

### Main Features

- ♦ Low Power ETX CPU Module
- ♦ Supports Intel® Pentium® M/ Celeron® Processor
- ♦ Intel® 852GM Chipset
- ♦ Supports 200/266 SO-DIMM up to 1GB
- ♦ Intel® 82562GZ 10/100 Ethernet Controller
- ♦ VIA VT1613G CODEC, AC' 97 Audio Interface
- ♦ Supports LVDS Interface
- ♦ Supports DVO Interface

### Product Overview

The ICES 102 is an ETX CPU module with Intel® 852GM chipset supports Intel® Celeron® M or Pentium® M processor with 400 MHz FSB and one un-buffered non-ECC SO-DIMM 200/266 up to 1GB. The Intel® 852GM chipset supports ISA, PCI, IDE, LPT, VGA, LVDS, LAN, Serial, USB DVO interfaces and more.

The ICES 102 follows the ETX standard x 1, x 2, x 3, x 4 connections between the ETX CPU module and I/O carried board, thus it is compatible with the carried boards from other brands like Kontron and Advantech. The ICES 102-C65 ETX CPU Module can easily integrated into most of the limited space projects, such as industrial automation, data acquisition and equipment computers.

### Specifications

#### CPU Support

- ♦ Intel® Celeron® M processor
- ♦ Intel® Pentium® M processor
- ♦ Supports 400 MHz FSB CPU only

#### Main Memory

- ♦ Supports one unbuffered non-ECC DDR SO-DIMM 200/266 up to 1GB

#### Chipset

- ♦ Intel® 852GM + ICH-4 chipset

#### BIOS

- ♦ Award System BIOS
- ♦ Advanced Power Management support
- ♦ 4 Mbit flash ROM
- ♦ Supports Boot from USB-CDROM and Boot From CF Card (Industry grade bootable CF Card)

#### On-board LAN

- ♦ Intel® 82562GZ 10/100 Fast Ethernet
- ♦ Supports PXE LAN boot function
- ♦ Signals down to I/O Board

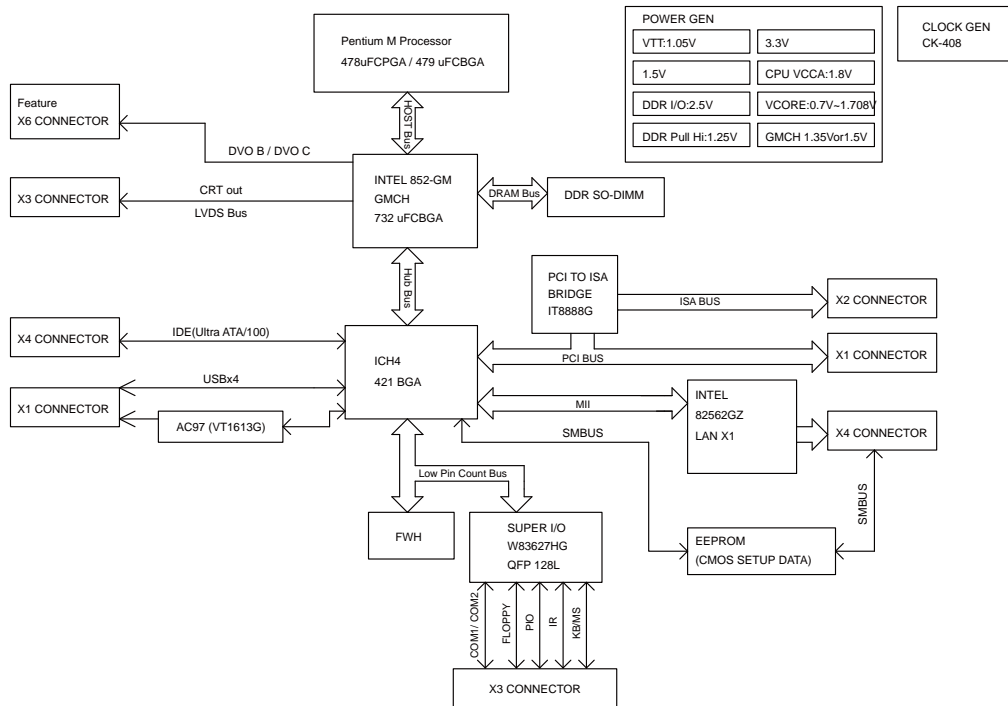
#### Display

- ♦ Intel® 852GM integrated graphics solution up to 64 MB of dynamic video memory allocation drives a standard progressive scan analog monitor with pixel resolution up to 1600 x 1200 at 85 Hz
- ♦ Wide screen resolution support for 852 x 480 and 1366 x 768 resolution
- ♦ Single or dual pixel LVDS panel support
- ♦ Supports CRTs up to 1920 x 1440 x 32 bpp at 85 Hz

#### Super I/O

- ♦ WINBOND W83627HG

## Block Diagram



### ETX Connector

- X1  
4 x 32-bit/33 MHz PCI  
VIA VT1613G Codec - AC' 97 Audio Interface  
4 x USB 2.0
- X2  
ISA Interface (full function)
- X3  
1 x VGA  
1 x LVDS (dual pixel)  
1 x Parallel port  
1 x KB/Mouse  
COM1 and COM2  
1 x IrDA
- X4  
1 x Ethernet (10/100)  
SMBus/I2C  
2 x IDE

### Power Requirements

- +5 V power only, follows ETX power and ground pin definitions.
- Supports both AT and ATX power mode

### Dimensions

- 95mm (W) x 114mm (L) (3.74" x 4.5)

### Environment

- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity:  
Operating 10% - 90%, non-condensing  
Non-operating 5% - 95% (non-condensing)

### Certifications

- CE approval
- FCC Class A

## Ordering Information

- **ICES 102-373 (P/N: 10K0001020X0)**  
ETX Module with Celeron® M 1 GHZ/512 KB L2, VGA/ISA/PCI/IDE/LVDS/Audio/COM/LPT/USB2.0/LAN Interface
- **ICES 102-C65 (P/N: 10K00010201X0)**  
ETX Module with onboard Celeron® M 600 MHz processor, VGA/ISA/PCI/IDE/LVDS/Audio/COM/LPT/USB2.0/LAN Interface
- **ICES 102-SKT (P/N: 10K00010200X0)**  
ETX Module with Pentium® M/Celeron® M CPU Socket, VGA/ISA/PCI/IDE/LVDS/Audio/COM/LPT/USB2.0/LAN Interface