

conga-X915

XTX™ - Facelift for ETX®



■ High End

The conga-X915 features Intel® Pentium® M processors up to 2.0 GHz with 2 MByte cache. Compared to the conga-X852 the conga-X915 offers an additional 4x X1 PCI Express lanes for very fast I/Os.

■ Low Power Consumption

The complete design is geared around low power consumption. The Intel Pentium M 1.4 GHz variant offers very reasonable computing performance for mobile solutions. The **congatec** Embedded BIOS offers ACPI support that's necessary when using batteries. Enhanced Intel Speed Step® Technology is supported.

■ Lead-free Design (RoHS)

Starting in July 2006 all electronic products need to be environmentally friendly. The conga-X915 already fulfills these requirements today.

■ ETX® Standard

The conga-X915 is based on the ETX® spec 2.7 an can easily be integrated into any existing ETX® design that is not using the ISA bus. In order to take advantage of the XTX functions you only have to consider the X2 connector signals, everything else remains the same.

■ Graphics Efficiency

The integrated Intel® Graphics Media Accelerator 900 features the latest 3D, 2D and video capabilities. It supports up to 224 MByte frame buffer using Dynamic Video Memory Technology (DVMT). conga-X915 automatically recognizes almost every available flatpanel display and sets all parameters accordingly. Additional displays can be connected using the analog VGA interface or the DVO port. TV-Out is also supported.

■ Mass Storage

Two serial ATA® drives can be connected as fast mass storage devices. In order to support economical and robust CompactFlash cards, parallel ATA is also available.

■ Sound

conga-X915 can utilize several high definition audio (HDA) codecs. This allows for the easy implementation of telephone and audio applications that require the highest sound quality and numerous channels.

■ Connectivity

Thanks to the six **USB 2.0**, 2x **SATA®**, two COM ports, **PCI**, **I²C**, **LPT**,... the conga-X915 offers more connectivity than most other computer modules.

■ Security

The conga-X915 can be equipped optionally with a "Trusted Platform Module" (TPM). This TPM includes coprocessors to calculate efficient hash- and RSA-algorithms with key lengths up to 2,048 bits as well as a real random number generator. Security sensitive applications like gaming and ecommerce will benefit also with improved authentication, integrity and confidence levels.

■ Software and Driver Support

congatec offers advanced Board-Support-Packages for the conga-X915, which include both the latest tested drivers from silicon vendors and the **congatec** specific drivers for accessing all of our additional embedded BIOS features. This will help our customers reduce their time-to-market.

■ Embedded BIOS Features

The conga-X915 is equipped with the **congatec** Embedded BIOS and supports the following features:

- ACPI Power Management
- ACPI Battery Support
- Supports Customer Specific CMOS Defaults
- Multistage Watchdog
- User Data Storage
- Manufacturing Data and Board Information
- OEM Splash Screen
- Flat Panel Auto Detection
- BIOS Setup Data Backup
- Fast Mode I²C Bus
- Real Headless Operation
- Console Redirection and BIOS Update(flashing BIOS) via Serial Port

■ Design-In Support

congatec support begins with your product idea and philosophy and continues throughout the series phase all the way up to the next product generation. This commitment to support helps our customers keep system development costs low and speeds up time-to-market.

■ System Integration

An important factor for each system integration is the thermal design. The heatspreader is a thermal coupling interface that makes fanless and rugged solutions possible.

Technical Data

■ Formfactor

ETX® Spec 2.7. without ISA Support
XTX™ Extensions

■ CPU

Intel® Pentium® M 760
2.0 GHz, 2 MByte cache, FSB 533 MHz
Intel® Pentium® M 745
1,8 GHz, 2 MByte cache, FSB 400MHz
Intel® Pentium® M 738
1,4 GHz, LV, 2 MByte cache, FSB 400MHz
Intel® Celeron® M 373
1,0 GHz, ULV, 512 kByte cache, FSB 400MHz

■ DRAM

SO-DIMM DDR400 up to 1 GByte

■ Chipset

Graphics & Memory Controller Hub
Intel® 82915GM
I/O Controller Hub
Intel® 82801FBM (ICH6-M)
I/O Controller
Winbond 83627HG
Ethernet PHY
Intel® 82562

■ I/O Interfaces

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. 2.1, no ISA Bus, LPC Bus
I²C Bus, 400 kHz
Floppy (Shared with LPT)
LPT (EPP/ECP, Shared with Floppy)
2x COM Ports, TTL Level, 1x IrDA Port
PS/2 Keyboard, Mouse

■ Sound

AC'97 Rev.2.2 Compatible
Line In, Line Out, Mic In
Digital High Definition Audio Interface
with support for multiple Codecs

■ Ethernet

IEEE 802.3u 100Base-Tx
Fast Ethernet compatible

■ Graphic Interface

Enhanced 256 Bit 3D Video Controller
Intel® Graphics Media Accelerator 900
533 MHz Memory Clock
333 MHz Core Clock
max. 224 MByte 64 Bit Video RAM (DVMT 3.0)

Full Dual View

with two independent Pipelines

Motion Video Support

Motion Compensation
Subpicture Support
Dynamic Blob & Weave
HDTV (1920x1080) Support

Flatpanel Interface

Integrated LVDS Transmitter
Supports 1x18 Bit and 2x18 Bit panel types
Resolutions 640x480 up to 1400x1050
Automatic Panel Detection via EPI
(Embedded Panel Interface based on
VESA EDID™ 1.3)

CRT Interface

400 MHz RAMDAC
Resolutions up to 2048x1536 @ 75 Hz
(QXGA)
including 1920x1080 @ >85 Hz (HDTV)

AUX Output

2x SDVO

TV Out

on ETX X3 connector

■ congatec Board Controller

Multi Stage Watchdog
Nonvolatile User Data Storage
Manufacturing and Board information
Board Statistics
BIOS Setup Data Backup
Fast Mode, Multi Master I²C Bus, 400 kHz

■ Embedded BIOS Features

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®

■ Security (optional)

TMP/TPA Security Functions, tor Hash, RSA
Keys and Random Numbers

■ Power Management

ACPI 2.0 with Battery support

■ Operating Systems

Microsoft® Windows® XP, 2000
Microsoft® Windows® XP embedded
Microsoft® Windows® CE 5.0
Windriver VxWorks, LINUX, QNX

■ Power Consumption

5 Volt DC ± 5%
CMOS Battery Backup 3,3 Volt

■ Temperature

Operating 0 .. +60°C
Storage -20 .. +80°C

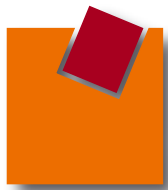
■ Humidity

Operating 10 - 90% r. H. non cond.
Storage 5 - 95% r. H. non cond.

■ Size

95 x 114 mm (3.7 x 4.5")





congatec

the rhythm of embedded computing

congatec AG

Auwiesenstr. 5
94469 Deggendorf, Germany

Tel + 49 (991) 2700-0
Fax + 49 (991) 2700-111
www.congatec.com

Fax reply to + 49 (991) 2700-111

Yes, please send a free and non-binding offer about:

Product	Quantity
---------	----------

Yes, please arrange an appointment with me for a detailed product presentation.

Yes, please send your free e-newsletter to me.

My Address:

Company

First Name, Name

Position

Street

ZIP, City

Country

Phone

Fax

E-Mail

© 2005 congatec AG. All rights reserved.

conga, congatec and XTX™ are registered trademarks of congatec AG. Intel and Pentium are registered trademarks of the Intel corporation. Express Card is a registered trademark of the Personal Computer Memory Card International Association (PCMCIA). PCI express is a registered trademark of the Peripheral Component Interconnect Special Interest Group (PCI). CompactFlash is a registered trademark of the Compact Flash Association. SIPC is a registered trademark of SIMicroelectronics. LynxEM+ is a registered trademark of the Silicon Motion inc. Winbond is a registered trademark of the Winbond Electronics corps. AVR is a registered trademark of the Atmel corporation. ETX is a registered trademark of JUMPLEC AG. AMICORE8 is a registered trademark of American Megatrends inc. Microsoft®, Windows®, Windows NT®, Windows CE and Windows XP® are registered trademarks of Microsoft corporation. VxWorks is a registered trademark of WindRiver. All product names and logos are property of the respective manufacturers.

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.

5-051117