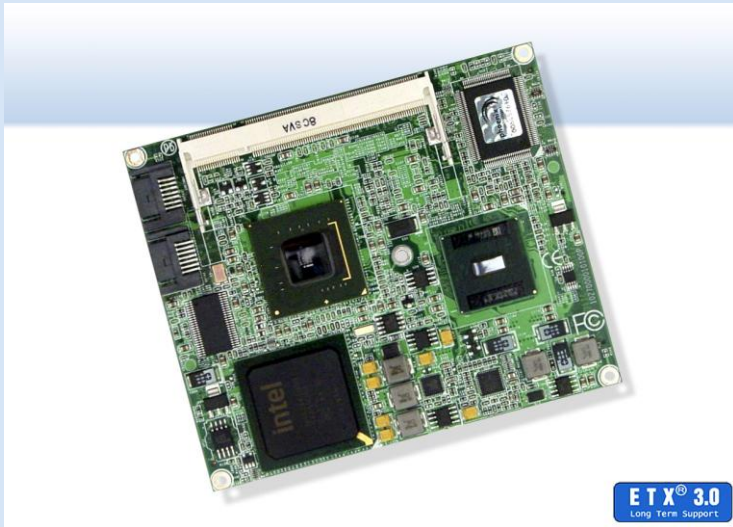


# ETX-N270 COMs



Low-power, high-performance ETX Computer-on-Modules featuring the 1.6GHz Intel Atom N270 CPU



- ◆ ETX 3.0 compliant
- ◆ Low power, high-performance, rugged
- ◆ Based on the 1.6GHz Intel Atom processor
- ◆ SO-DIMM socket supports up to 2GB DDR2 SDRAM
- ◆ Hi-res CRT, dual-channel 18-bit LVDS, and SDVO video
- ◆ SATA, IDE, USB 2.0, serial, AC'97 audio
- ◆ 10/100Mbps Ethernet LAN
- ◆ Dual expansion buses: 32-bit PCI and 16-bit ISA
- ◆ -20°C to +71°C (-2°F to +160°F) enhanced operating temperature

## Ideal for Embedded Applications

Diamond's ETX-N270 computer-on-modules (COMs) are compact, low-power, and powerful embedded computing cores suitable for powering a wide range of embedded applications. To support real-world applications subject to temperature extremes, the modules are rated for operation over an enhanced temperature range.

## Reduce Development Costs

By plugging these high-quality, plug-and-play 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. The ETX-N270 is also available pre-integrated in our Pluto Embedded-Ready Subsystem.

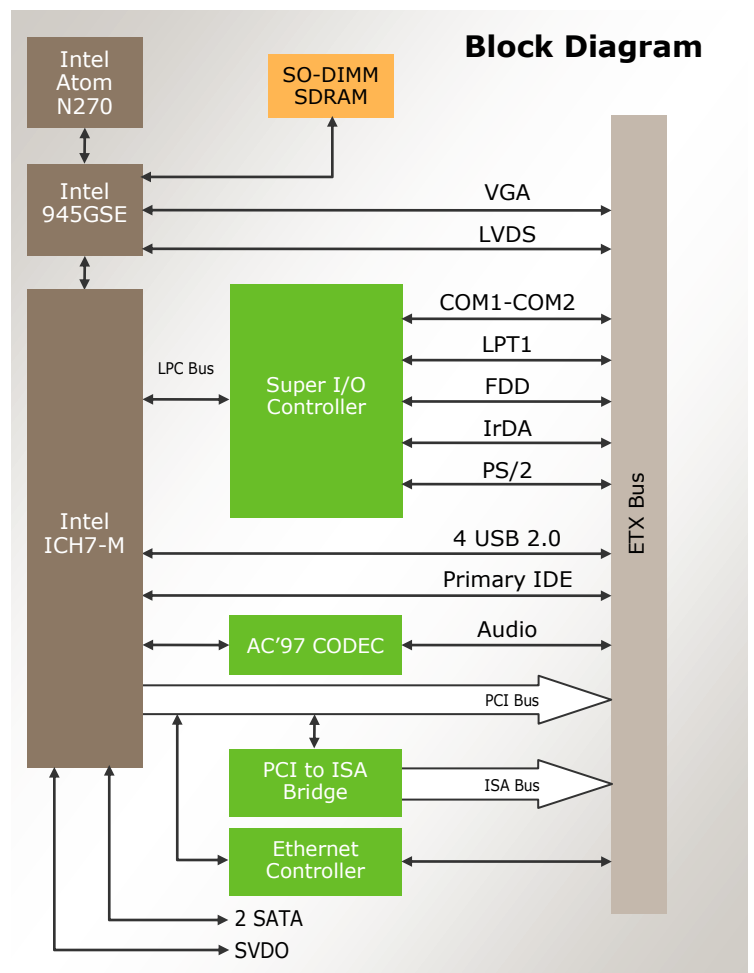
## Highly Integrated Module

The ETX-N270 integrates a complete set of PC-compatible functions, including a high performance, low-power Intel Atom processor and up to 2GB of high-speed system memory.

In addition, the module also provides 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, serial, parallel, audio, and PS/2 ports.

## Maximum Application Flexibility

For maximum application flexibility, the ETX-N270 can be interfaced to application-specific circuitry via both 32-bit PCI and 16-bit ISA expansion buses.



# ETX-N270 Series COMs



## Specifications

<b>Processor</b>	Intel Atom N270 at 1.6GHz
<b>Chipset</b>	Intel 945GSE with Intel ICH7M
<b>Front side bus</b>	533MHz
<b>L2 cache</b>	512KB
<b>Memory</b>	200-pin SO-DIMM socket support up to 2GB DDR2 SDRAM
<b>BIOS</b>	Phoenix Award PnP
<b>Graphics</b>	Intel GMA950 graphics core Up to 2048 x 1536 resolution RGB CRT output Dual channel 18-bit LVDS output SDVO interface (VGA, DVI, LVDS, TV out) Supports dual independent displays
<b>Audio</b>	AC'97 CODEC (Realtek ALC655) Mic in, line in/out
<b>USB ports</b>	4 USB 2.0
<b>Serial ports</b>	2 COM ports with logic-level signaling
<b>Networking</b>	10/100Base-T Ethernet (Intel 82562)
<b>Mass storage</b>	2 SATA ports with 150MB/s data rate 1 IDE port, supports 2 devices
<b>Parallel/Floppy</b>	SPP/EPP/ECP or floppy (shared interface)
<b>Keyboard/Mouse</b>	PS/2 keyboard and mouse ports (USB keyboard and mouse also supported)
<b>Other</b>	SMBus, I <sup>2</sup> C, IrDA serial interfaces; PC speaker interface; watchdog timer
<b>Expansion buses</b>	32-bit PCI bus (4 PCI masters) 16-bit ISA bus
<b>Form-factor</b>	ETX 3.0 compliant 4.5 x 3.7 in. (114 x 95 mm)
<b>Supply voltage</b>	+5VDC
<b>Power consumption</b>	9W idle, 13W loaded
<b>Operating temperature</b>	-20°C to +71°C (-2°F to +160°F)
<b>Humidity</b>	0 to 90% non-condensing
<b>Weight</b>	2.8oz / 79g
<b>RoHS</b>	Compliant

## Software Support

The ETX-N270 Series COMs are compatible with Windows XP and Linux 2.6 operating systems. Contact Diamond for information regarding support for other operating systems.

## 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 that implement the processing power needed to drive the application.

## ETX COM Development Systems

In addition to the ETX-N270 COMs themselves, Diamond offers pre-integrated development kits based on generic or application-oriented ETX baseboards. This increases project efficiency and reduces risks by providing a known good environment for rapid application development.

To simplify the development process, these kits' ETX baseboards each provide I/O connectors for quick and easy access to nearly all system interfaces, a CompactFlash socket, and modular PC/104-Plus expansion. They also come with SO-DIMM memory, an extensive set of interface cables, and full documentation and software.

In addition to these features, the Pluto ETX form-factor baseboard adds two serial ports, RS-232/422/485 buffering, digital I/O, a second Ethernet LAN interface, and digital I/O. Alternately, the Neptune EPIC form-factor baseboard adds four serial ports, RS-232/422/485 buffering, a gigabit Ethernet LAN interface, a wide-input (5V/7-28V) DC-to-DC power supply, and an industry-leading data acquisition subsystem option.



ETX form-factor baseboard



EPIC form-factor baseboard

## Ordering Information

<b>ETX-N270-1600</b>	ETX COM with Intel 1.6GHz Atom N270 CPU
<b>MEM-2048-05</b>	2GB DDR2 SDRAM SO-DIMM module
<b>MEM-1024-05</b>	1GB DDR2 SDRAM SO-DIMM module
<b>6884011</b>	ETX COM heatsink for ETX-N270 COM
<b>6884012</b>	ETX COM heatspreader for ETX-N270 COM
<b>DK-NN270</b>	Neptune N270 Development Kit: includes ETX-N270-1600, MEM-1024-05, 6884012, Neptune baseboard with all features, cable kit, panel I/O board, drivers for Linux and Windows, and documentation
<b>DK-PN270</b>	Pluto N270 Development Kit: includes ETX-N270-1600, MEM-1024-05, 6884012, Pluto baseboard, cable kit, drivers for Linux and Windows, and documentation