# Datasheet - ETX C3

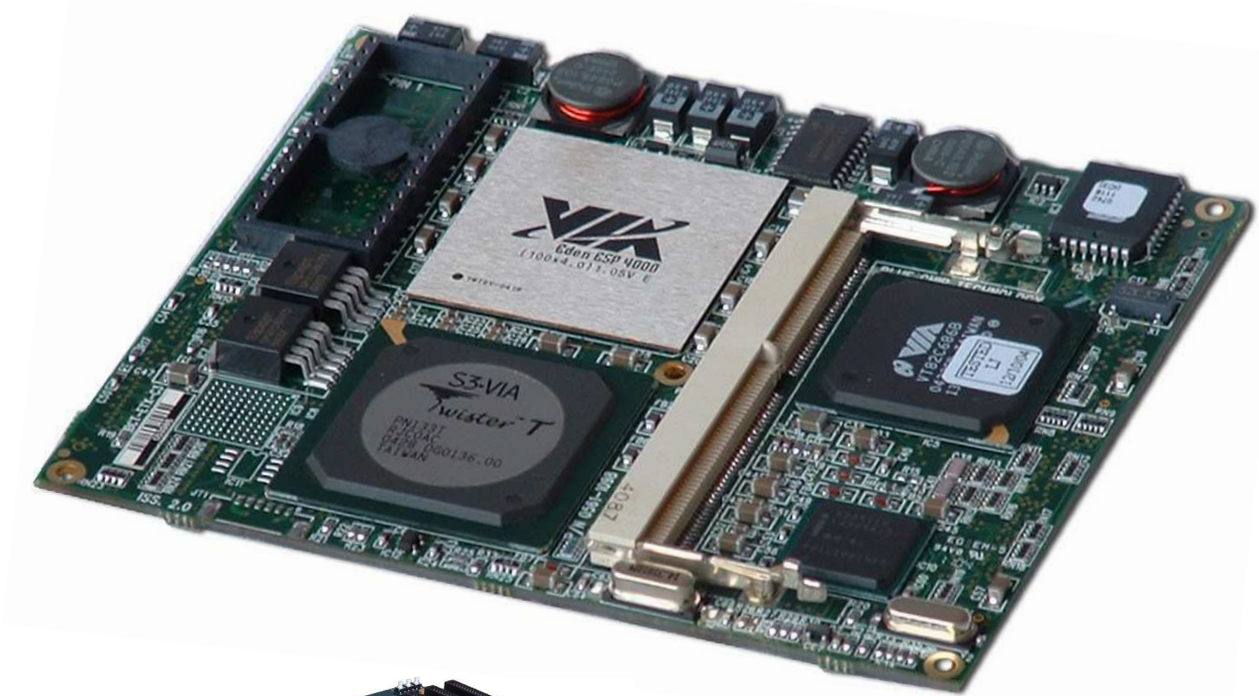
The ETX-C3 range offers a range of CPU speeds from 400MHz to 1GHz and a comprehensive feature set, whilst maintaining an exceptional thermal profile. Nominal power consumption for the 400MHz, 733MHz and 1GHz stands at 6, 7 and 12 watts respectively.

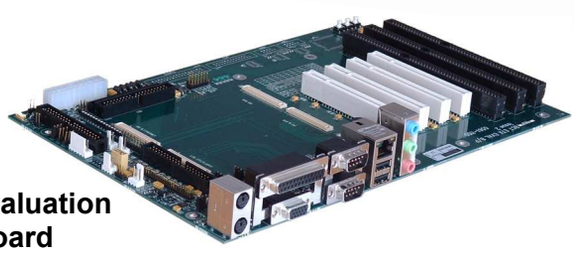
Based on the industry standard ETX form factor, our C3 modules are designed to be fitted quickly and easily onto a host board that supports your unique functions. This approach provides all the flexibility of a custom designed SBC without the lead time or costs. In addition, cables with their associated costs and EMC issues can be removed.

## Key Features

- High performance, low power multimedia engine
- Low profile - 12mm with spreader
- Single 5v power input
- 2D/3D Graphics Engine
- Supports STN, DSTN, TFT, LVDS and analogue displays
- Widescreen Support
- ETX form factor
- No cables required

Onboard functionality is exceptional including LCD, Plasma, CRT 2D & 3D graphics, LAN, Solid State Disk, IDE, USB, Audio, Serial, Parallel and Watchdog. The lower power ETX - C3 modules can be passively cooled and therefore does not require troublesome fans, simplifying their integration into your products.



**ETX evaluation host board**

BS EN ISO 9001:2000
Certificate No FM 33069

# Technical Specification

## System

VIA C3 with Samuel core, Full Speed FPU & SSE Support (Eden), processor options 400GHz, 733GHz and 1GHz
VIA PN133T Chipset (VT8606 & VT82C686B)
Phoenix BIOS, with Ethernet Boot ROM option Support for APM and VIA Power Saver (Long-Haul)
Customer Splash screen option, BIOS option for hardware disabling on board PCI devices
16MB to 512Mbyte PC100/133 3v3 SDRAM SODIMM, 128KB L1 and 64KB L2 Cache is integrated into the CPU

## Local Storage

ATA Flash socket for onboard storage (optional, height impact)
Dual ATA100/66/33 EIDE ports

## Operating System Support

Windows XP Embedded, Windows NT Embedded, Windows CE.NET, Linux and desktop Operating Systems
Windows CE.NET to boot from storage devices using FastBoot utility

## Enhanced IO

Quad USB Ver 1 .x Compliant ports
One IR port - shared with the second serial port UART
Floppy interface with support for dual 1.44MB FDD
Two 16C550 compatible serial ports at TTL level signalling
Parallel port with Bi-directional, EPP & ECP
PS/2 compatible keyboard and mouse port

## Display/Audio

Integrated AGP (x4) Graphics controller based on S3 Savage 4 CRT SVGA at up to 1600 x 1200 resolution
Direct LCD support for STN, DSTN and TFT up to 18 bit
Dual channel LVDS for up to 18 bit panels, selection between direct LCD and LVDS is a build option
8 to 32Mbyte of video memory (SMA)
Supports 848 x 480 & 1024 x 512 widescreen resolutions
Integrated Soundblaster/Direct sound AC97 controller, audio IO through AC97 CODEC
Line In/Out, Microphone and CD in. (CD in and Line in share the same pins and are therefore mutually exclusive)

## Local Area Network

10/100 Base - T Ethernet using Intel 82551ER, boot ROM option for remote booting (PXE)

## Environmentals/Mechanicals

ETX format 114 x 95mm, 4 mounting holes 12mm high including spreader
12 layer PCB with standard through hole via technology, all major BGA and silicon located on the upper side
Operating temperature range 0°C to +60°C
Storage temperature -20°C to +70°C
Relative Humidity 5 - 95% non-condensing.

## System Management

1.05 to 1.6V, 2.5, 3.3 and 5V voltage monitors, reset generated if the 5.0 volt rail falls below 4.65 volts
Two on board thermistors for system thermal monitoring
Hardware Watchdog timer with 1-25 second nominal timeout, software enabled/disable through an IO port
The time-out results in a system reset. Device Driver support is available
Real Time Clock
Speaker, Reset switch, Power Switch, Hard Disk Activity LED and external Lithium coin cell are all supported and located on the base board

## Expansion

As per ETX specification, 4 connectors (X1-X4) Supports four standard 5V 32 bit 33MHz PCI V2.2 devices
ISA Expansion supports three standard 16-bit ISA devices
Connector X1 provides the PCI Bus, USB and Audio
Connector X2 provides the ISA Bus
Connector X3 provides the VGA, LCD, COM1&2 (TTL) LPT1, Mouse and Keyboard
Connector X4 provides the Ethernet (non-isolated), 2xEIDE (4 drives), utilities signals and power management

## Power

5Volt only operation (and 5Vsb if ATX operation required)
On board switching regulators for other voltages
Typical power consumption: 400MHz 1.2A @ 5V (6W), 733MHz 1.4A @ 5V (7W), 1GHz 2.4A @ 5V (12W)

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