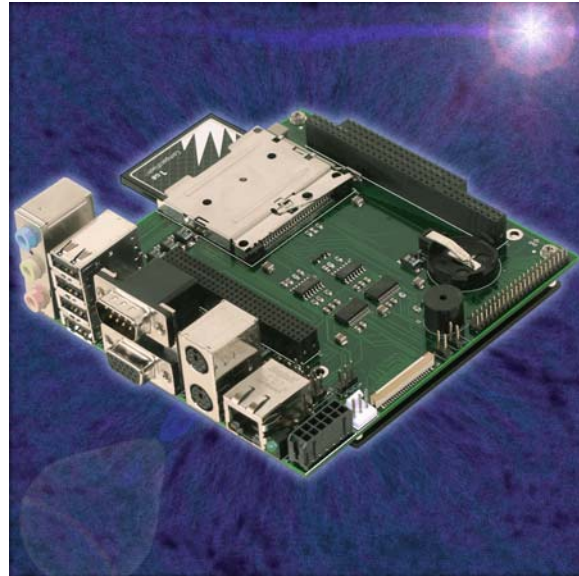


### FEATURES

- Wide range of ETX CPUs available – fanless up to 1.66 GHz Intel Core Duo
- Small size only 120mm by 125mm (4.72" by 4.92")
- Full PC/104-Plus I/O expansion
- Four rear-mounted USB 2.0 ports
- VGA, PS/2 mouse and keyboard
- Two COM ports (One selectable RS-232/422/485 and one RS-232 only)
- 10/100 Ethernet LAN
- Flat panel, IDE and Compact Flash support
- Standard 1/8"(3.5mm) audio with Line In, Line Out, and MIC



### FUNCTIONAL DESCRIPTION

The NANO I/O Server is one of the smallest embedded motherboard systems and is designed to support the ACCES I/O line of USB and PC/104-based I/O modules along with the high performance benefits of ETX. Featuring a motherboard/baseboard only 120mm across, the NANO right-angle mounted connectors include VGA, RS-232/422/485, four USB 2.0 ports, standard audio, PS/2 mouse and keyboard, and Ethernet. ACCES I/O's experience in providing OEMs with custom ETX baseboards is highlighted by this dense baseboard design.

The NANO I/O Server is unique due to the capability of utilizing any embedded ETX CPU board that meets the ETX standard for its processing, while providing PC/104 I/O module expansion. Whether the application requires a high-end 1.8GHz Intel Pentium M, a fanless mid-range 800MHz Celeron M, or a very low wattage AMD LX800 processor, ACCES I/O can provide a system solution to match a specific requirement. Although smaller than the EPIC embedded boards, the NANO still supports PC/104-Plus I/O modules in an upward stack. In addition to the rear motherboard I/O, the NANO has supplemental onboard I/O connectors for flat-panel support, IDE, Compact Flash, and an extra RS-232 serial port. Power can be provided to the NANO through a 12-pin micro-fit power connector with a cable adapter connected to any ATX power supply. For an external DC powered system, a PC/104 or internal DC-DC power supply from ACCES I/O can be mounted inside an enclosure.

The NANO I/O Server is the perfect product for users ranging from high-volume OEMs to small, simple evaluation/prototype systems. By combining the benefits of both the ETX and PC/104 standards, a more cost effective time to market is achieved no matter what the quantity. Large quantity OEMs can use the wide range of COTS PC/104 and ETX products for simple and easy prototyping and evaluation purposes. For embedded developers designing systems which may require smaller quantities, the NANO I/O Server is still the perfect solution. Now your next embedded system can include all the benefits of this combo motherboard. These benefits include the capability to easily choose and upgrade your ETX CPU and the high availability of COTS PC/104 modules. Your next system can have the best of both worlds. Once again, time to market is dramatically reduced and future upgrades are as easy as choosing a new ETX CPU and/or PC/104 module.

# Specifications

## Motherboard Rear Mounted Connectors

Sound	Three vertical 1/8" (3.5mm) audio jacks Blue - Line In Green - Line Out Pink - MIC
USB	Four USB 2.0 connectors
VGA	Standard DB15 female
Serial	COM1 DB9 male RS-232/422/485 (jumper selection)
Keyboard	PS/2 round 6-pin type
Mouse	PS/2 round 6-pin type
LAN	RJ45 10/100 Mbit Ethernet
LED	Green board power indicator

## Top Mounted Board Connectors and Devices

Power	Molex 12-pin micro-fit (6 inch ATX cable adaptor included)
PC/104-Plus I/O Expansion	Standard PC/104 ISA bus stack up connector Standard PCI-104 PCI bus stack up connector
Flat Panel	40-pin J1LI connector LVDS or LCD option (depending on ETX module)
Fan Power	3-pin 12VDC powered
Serial	COM2 RS-232 10 pin IDC header
IDE	44-pin 2.5 inch laptop drive type
Compact Flash	Standard CF2 50-pin side mount with ejector housing
Reset	2-pin header
Power switch	2-pin header
CMOS backup	Removable lithium disk battery holder
Buzzer	Round board mounted

## Bottom Mounted Board Connectors

ETX	Four standard ETX specified Hirose connectors
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## Environmental

Operating temperature range	0 to 70°C (-20 to 85°C optional)
Storage temperature range	-50 to +120°C
Humidity	Up to 95 % non-condensing
Base board dimensions	120mm by 125mm

## Power Consumption

Required (Baseboard only)	+5 Volts @ <100mA
Maximum system input power availability per voltage	5V @20A    12V @ 5A 3.3V@5A    -12V @ 5A

## Ordering Guide

ETX-NANO-104	Baseboard (includes 6 inch ATX power adaptor cable)
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