

Blue Chip Technology



Single Board Computer

ATOM

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- 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

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

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.

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.



BS EN ISO 9001
Certificate No 33069

3
YEAR
WARRANTY



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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 MIII 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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