA2	047250	Flatpanel prototype adapter to develop your own flatpanel adapter including cables set.
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