

ETX-945 Series

COMPUTER-ON-MODULE CORES FOR CUSTOM EMBEDDED SYSTEMS



- ETX 3.0 compliant
- High performance, low power, rugged
- Available with Intel Core2Duo, CoreDuo or Celeron M CPUs in standard, LV, and ULV technologies
- SO-DIMM socket supports up to 1GB DDR2 SDRAM
- Hi-res CRT and dual-channel 24-bit LVDS video
- SATA, USB 2.0, serial, and AC97 audio
- 10/100 Mbps Ethernet LAN
- Dual expansion buses: 32-bit PCI and 16-bit ISA
- -40°C to +85°C extended temperature operation

DESCRIPTION

Diamond's ETX-945 Series computer-on-modules (COMs) are compact embedded computing cores suitable for powering a wide range of embedded applications. By plugging these powerful COMs into standard or custom application baseboards, OEMs can reduce development costs, minimize design risks, and shorten time-to-revenue while benefiting from the latest embedded technologies.

Each Diamond ETX-945 Series COM integrates a complete set of PC-compatible functions, including a high-performance, low-power Intel processor and up to 1GB of high-speed DDR2 system DRAM.

In addition to these core computing functions, the modules also provide interface controllers for high-resolution CRT and LVDS-interfaced displays, 10/100Mbps Ethernet, and both SATA and IDE storage devices, as well as USB 2.0, audio, serial, parallel, and PS/2 ports.

For maximum application flexibility, all of Diamond's ETX-945 Series ETX COMs can be interfaced to application-specific circuitry via both 32-bit PCI and 16-bit ISA expansion buses. To support applications which are subject to temperature extremes, the modules also feature an extended operating temperature range of -40°C to +85°C.

The ETX-945 Series supports Windows XP and Linux operating systems.

SPECIFICATIONS

Processor	Intel Core2Duo, CoreDuo or Celeron M in socket or soldered on-board
Chipset	Intel 945GME with Intel ICH7M
Front Side Bus	533MHz or 667MHz, CPU dependent
L2 Cache	Up to 4MB, CPU dependent
System Memory	1 200-pin SO-DIMM socket, up to 1GB DDR2 SDRAM (400/533/667MHz)
BIOS	Phoenix Award PnP
Graphics	Intel GMA950 graphics core Up to 2048x1536 resolution RGB CRT output Dual channel 24-bit LVDS output Supports dual independent displays
Audio	Realtek ALC655 AC97 CODEC Mic in, line in/out on ETX connectors
USB Ports	1 USB 2.0
Serial Ports	1 RS-232; 1 RS-232/422/485
Networking	Intel 82562 10/100Base-T Ethernet
Mass Storage	2 SATA ports, 150MB/s data rate 1 PATA port, supports 2 IDE devices
Parallel/Floppy Port	SPP/EPP/ECP mode or floppy connector
Keyboard/Mouse	PS/2
Expansion Buses	32-bit PCI bus (4 PCI masters) 16-bit ISA bus
Dimensions	4.5" x 3.7" (114mm x 95mm)
Weight	2.8oz (79g)
CPU TDP	5.5W to 34W, CPU dependent
Operating Temp	-40°C to +85°C
Humidity	0 to 90% non-condensing
Form Factor	ETX 3.0 Compliant
RoHS	Compliant

ETX COM BASEBOARDS

In addition to the ETX-N270 Series COMs, Diamond offers both standard ETX COM Baseboards and application-specific baseboards tuned to fit precise customer needs. The BB-ETX-01 baseboard is an ETX form-factor baseboard that brings out the standard ETX I/O to connectors and is intended for application development. Alternately the ETX-N270 is available integrated into Diamond's Neptune, an off-the-shelf EPIC single board computer rich in I/O.

CUSTOM BASEBOARD DESIGNS

Through more than 20 years of experience producing industry-leading data acquisition I/O on PC/104 and PC/104-Plus modules and single-board computers, Diamond has developed an extensive library of analog, digital, and I/O interface technology. This expertise is now available in the form of application-specific baseboards tuned to fit precise customer requirements, coupled with ETX COMs implement the processing power needed to drive the application.

DEVELOPMENT & MANUFACTURING SERVICES

To further assist OEMs using our ETX-COM products, Diamond also offers the following value-added development and manufacturing services:

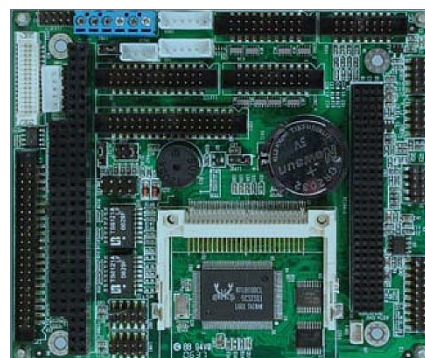
- Custom application baseboard design
- Operating system and device drivers
- BIOS customization and support
- Burn-in and screening
- Conformal coating
- Extended temperature testing
- Full systems integration
- Program management

ORDERING INFORMATION

Part Number	Description	CPU Style	FSB Rate	L2 Cache	CPU TDP
ETX-945-T7400	ETX COM with Intel 2.16GHz Core2Duo CPU	In socket	667MHz	4MB	34W
ETX-945-L7400	* ETX COM with Intel 1.5GHz Core2Duo LV CPU	Soldered on	667MHz	4MB	17W
ETX-945-U7500	* ETX COM with Intel 1.06GHz Core2Duo ULV CPU	Soldered on	533MHz	2MB	10W
ETX-945-L2400	ETX COM with Intel 1.66GHz CoreDuo LV CPU	Soldered on	667MHz	2MB	15W
ETX-945-U2500	* ETX COM with Intel 1.2GHz CoreDuo ULV CPU	Soldered on	533MHz	2MB	9W
ETX-945-CM423	* ETX COM with Intel 1.06GHz Celeron M ULV CPU	Soldered on	533MHz	1MB	5.5W

* Note: These models are special order only.

Accessory	
Part Number	Description
MEM-512-06	512MB DDR2 SDRAM SO-DIMM module
MEM-1024-06	1GB DDR2 SDRAM SO-DIMM module
6884020	ETX COM heat spreader for ETX-945 soldered-on CPUs
6884021	ETX COM heat spreader for ETX-945 CPUs in socket
6884022	ETX COM heatsink with fan for ETX-945 soldered-on CPUs
6884023	ETX COM heatsink with fan for ETX-945 CPUs in socket
PLT-BASE	ETX Baseboard with PC/104-Plus expansion
C-PLT-KIT	ETX Baseboard Cable Kit



PLT-BASE: ETX form-factor development baseboard for the ETX-945 Series

