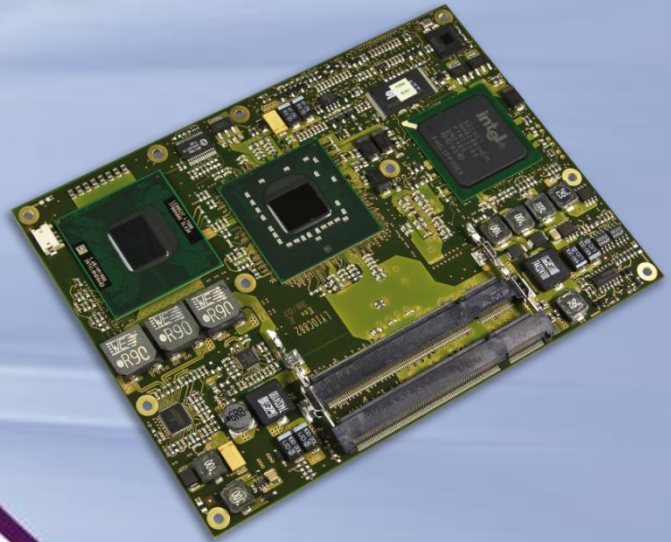


Product Sheet



COM Express™ Family

Intel® Core™ 2 Duo Extended

COM Express™, an open specification of the PICMG (PCI Industrial Computer Manufacturer Group), is a module concept to bring PCI Express and other latest technologies like SATA, USB 2.0 and LVDS on a COM (Computer On Module).

COM Express is plugged onto an application-specific base board similar to the ETX concept, but offers more options and a growth path to future CPU technologies. The design of the **MSC CXE-C2D965** module is based on Intel's dual core CPU technology enabling you to boost your embedded application to highest performance levels.

Even more, it supports up to 4GByte of memory on two sockets to achieve better graphics and computer Performance.

Features

- Intel® Celeron M 550 (2.0GHz), Intel® Core™ 2 Duo L7500 (1.6GHz)
- Mobile Intel® 965GME Chipset with integrated Intel® Graphics Media Accelerator X3100
- PCI Express™ x16 (PEG) Support
- Up to 4GB DDR2 SDRAM, dual channel access
- Three SATA-300 mass storage Interfaces
- 10/100/1000 Base-TX Ethernet interface
- LVDS interface (18 / 24 / 36 / 48 Bit)
- Max. resolution up to 2.048 x 1.536, 32bpp
- Dual Independent Display support
- Five PCI Express™ x1 lanes
- Eight USB 2.0 interfaces
- HD audio interface
- Infineon TPM 1.2
- Phoenix TrustedCore BIOS with security extensions
- System monitoring, watchdog
- ACPI power management including Suspend-to-RAM support
- Fully COM Express™ Type 2 compliant
- Windows XP (embedded) and Linux supported

Various processors (Celeron M and Core 2 Duo) are supported by this design.

Besides an extensive set of interfaces and features, the MSC CXE-C2D965 offers hardware and BIOS based security compliant to the requirements of TCG (Trusted Computing Group).

For evaluation and design-in of the COM Express™ modules we provide evaluation baseboards with PC style connectors providing access to all COM Express™ module interfaces. Customer mother-boards may also be offered according to your special needs.

Starter kits for Linux are available on request.

Product description (more options on request)	Order No.
MSC CXE-C2D965-550-160000, Intel® Celeron M 550, 10/100/1000Base-TX, TPM	32328
MSC CXE-C2D965-L7500-160000, Intel® Core™ 2 Duo L7500, 10/100/1000Base-TX, TPM	32264

Technical Data – MSC CXE-C2D965

Core Logic, Memory

CPU: Intel® Celeron M 550 (2.0GHz), Intel® Core™ 2 Duo L7500 (1.6GHz)

Chipset: Intel® 82965GME, ICH8-M

Memory: Two 200-pin SO-DIMM sockets for up to 4 GB PC5300 DDR2 SDRAM, dual channel memory support

Drives

SATA: 3 x SATA-2 channels (up to 300MB/s)

EIDE: 1 x Enhanced IDE port (ATA/UDMA100)

Standard Interfaces

USB: 8 x USB 2.0 to COM Express connector

Bus Interfaces

COM Express™ Interface: Type 2 interface, fully compliant

PCI Express™: Six channels PCI Express x1, one channel shared with Gbit Ethernet, one PCI Express Graphic (PEG) x16

PCI: 32 Bit, 33MHz standard interface (PCI 2.3)

LPC: Low Pin Count bus for heritage interfaces

Flat Panel / CRT Interface

Graphics Controller: Intel® Graphics Media Accelerator X3100, (integrated in Intel® 965GME chipset)

Video Memory: UMA, up to 384 MB

LCD Interface: LVDS 24/48 Bit, dual channel, Resolution 2048 x 1536

CRT Interface: Resolution 2048 x 1536

Miscellaneous

Watchdog Timer: Initiates system reset, (programmable, 1s ... 255h)

Fan Supply: 3-pin header (12V)

Battery: External

System Monitoring: Voltage, Temperature, Fan

LAN Interface

Ethernet: 10/100/1000Base-TX (Intel® 82566)

Sound Interface

Intel® High Definition Audio

Security Device

Infineon Trusted Platform Module 1.2 SLB 9635

Bios

Phoenix TrustedCore

Boot Options: Quick Boot, MultiBoot XP (FD, HD, CD, LAN, USB), Boot without keyboard, LAN Boot via PXE (RPL optional), Wake on LAN (WOL) supported

Security: Phoenix StrongROM technology, TPM 1.2 support, Pre-Boot-Authentication, Phoenix SecureFlash for safe BIOS updates

Power Management: ACPI (S3, S4, S5 supported), Enhanced Intel SpeedStep® technology supported, Active/passive cooling

USB: USB legacy support (Keyboard, Mouse, Hub)

Video: VGA BIOS with flat panel extensions (EPI)

Setup: CMOS configuration backup in EEPROM

HW Programming I/F: UspEpc (Universal board support package for embedded PCs)

Power Supply

Power: Power +12V +/-10%, 5V Stby optional

Power Consumption: 40W typ. (550, 2.0GHz), 35W typ. (L7500, 1.6GHz)

Environment

Ambient: 0° ... 60°C (operating)

Temperature: -25° ... 85°C (storage)

Humidity: 5 ... 95% (operating, non-condensing)
5 ... 95% (storage, non-condensing)

Mechanical

Dimensions: 155mm x 110mm x13mm

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