

Blue Chip Technology



Single Board Computer

ELECTRON

ELECTRON

Up to 500MHz Pentium® III SBC with Ultra SCSI II, AGP Intel i740 3D Graphics, Ethernet and Audio

- Supports Pentium® II and III processors up to 500MHz
- 100MHz Slot 1 bus
- Flush (vertical) mounting SEC processor
- Intel 440BX AGPset
- Up to 256MB SDRAM
- Up to 512KB L2 Cache
- 0 to 72MB Flash options (DiskOnChip)
- AGP Intel i740 3D Graphics CRT Video
- CRT resolutions to 1600 x 1200 in 8 Bit Colour
- Up to 8MB Video memory
- 100/10Base-T NE2000 compatible Ethernet PCI interface
- Ultra SCSI II with 40MB/Sec transfer rate and 68-pin connector

Blue Chip Technology's ELECTRON provides the highest performance and integration ever in a PICMG compliant Pentium® II/III single board computer. ELECTRON is based on the latest Intel 440BX Chip Set and supports processor speeds to 500MHz with a 100MHz external clock. On-board features include Ultra SCSI II, AGP 3D Graphics, 10/100Base-T Ethernet and Audio.

ELECTRON also has a flush mounting Pentium® II/III SEC (single edge connector) processor which enables the use of all the slots on PICMG passive backplanes.

ELECTRON supports up to 256MB SDRAM, up to 512KB internal Level II cache and Flash options from 0MB to 72MB.

The Video is based on the Intel i740, which is a high performance AGP 3D Video controller with up to 8MB of video memory. This supports CRT resolutions up to 1600 x 1200 in 8 Bit Colour.

The optional Ultra SCSI II which is based on the Adaptec AIC-7880 provides an 8/16 bit Ultra SCSI interface with data transfer rates up to 40MB/Sec.

An NE2000 compatible PCI 100/10Base-T Ethernet controller is featured together with an ESS186x Audio controller which provides stereo Soundblaster™ compatibility with mic/line in and line level outputs.

ELECTRON supports up to four EIDE devices, dual floppy disk drives, dual USB, two Serial ports and one parallel port.



- Soundblaster™ compatible 16 bit stereo codec
- Four EIDE drives
- Dual Floppy drives
- 2 Serial ports (1 x RS232, 1 x RS232/RS422/485)
- Enhanced Bi-directional SPP/EPP/ECP parallel port
- Dual USB support
- On-board lithium battery for Real Time Clock & CMOS retention
- LM79 system monitor
- Watchdog
- PICMG compliant



3
YEAR
WARRANTY

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Up to 500MHz Pentium® III SEC with Ultra SCSI II, AGP Intel i740 3D Graphics, Ethernet and Audio

TECHNICAL SPECIFICATION

PROCESSORS SUPPORTED & SPEED

Pentium II/III P233 to 500MHz in Slot 1 Format
66 and 100MHz host bus frequencies
Flush mounting SEC Processor

MAIN CHIP SET

Intel 440BX AGPset
82C443BX and PIIX4E

DRAM

Up to 256MB SDRAM via 2, 168 pin DIMMS
ECC Parity supported
SDRAM supported on 66/100MHz host bus
Memory interface support for 3V3 SDRAM

CACHE (L2)

512KB L2 cache in Pentium II module

FLASH SOCKET

M-Systems DiskOnChip
0-72MB options

BIOS

Phoenix System BIOS
Located in a 256K Flash ROM
Intel Video BIOS

VIDEO

AGP 3D Graphics Video controller
Intel i740 (66/133)
Up to 1600 x 1200 in 8 bit colour
Up to 1024 x 768 in 8/16/24 bit colour
4MB of Video memory
8MB option

ULTRA SCSI II

PCI SCSI II host adaptor (Adaptec AIC-7880)
8/16 bit Ultra SCSI interface
Up to 40MB/Sec data transfer rate
SCSI BIOS held in System BIOS ROM
68 Way SCSI II connector
On-board active termination

ETHERNET

PCI NE 2000 Compatible
10/100Base-T controller
UTP interface with auto-negotiation
Remote Boot ROM option (in system BIOS ROM)

AUDIO

Soundblaster™ compatible ESS
16 bit stereo codec

HARD DISK

Fixed Disk Controller for Dual EIDE HDD interfaces via PIIX4
Supports PIO mode 4 and Bus Master transfers up to 22MB/Sec
Supports Ultra DMA33
Synchronous DMA transfers up to 33MB/Sec

FLOPPY DISK

Floppy Disk Controller for up to 2 FDD to 2.88 MB

ISA BUS

ISA edge connector interface
Fully buffered drive for up to 20 ISA slots

PCI BUS

PCI Local Bus Interface Ver 2.1
Support for 3/4 PCI slots
PICMG (Ver 2.0) compliant

SERIAL PORTS

1 x RS232, 16C550 compatible
1 x RS232/422/485

PARALLEL PORT

1 x PC compatible
bi-directional SPP/ECP/EPP

USB

2 x USB ports
Serial transfer rates up to 12 and 1.5 Mbit/Sec

WATCHDOG

Software disabled/enabled
refresh period 0.5 sec

ALARM FUNCTIONS

LM79 system monitor
Detects voltage excursion on supply rails
Detects fan failure for up to 3 fans
System temperature monitoring

KEYBOARD PORT

Standard AT/ PS/2 PC compatible
6 pin mini connector

MOUSE PORT

PS/2 Mouse via header

PERIPHERALS HEADER

Reset, Speaker, IDE, Power LEDs etc

POST LEDs

On-board diagnostic LEDs for POST and PSU/system status

BATTERY

On-board 3 Volt Lithium battery
Supports Real Time Clock and CMOS RAM
External battery INPUT provided

BOARD DIMENSIONS

PICMG Compatible 338mm x122mm

MOUNTING

Via passive backplanes

ENVIRONMENTAL

0°C to +55°C Operational temp
-25°C to +85°C Storage temp
Non-condensing Relative Humidity 10% to 90%

SUPPLY VOLTAGE

Pentium core and 3.3V generated on-board via a DC-DC converter
CPU Core selected by CPU VID pins
Automatic jumperless CPU voltage settings

EMC

Compliant with EN55022 and EN 50082

OPERATING SYSTEMS

MS-DOS, Windows 95/98/NT

WARRANTY

3 years

ACCESSORIES

ELECTRON hard copy User Manual

ELECTRON cable kit: includes cables for Audio, Utilities, HDD, FDD, Serial, Parallel, USB and PS/2 Mouse SCSI 68-pin high density SCSI cable interface

OPTIONS

*On-board Ultra SCSI II controller
Video memory upgrade to 8MB
Passive Backplanes: please call for details*

ORDER GUIDE

Please call or refer to our price list for detailed ordering information.



YEAR 2000 Compliance



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