

# Blue Chip Technology



Single Board Computer

ATOM

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## Pentium® based half size PISA/ISA SBC with CRT/LCD, Audio and Ethernet

- Supports Intel Pentium® processors to 233MHz MMX, AMD K6-2/III (3D Now) to 300MHz, Cyrix MII to P300 MX and IDT Winchip to 240MHz.
- Up to 256MB DRAM
- 0/256/512KB L2 Cache options
- 0 to 72MB Flash options (DiskOnChip)
- Chips & Technologies 69000 PCI SVGA LCD and CRT
- Resolutions to 1280x1024x256, 1024x768x64K, 800x600x16M, 640x480x16M
- 2MB of video memory (4MB option)
- Soundblaster™ compatible 16 bit stereo codec
- 100/10Base-T NE2000 compatible Ethernet PCI interface
- PISA (PCI+ISA) or ISA bus interface
- Dual EIDE drives
- Dual Floppy drives
- 2 Serial ports (1 x RS232, 1 x RS422/485/IrDA)
- Enhanced Bi-directional SPP/EPP/ECP parallel port
- Dual USB support
- IrDA option
- Real-time clock with on-board lithium battery
- Watchdog timer
- Standard 5.25" power connector

ATOM is a half size Pentium® based single board computer developed by Blue Chip Technology for space critical and high performance applications. Key features include on-board PCI SVGA LCD/CRT support, 10/100Base-T ethernet and audio. ATOM is available with either an ISA only bus connector or a PISA (PCI and ISA) bus connector.

PISA bus technology enables ATOM to support PCI and ISA expansion cards in very small spaces using compact PISA backplanes. Up to four PCI slots and up to twenty ISA slots are supported.

Based on the Intel 430HX chipset which offers reliability, performance and longevity, ATOM supports Pentium® class processors up to 300MHz, including Intel, AMD, IDT and Cyrix processors. Up to 256MB DRAM is supported with L2 Cache options of 0, 256, 512KB and Flash options from 0MB to 72MB using DiskOnChip plug-in modules.

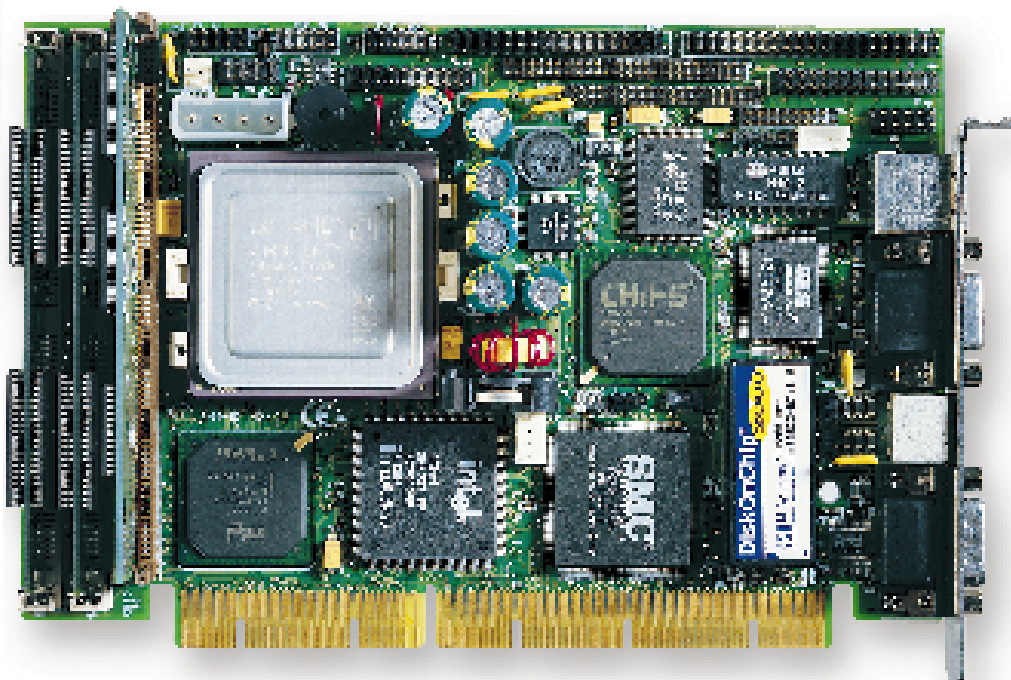
The latest Chips & Technologies 69000 video controller supports both CRT and LCD displays, simultaneously if required. With 2MB of video memory (4MB build option), ATOM supports LCD and CRT resolutions to 1280 x 1024 x 256, 1024 x 768 x 64K, 800 x 600 x 16M, 640 x 480 x 16M. A wide range of LCD panels up to 36 bits are supported making the ATOM an ideal SBC solution for flat panel applications. Optional LCD solution and cable kits provide easy flat panel integration.

ATOM supports dual EIDE devices, dual floppy disk drives, dual USB ports, two Serial ports (IrDA option on COM2) and one SPP/ECP/EPP bi-directional parallel port. An ESS186x controller provides stereo Soundblaster™ compatibility with line input and speaker outputs.



BS EN ISO 9001  
Certificate No 33069

**3**  
YEAR  
WARRANTY



An NE2000 compatible PCI 100/10Base-T Ethernet controller is featured on-board together with a screened RJ45 connector for ease of interfacing. The standard PC power connector enables ATOM to be used without a backplane, if necessary, in embedded applications.

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Pentium® based half size PISA/ISA SBC with CRT/LCD, Audio and Ethernet

## TECHNICAL SPECIFICATION

### PROCESSORS SUPPORTED AND SPEED

Pentium P133 to PR-300 in SPGA Formats  
Intel (MMX) up to 233MHz  
AMD K6-2/III to 300MHz  
IDT Winchip C6 (low power CPU)  
IBM, Cyrix, SGS6x86 to PR-300 MII ZIF socket

### MAIN CHIP SET

Intel 430HX

### DRAM

Up to 256MB via 2, 72 pin SIMMS  
Parity supported  
EDO and fast page DRAM supported

### CACHE (L2)

0/256/512KB via 1 x 160 pin COAST connector  
COAST 1.2 compliant  
Option of 3.3 or 5V asynchronous/sync burst pipeline mode  
Auto detect cache type and size

### FLASH

M-Systems DiskOnChip  
0-72MB options

### VIDEO

SVGA Video output  
Chips & Tech 69000  
2MB of Video memory  
CRT and LCD resolutions:  
1280 x 1024 x 256, 1024 x 768 x 64K,  
800 x 600 x 16M, 640 x 480 x 16M  
36 bit LCD support via 2mm pitch header  
Zoom video input  
Support for Chips & Tech 69030 with 4MB of Video memory

YEAR 2000 Compliance



*Phoenix*  
Phoenix Technologies Ltd.

### BIOS

Phoenix system BIOS  
Custom extensions  
Chips and Technologies Video  
Located in flash parts to facilitate user upgrades

### ETHERNET

10/100Base-T controller  
RJ45 connector via rear panel  
NE2000 compatible

### AUDIO

Soundblaster™ compatible ESS  
16 bit stereo codec  
Optional custom cable available

### HARD DISK

Fixed Disk Controller for 1 EIDE HDD interface (2 devices including LS120 drives via PIIX3)

### FLOPPY DISK

Floppy Disk Controller for up to 2 FDD to 2.88MB

### BUS INTERFACE

PCI (2.1 compliant) and ISA buses via PISA connector  
4 PCI slots supported before PCI - PCI bridge required on backplane

### REAL TIME CLOCK

Battery backed via on-board lithium cell

### WATCHDOG

Software enabled/disabled

### SERIAL PORTS

2 x RS232 PC 16C550 compatible  
COM1 (RS232) on rear panel  
COM2 (RS232/485/422) via header  
IrDA option on COM2

### PARALLEL PORT

1 x enhanced bi-directional SPP/EPP/ECP

### USB

2 x USB via header  
Optional custom cable available

### KEYBOARD PORT

Standard AT/PS2 PC compatible  
6 pin PS/2 connector on rear panel

### MOUSE PORT

PS/2 Mouse via header on-board  
Optional custom cable available

### PERIPHERALS HEADER

Reset, Speaker, IDE, Power LEDs etc

### BATTERY

On-board 3.7 Volt field replaceable Lithium battery  
Supports Real Time Clock and CMOS RAM  
External battery input provided  
Diode protected automatic switching

### BOARD DIMENSIONS

PISA version 188mm x 127mm  
ISA version 188mm x 122mm

### MOUNTING

Via passive back planes

### ENVIRONMENTAL

0°C to 60°C Operational temp  
-25°C to 85°C Storage temp  
Non-condensing Relative Humidity 10% to 90%

### POWER MANAGEMENT

BIOS provides APM

### SUPPLY VOLTAGE

+5 and +12 Volts for panels and fan connector  
Pentium core generated via DC/DC converter  
3.3V generated by second DC/DC converter  
Standard 5.25" power connector

### SUPPLY CURRENT

4 Amps for a Pentium 233MHz (typical)

### EMC

Compliant with EN55022 and EN50082

### OPERATING SYSTEMS

Windows 95, 98 and NT

### WARRANTY

3 years

### ACCESSORIES

*ATOM hard copy User Manual*

*ATOM cable kit: includes cables for Audio, Utilities, HDD, FDD, Serial (COM 2), Parallel, USB and PS/2 Mouse*

*ATOM LCD Solution: includes cable assembly and BIOS upgrade (Please call for details of panels supported and part numbers)*

### OPTIONS

*69030 Video Controller with 4MB of video memory  
Passive Backplane  
please call for details*

### ORDER GUIDE

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

Blue Chip Technology



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