

## ECB-665

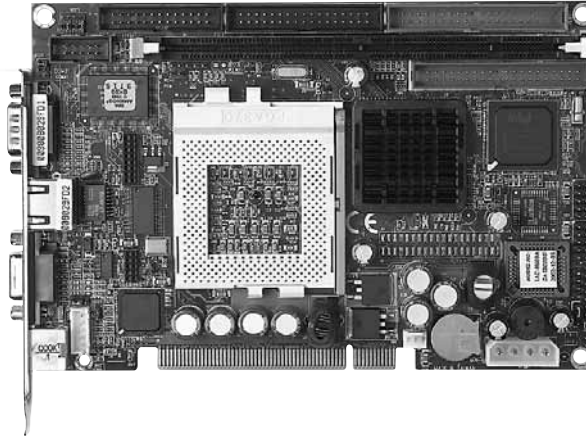
Intel Tualatin Pentium III/  
Celeron PCI-bus half-size CPU card

### FEATURES

- Supports Intel Pentium III/Celeron (CopperMine and Tualatin) Processor
- 2 COM/4 USB/1 Parallel/1 IrDA port
- Intel 82815EG GMCH 2D/3D Graphics Accelerator
- Intel 82562ET 10/100Base-Tx fast Ethernet controller

### Ordering Information

- ECB-665  
Intel Tualatin Pentium III/Celeron PCI-bus half-size CPU card with VGA, 3D graphics and single 10/100Base-Tx Ethernet



### SPECIFICATIONS

#### General Functions

CPU	Supports Intel Pentium III/Celeron (CopperMine and Tualatin) and VIA C3
FSB	66/100/133MHz
BIOS	AMI 512K Flash BIOS
Chipset	Intel FW82815EG GMCH/FW82801BA ICH2
I/O Chipset	Winbond W83627HF-AW
Memory	One 168-pin DIMM socket supports up to 512MB SDRAM
Enhanced IDE	Supports four EIDE (Ultra DMA 100)
FDD interface	Supports two floppy disk drives
Parallel port	One bi-directional parallel port
Serial port	One RS-232 and one RS-232/422/485 serial port
IrDA interface	115Kbps IrDA 1.0 compliant
KB/Mouse connector	1 x K/B & Mouse
USB connectors	4 x USB 1.1 ports
Watchdog timer	Reset; 0 ~ 63 sec., 2 sec./step
H/W status monitor	Monitoring temperatures, voltages, and cooling fan status. Auto throttling control when CPU overheats

#### CRT Interface

Chipset	Intel FW82815EG GMCH with integrated 2D/3D graphics engine
Display memory	1/2/4MB frame buffer using system memory
Resolution	CRT mode: 1280 x 1024 @ 24bpp (60Hz)
VGA interface	AGP 4X VGA interface

#### Ethernet interface

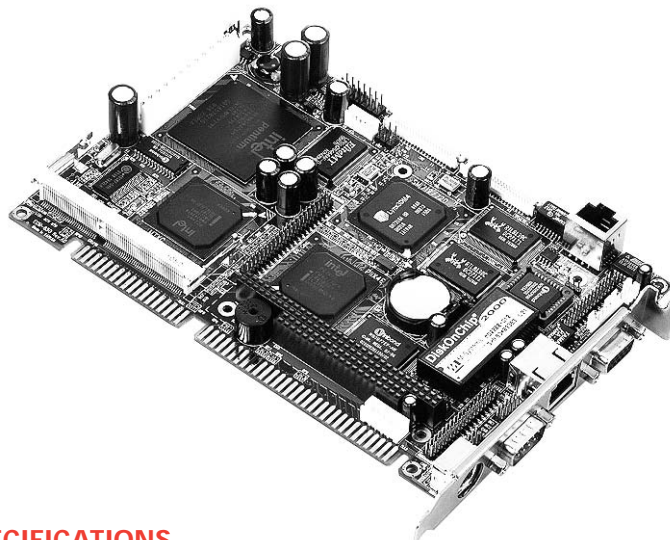
Chipset	Intel 82562ET
Ethernet interface	IEEE 802.3u 100Base-TX Fast Ethernet compatible
Remote boot ROM	Optional built-in boot ROM in Flash BIOS

#### Mechanical and Environmental

Power requirement	+5V @ 7.17A, +12V @ 470mA (with Pentium III 1GHz & 512MB SDRAM)
Power type	AT/ATX
Operating temperature	0 to 60°C
Board size	185mm x 122mm
Weight	0.25kg

## ECB-650

Intel Tillamook MMX,  
half-size ISA-bus CPU card



### FEATURES

- Intel Mobile Pentium MMX 266MHz Tillamook CPU
- Supports DiskOnChip (SSD) up to 288MB
- SMI Lynx EM+ SM712 64-bit GUI, 2D engine
- Dual 10/100Base-Tx fast Ethernet
- +5V only operation

### Ordering Information

- ECB-650  
Intel Pentium MMX 266MHz ISA-bus half-size CPU card with LCD/CRT video & dual Ethernet
- ECB-650L  
Intel Pentium MMX 266MHz ISA-bus half-size CPU card with LCD/CRT video & single Ethernet

### SPECIFICATIONS

#### General Functions

CPU	Intel Tillamook MMX 266
BIOS	Award 256KB Flash BIOS
Chipset	Intel 82439 Tx
I/O Chipset	Winbond W83977EF-AW
L2 Cache	Onboard 512KB PBSRAM
Memory	Onboard one 144-pin SODIMM socket supports up to 256MB
Enhanced IDE	Supports two hard drives BIOS auto-detect. Supports PIO mode-4 and Bus Master
FDD interface	Supports two floppy disk drives, 5.25" (360KB and 1.2MB) and/or 3.5" (720KB, 1.44MB and 2.88MB)
Parallel port	Configured to LPT1, LPT2, LPT3 or disabled. Supports SPP, ECP and EPP modes
Serial port	One RS-232 and one RS-232/422/485 serial port. Ports can be configured as COM1, COM2, COM3, COM4 or disabled individually. Two 16C550 serial UARTs
IR interface	IR connector supports one IrDA Tx/Rx header
KB/Mouse connector	6-pin mini DIN connector. Supports keyboard & mouse
USB connectors	5 x 2 header onboard supports dual USB ports.
Battery	Lithium battery for data retention
DMA channels	7
Interrupt levels	15
Watchdog timer	Can generate a system reset. Software selectable time out interval (16 sec~127 min., 30 sec/step)
Power management	I/O peripheral devices support power saving and doze/standby/suspend modes. APM 1.2 compliant.
PC/104 connector	PC/104 connector onboard

#### Flat Panel/CRT

Chipset	SMI LynxEM+ SM712, high performance 64-bit GUI 2D engine
Display memory	Built in 4MB SGRAM
Display type	Supports CRT and flat panel (TFT, DSTN, and Mono) displays. Can display both CRT and flat panel simultaneously
Resolution	Supports up to 1024 x 768 @ 64K colours (CRT/LCD simultaneously)

#### Ethernet interface

Chipset	Dual Realtek RTL8139C PCI-bus Ethernet controllers onboard
Ethernet interface	Onboard 100Base-Tx RJ-45 connectors

#### SSD Interface

One 32-pin DIP socket supports M-Systems DiskOnChip 2000 series, memory capacity from 8MB to 288MB

#### Mechanical and Environmental

Power requirement	+5V @ 2.4A, +12V @ 70mA (with Pentium MMX 266MHz & 64MB SDRAM)
Operating temperature	0 to 60°C
Board size	185mm x 122mm
Weight	0.4kg

## ECB-642

NS Geode GX1 ISA-bus  
half-size CPU card



### FEATURES

- Onboard NS Geode GX1 300MHz Processor
- 32MB SDRAM Onboard
- Supports M-Systems DiskOnChip
- 2 COM/2 USB/1 Parallel/1 IrDA port
- NS Geode GX1 integrated 2D Graphics Accelerator
- Realtek RTL8100B 10/100Base-Tx fast Ethernet controller
- Supports CRT, 18-bit TFT, Optional Single-channel 18-bit LVDS panels

### Ordering Information

- ECB-642  
NS Geode GX1 ISA-bus half-size card with LCD, AC97 Audio, Single 10/100Base-Tx Ethernet, & 32MB SDRAM
- ECB-642N  
Same as above, but without 10/100Base-Tx Ethernet

### SPECIFICATIONS

#### General Functions

CPU	Onboard NS Geode GX1 300MHz
BIOS	Award 256K Flash BIOS (optional Insyde BIOS)
Chipset	NS Geode GX1/CS5530A
I/O Chipset	Winbond W83977F-A
Memory	Onboard 32/64/128MB SDRAM and one 144-pin SODIMM socket supports up to 384MB SDRAM
Enhanced IDE	Supports four EIDE devices
FDD interface	Supports two floppy disk drives
Parallel port	One bi-directional parallel port
Serial port	Two RS-232 ports
IrDA	115Kbps IrDA 1.0 compliant
KB/Mouse connector	1 x K/B & Mouse
USB connectors	2 x USB 1.0 ports
DI/O	4-bit TTL DI and 4-bit TTL DO
Watchdog timer	Reset; 16 ~ 127 min., 30 sec./step
Expansion	One PC/104 connector onboard

#### Flat Panel/CRT

Chipset	NS Geode GX1 with integrated 2D graphics engine
Display memory	1/2/4MB frame buffer using system memory
Resolution	CRT mode: 1280 x 1024 @ 8bpp (60Hz) LCD Simultaneous mode: 1024 x 768 @ 16bpp (60Hz)
VGA/LCD interface	PCI bus VGA/LCD interface. Supports 9/12/18-bit TFT panels
LVDS	Optional single channel, 1 x 18-bit

#### Audio interface

Chipset	NS Geode CS5530A
AC97 Codec	LM4546VH
Audio interface	Mic in, Line in, CD audio in, Line out

#### Ethernet interface

Chipset	Realtek RTL8100B
Ethernet interface	IEE 802.3u 100Base-TX Fast Ethernet compatible
Remote boot ROM	Optional built-in boot ROM in Flash BIOS

#### SSD Interface

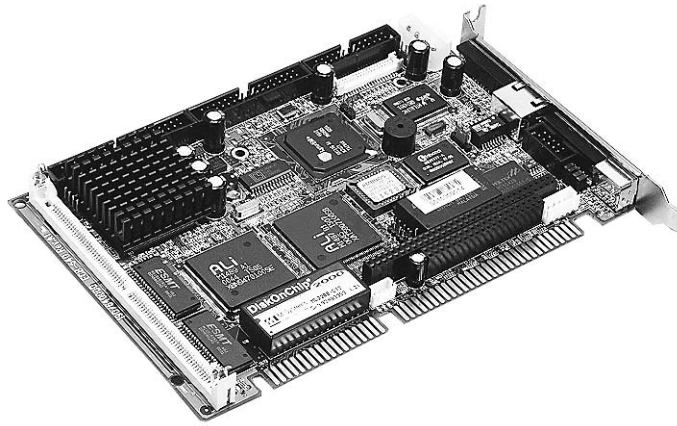
	One M-Systems DiskOnChip socket
--	---------------------------------

#### Mechanical and Environmental

Power requirement	+5V @ 1.39 (with NS Geode GX1 300MHz & 32MB SDRAM)
Power type	AT/ATX
Operating temperature	0 to 60°C
Board size	185mm x 122mm
Weight	0.4kg

# ECB-640

AMD 486DX5-133  
ISA-bus Half-size CPU card



## FEATURES

- AMD 486DX5-133MHz CPU
- Supports DiskOnChip (SSD) up to 288MB
- SMI LynxEM + SM712, 64-bit GUI, 2D engine
- 10/100Base Tx fast Ethernet
- Onboard 8MB EDO RAM

## Ordering Information

- ECB-640  
AMD 486DX5 133MHz  
ISA-bus half-size CPU card  
with LCD/CRT video, single  
Ethernet & 8MB EDO RAM
- ECB-640N  
AMD 486DX5 133MHz  
ISA-bus half-size CPU card  
with LCD/CRT video & 8MB  
EDO RAM

## SPECIFICATIONS

### General Functions

CPU	AMD 486DX5-133 onboard
BIOS	AMI 128KB Flash BIOS
Chipset	Ali M1487/1489
I/O Chipset	Winbond W83977F-A
L2 Cache	128KB level 2 cache
Memory	8MB EDO RAM onboard, 72-pin SIMM x 1, Max. 40MB
Enhanced IDE	Supports two IDE devices
FDD interface	Supports two floppy disk drives, 5.25" (360KB and 1.2MB) and/or 3.5" (720KB, 1.44MB and 2.88MB)
Parallel port	Supports SPP, ECP and EPP modes
Serial port	One RS-232 and one RS- 232/422/485 serial port. Ports can be configured as COM1, COM2, COM3, COM4 or disabled individually. 16C550 equivalent
IR interface	IR connector supports one IrDA Tx/Rx header
KB/Mouse connector	6-pin mini DIN connector. Supports keyboard & mouse
Real time clock	STM48T86PCT or equivalent
DMA channels	7
Interrupt levels	15
Watchdog timer	Can generate a system reset, IRQ15 or NMI. Software selectable time out interval (16 ~ 127min., 30 sec./step)
Expansion	PC/104 connector onboard

### Flat Panel/CRT

Chipset	PCI SMI Lynx + SM712, 64-bit GUI, 2D engine
Display memory	Built in 2MB SGRAM
Display type	Supports CRT and flat panel TFT displays. Can display both CRT and flat panel simultaneously
Resolution	Supports up to 1024 x 768. Supports 18/24 bit TFT LCD

### Ethernet interface

Chipset	Realtek RTL8139C 10/100Base-Tx Fast Ethernet controller
Ethernet interface	Onboard 100Base-Tx RJ-45 connector

### SSD Interface

One 32-pin DIP socket  
supports M-Systems  
DiskOnChip 2000 series,  
up to 288MB

### Mechanical and Environmental

Power requirement	+5V @ 2A (with AMD 486DX5 133 MHz & 8MB EDO RAM)
Operating temperature	0 to 60°C
Board size	185mm x 122mm
Weight	0.4kg