

COMe 855 COMPACT MODULES

Com Express[™] Family

- → Intel[®] Pentium[®] M 1.4 GHz 1.8 GHz
- → Intel[®] 855GME Chipset with integrated Intel[®] Extreme Graphics2 Controller
- → Up to 1Gbyte PC2700 DRAM (ECC possible)







COMe 855 c Pentium M Compact Module



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 in the ETX concept, but offers more options and a growth path to future CPU technologies. Utilizing different sizes, COM Express can be used for highly embedded solutions up to high performance platforms.

The design of the COMe 855 C modules supports all current variants of the Intel Embedded Pentium M processor up to the latest version with 400 MHz FSB.

For evaluation and design-in of the COM Express modules we provide evaluation baseboards and develop motherboards providing the interface infrastructure for the COM Express module and offering PC plug connectors for external connection.

Special Starter Kits for Windows CE .NET and Linux are available on request.

III Features

- → Intel Pentium M 1.4 GHz 1.8 GHz (2 MB Cache)
- → Intel 855GME Chipset with integrated Intel Extreme Graphics2 Controller
- → Up to 1 GB PC2700 DRAM (ECC possible)
- → Dual Enhanced IDE Interface
- → 10/100Base-T Ethernet Interface
- → LCD LVDS Interface (18 / 24 / 36 / 48 Bit)
- → Resolution up to 1.600 x 1.200
- → CRT Interface up to 2.048 x 1.536
- → Dual Display Operation supported
- → Quad USB 2.0 Interfaces
- → AC'97 Audio Interface
- → RTC (Battery-buffered)
- ightarrow System Monitoring, Watchdog
- → APM ACPI Power Management including Suspend-to-RAM
- → Fully COM Express Type 2 compliant
- → WindowsXP (embedded), Windows CE .NET and
- → Linux supported

Product description	Clock	TDP
COMe Pentium M 745 Compact Module	1.80 GHz	26 Watt
COMe Pentium M LV 738 Compact Module	1.40 GHz	15 Watt

III Core Logic, Memory

CPU Intel Pentium M LV 738 (1.4 GHz)

or 745 (1.8 GHz) FSB 400 MHz

Chipset Intel 82855GME, ICH4

Memory 200-pin SO-DIMM socket for up to 1 GB, PC2700 DDR

SDRAM (DDR 333), ECC possible with ECC-SODIMM

III Drives

EIDE 2 Enhanced IDE ports Ultra DMA100

Floppy Shared with parallel port

III Standard Interfaces

USB 4 x USB 2.0

III Bus Interfaces

COM Express™ Typ2 Interface with PCI and IDE.

Interface No PCI Express Signal due to used chipset

PCI 32-bit standard interface Serial Bus 1²C Bus, SMBus interface

III Flat Panel / CRT Interfaces

Graphics Controller Intel® Extreme Graphics2 (integrated in Intel® 855 GM

Chipset)

Video Memory UMA, up to 32MB

LCD Interface LVDS 18/24/36/48-bit max. resolution 1.600 x 1.200

CRT Interface Max. resolution 2.048 x 1.536

III Miscellaneous

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

Fan Supply 3-pin header (5V)

Battery External

III System Monitoring

Voltage yes Temperature yes Fan yes

III LAN Interface

Ethernet 10/100Base-T controller in ICH4 (Intel® 82559 compatible)

LAN Boot RPL PXE

III Sound Interface

Audio AC'97 2.3 Audio Codec, Realtek ALC650

III BIOS

Type Phoenix (in on-board Flash)

Auto Configuration Plug & Play (PCI, ISA) PCI Auto Configuration (PCI 2.1)

Automatic DRAM configuration

Boot Options Quick Boot, MultiBoot (FD, HD, CD, LAN, USB)

Boot without keyboard

Security System and setup password Write protection for BIOS Flash

Power Management APM ACPI (including suspend-to-RAM) Fixed frequency

option (Setup) Geyserville 3 Support

USB legacy support (Keyboard, Mouse, Hub)

Video VGA Bios with flat panel extensions
Flash Update BIOS update via storage media
Setup CMOS setup backup in Flash chip

III Power Supply

Power +5V +/-10%

Power Consumption 15W typ. (1.4GHz, 256MB) 1.5W typ. (suspend)

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III Environment

Ambient o° \dots 60°C (operating)

Temperature -25° \dots 85°C (storage)

Humidity 20 \dots 80% (operating)

5 ... 95% (storage, non-cond.)

III Mechanical

Dimensions 95mm x 95mm x 12mm

Heatspreaders 95mm x 95mm x 2mm with through hole standoffs (3mm)

or threaded corner standoffs (2.5mm)

