

# XTX™ Module

## High Performance

### conga-X945

Featuring the latest Intel® Core™ 2 Duo LV Processors up to 1.5 GHz

Provides up to 2 GByte top of the line DRAM performance

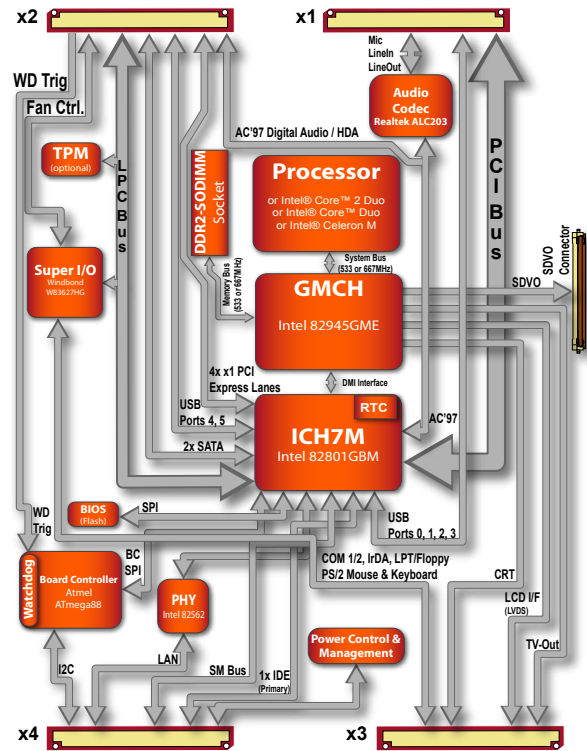
ACPI Battery Support, Flat Panel detection ....



<b>Formfactor</b>	<b>ETX® Spec 2.7. without ISA Support, XTX™ Extensions</b>
<b>CPU</b>	Intel® Core™ 2 Duo L7400 LV, 1.5 GHz, (4M cache, 667 MHz FSB, 65nm) Intel® Core™ 2 Duo U7500 ULV, 1.06 GHz, (2M cache, 533 MHz FSB, 65nm) Intel® Core™ Duo L2400 LV, 1.66 GHz, (2M cache, 667 MHz FSB, 65nm) Intel® Celeron® M440, 1.86 GHz, (1M cache, 533 MHz FSB, 65nm) Intel® Celeron® M423 ULV, 1.06 GHz, (1M cache, 533 MHz FSB, 65nm)
<b>DRAM</b>	SO-DIMM DDR2 667/PC 5300 up to 2 GByte
<b>Chipset</b>	Graphics & Memory Controller Hub: Intel® 945GME I/O Controller Hub: Intel® 82801GBM (ICH7-M) I/O Controller: Winbond 83627HG Ethernet PHY: Intel® 82562
<b>Ethernet</b>	IEEE 802.3u 100Base-Tx, Fast Ethernet compatible
<b>I/O Interfaces</b>	4x PCI Express™ Lanes, 2x Serial ATA® (AHCI), 1x EIDE (UDMA-66/100), 2x Express Card® (uses 2x USB & 2x PCI Express), 6x USB 2.0 (EHCI), PCI Bus Rev. 2.3, no ISA Bus, LPC Bus, I²C (Fast Mode, 400 kHz, Multi Master), Floppy (Shared with LPT), LPT (EPP/ECP, Shared with Floppy), 2x COM Ports TTL Level, 1x IrDA Port, PS/2 Keyboard, Mouse
<b>Sound</b>	AC'97 Rev.2.2 Compatible, Line In, Line Out, Mic In, Digital High Definition Audio Interface with support for multiple audio codecs
<b>Graphics</b>	Enhanced 256 Bit 3D Video Controller, Intel® Graphics Media Accelerator 950, Up to 10.6 GB/sec memory bandwidth, 256-bit graphics core, max. 224 MByte 64 Bit Video RAM (DVMT 3.0), Dynamic Display Modes for flat-panel, wide-screen and Digital TV support, Two independent pipelines for full dual view support
<b>Motion Video Support</b>	High Definition Hardware Motion Compensation to support high definition hi-bitrate MPEG2 media playback, Up and Down Scaling of Video Content, High Definition Content Decode, HDTV (1080i/p) Support
<b>Flat panel Interface</b>	Dual 112 MHz LVDS Transmitter, Supports all 1x18, 2x18, 1x24, 2x24 Bit, VESA- and openLDI-Mappings, Resolutions 640x480 up to 1600x1200, Automatic Panel Detection via EPI, (Embedded Panel Interface, based on VESA EDID™ 1.3)
<b>CRT Interface</b>	400 MHz RAMDAC, Resolutions up to 2048x1536 @ 75 Hz, including 1920x1080 @ >85 Hz (HDTV)
<b>AUX Output</b>	2x SDVO
<b>TV Out</b>	On ETX® X3 connector
<b>congatec Board Controller</b>	Multi Stage Watchdog, Non-volatile User Data Storage, Manufacturing and Board information, Board Statistics, BIOS Setup Data Backup, I²C (Fast Mode, 400 kHz, Multi Master), Power Loss Control
<b>Embedded BIOS Features</b>	OEM Logo, OEM CMOS Defaults, LCD Control, (Auto Detection, Backlight Control), Serial Port Console Redirection, for Remote Setup and Installation, Flash Update, Based on AMIBIOS®
<b>Security</b>	The conga-X945 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.
<b>Power Management</b>	ACPI 2.0 with Battery support
<b>Operating Systems</b>	Microsoft® Windows7, Microsoft® Windows XP, Microsoft® Windows CE 6.0, Microsoft® Windows® embedded Standard, Windows Embedded Compact 7, Linux
<b>Power Consumption</b>	Typ. application: 10.5 W @ 5V, (1.66 GHz Core Duo), CMOS Battery Backup
<b>Temperature</b>	Operating: 0 .. +60°C Storage: -20 .. +80°C
<b>Humidity</b>	Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.
<b>Size</b>	95 x 114 mm (3.7" x 4.5")

# Block Diagram conga-X945

# Order Information conga-X945



Article	PN	Description
conga-X945/423	034571	Intel 945GME and Intel® Celeron® M 423 processor with 1.06GHz, 1MB L2 cache and 533MHz FSB.
conga-X945/440	078965	Intel 945GME and Intel® Celeron® M 440 processor with 1.86GHz, 1MB L2 cache and 533MHz FSB.
conga-X945/L2400	085691	Intel 945GME and Intel® CoreDuo™ L2400 processor with 1.66GHz, 2MB L2 cache and 667MHz FSB.
conga-X945/U7500	014781	Intel 945GME and Intel® Core2Duo™ U7500 processor with 1.06GHz, 2MB L2 cache and 533MHz FSB.
conga-X945/L7400	055874	Intel 945GME and Intel® Core2Duo™ L7400 processor with 1.5GHz, 2MB L2 cache and 667MHz FSB.
conga-X915+X945/HSP-B	062579	Heatspreader, Standoff with 2.7mm bore hole
conga-X915+X945/HSP-T	011278	Heatspreader, Standoff with M2.5mm thread
conga-X915+X945/CSP-B	024873	Standard passive cooling solution, black surface with 10mm fins, bore hole standoffs
conga-X915+X945/CSP-T	073258	Standard passive cooling solution, black surface with 10mm fins, thread standoffs
conga-X915+X945/CSA-B	088741	Standard active cooling solution, black surface with 10mm fins, integrated 12V fan 5500rpm, cable length 200mm, w/3 pin, 2.54 pitch connector, bore hole standoffs
conga-X915+X945/CSA-T	036198	Standard active cooling solution, black surface with 10mm fins, integrated 12V fan 5500rpm, cable length 200mm, w/3 pin, 2.54 pitch connector, thread standoffs
DDR2-SODIMM-667 (512MB)	057841	DDR2-SODIMM memory module with 512MB RAM (667 MT/s)
DDR2-SODIMM-667 (1GB)	087412	DDR2-SODIMM memory module with 1GB RAM (667 MT/s)
DDR2-SODIMM-667 (2GB)	068712	DDR2-SODIMM memory module with 2GB RAM (667 MT/s)

### Engineering Tools / Accessories for XTX®

conga-Xeval	019482	Evaluation carrier board for XTX-modules
conga-XXIT	077441	XTX-Starterkit with conga-XEVAL, conga-Xdebug, conga-FPA2, conga-XDVI, Power supply, USB-Stick, ...Without XTX-module
conga-XDVI	098637	Evaluation platform to convert SDVO to DVI-D
conga-Xdebug	041784	XTX debugging platform. Including cable for COM, PS/2 and VGA
conga-FPA2	047250	Flatpanel prototype adapter to develop your own flatpanel adapter including cables set
XTX/ETX-baseboard-socket-3	400006	Connector for ETX and XTX carrier boards, height 3.0 mm, packing unit 8 pieces
XTX/ETX-baseboard-socket-9.5	400009	Connector for ETX and XTX carrier boards, height 9.5 mm, packing unit 8 pieces
conga-LDVI/EPI	011115	LVDS to DVI adapter board for digital flat panels with a graphics resolution up to 1280x1024 pixel