

# Blue Chip Technology

Single Board Computer

NEUTRON

# NEUTRON

5x86 PC/104 SBC with CRT and LCD

- AM5x86-P75/133MHz CPU
- ALi Finali PCI chipset
- 16MB DRAM on-board
- 0-144MB Flash options (DiskOnChip)
- Chips&Technologies 690X0 PCI SVGA for LCD and CRT
- Resolutions to 1280x1024x256, 1024x768x64K, 800x600x16M, 640x480x16M
- 2 or 4MB of video memory
- PC/104 (ISA) expansion
- EIDE interface supporting two drives
- Floppy interface supporting two drives
- 4 Digital inputs (option)
- 2 RS232 Serial ports
- Bi-directional SPP/EPP/ECP parallel port
- Real-time clock with support for off-board battery
- Watchdog timer
- Keyboard port

Blue Chip Technology's NEUTRON is a 5x86 based PC/104 form factor single board computer with on-board LCD and CRT support.

The design is based on the AMD AM5x86 running at 133MHz, providing an equivalent performance to a P75. 16MB of DRAM is fitted on-board and Flash options range from 0MB to 144MB using DiskOnChip plug-in modules.

NEUTRON utilises the ALi Finali PCI chipset, which has a long life cycle and contains an integrated PCI Bus EIDE controller with a high performance IDE interface allowing up to two IDE devices (such as hard drives, CD-ROM readers, etc.).

The Chip&Technologies 690X0 video controller supports both CRT and LCD displays, simultaneously if required. The board is fitted with a 10 way header providing standard VGA signals for interfacing CRTs, dual headers for the interfacing of a wide range of LCD panels up to 36 bits and a dedicated connector for popular LCDs. The video controller integrates 2 or 4MB of video memory supporting LCD and CRT resolutions to 1280x1024x256, 1024x768x64K, 800x600x16M, 640x480x16M.

The SMC 37C665 Super I/O controller integrates the standard PC/I/O functions: floppy interface, two FIFO serial ports and one EPP/ECP capable parallel port. Up to four digital inputs are supported.

For expansion, NEUTRON has a standard PC/104 (ISA) connector which supports up to four PC/104 expansion modules.

NEUTRON is available with a full set of software drivers and utilities allowing customers to develop embedded PC applications using advanced operating systems such as Windows NT, Windows 95/98 and Windows CE.



BS EN ISO 9001  
Certificate No 33069

**3**  
YEAR  
WARRANTY

# Blue Chip Technology



NEUTRON Single Board Computer

## NEUTRON

5x86 PC/104 SBC with CRT and LCD

### TECHNICAL SPECIFICATION

#### PROCESSORS SUPPORTED & SPEED

AM5x86/133MHz

#### MAIN CHIP SET

ALi Finali

#### DRAM

16MB EDO or FPM on-board

#### FLASH SOCKET

M-Systems DOC supported  
0-144MB options

#### EEPROM

128 bytes

#### BIOS

AMI BIOS

#### VIDEO

Chips&Technologies 690X0 PCI  
SVGA for LCD and CRT  
2 or 4 MB Video memory  
CRT and LCD Resolutions:  
1280x1024x256, 1024x768x64K,  
800x600x16M, 640x480x16M,  
848x480x16M Plasma panels  
3.3V and 5V panel power support  
Up to 36bit LCD support via 2mm  
pitch header

#### HARD DISK

Fixed Disk Controller for 1  
EIDE HDD unit (2 devices)

#### FLOPPY DISK

Floppy Disk Controller for 2 FDD  
to 2.88MB

#### BUS INTERFACE

PC/104 16 bit interface

#### REAL TIME CLOCK

Battery backed via off-board  
Lithium cell

#### WATCHDOG

Software enabled/disabled  
0.5 sec time interval (other options  
available)

#### SERIAL PORTS

2 x RS232

#### PARALLEL PORT

1 x Enhanced Bi-Directional  
SPP/EPP/ECP

#### KEYBOARD PORT

AT and PS/2 compatible via header

#### RESET PORT

Via I/O port or reset switch

#### PERIPHERALS HEADER

Reset, Speaker, LEDs,  
Keyboard

#### BATTERY

Off-board 3 Volt Lithium battery  
connector

Supports Real Time Clock and  
CMOS RAM

Field replaceable

#### BOARD DIMENSIONS

114mm x 96mm (this includes the  
connector areas as defined by the  
PC/104 standard)

#### MOUNTING

Via 4 x 3mm holes

#### ENVIRONMENTAL

0°C to 60°C Operational temp

-25°C to 85°C Storage temp

Non-condensing Relative

Humidity 10% to 90%

#### POWER MANAGEMENT

Standby and suspend modes

#### SUPPLY VOLTAGE

+5 Volts for true embedded  
applications

On-board switching regulators for  
low voltage devices

#### EMC

Compliant with EN55022 and  
EN50082

#### OPERATING SYSTEMS

MS-DOS

Windows 95/98

Windows CE

#### WARRANTY

3 years

#### ACCESSORIES

**NEUTRON hard copy User Manual**

**NEUTRON cable kit:** includes  
cables for Utilities, HDD and FDD

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

#### ORDER GUIDE

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



**YEAR 2000**  
Compliance

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