



PC/II+dL Features

- Low power requirements
- AMD DX5 133 MHz Processor
- Up to 32MB of EDO DRAM
- Super VGA & panel video w/2MB memory
- 10Base-T & AUI Ethernet LAN
- Up to 8MB of flash storage
- M-Systems Disk-On-Chip support
- SCSI-2 and IDE controller
- PC/104 form factor and bus interface
- Watchdog & dual-voltage power monitors
- Up to 4 RS-232 serial ports - 1 parallel port

From manual IDN0044v3

Specifications

Board Form Factor:

3.775 x 3.550 inch, PC/104 compliant; FR4

Basic Board Requires:

Central Processing Unit
Minimum Memory - Soldered, 4 MB
Minimum Connectors - Power

Architecture:

PC/AT

Central Processing Unit:

486DX4 RISC-Core Processor - Intel or AMD
INTEL DX4:

- 66 MHz and 100 MHz core speed
- 33 MHz local bus speed
- 3.3V core and 5V tolerant I/O
- 32-Bit RISC technology core
- Pipelined execution
- Integrated Floating-Point unit
- Integrated Write-Back or Write-Through Cache

AMD DX4 and DX5:

- 100 MHz and 133 MHz core speed
- 33 MHz local bus speed
- 3.3V core and 5V tolerant I/O
- 105.6 million bytes/second burst bus
- 0.35- μ CMOS-process technology
- Integrated Floating-Point unit
- Integrated Write-Back or Write-Through Cache

Cache Memory:

16K of integrated on-chip Cache Memory (L1)
Unified organization, uses modified MESI protocol
High performance write-back and write-through (user options)

Memory:

EDO DRAM (soldered) memory, 60 ns typical

Memory Options:

4, 8, 16 or 32 MB installed by Option

DMA:

(7) Channels, 128 MB addressing

Interrupt Levels:

(15) Standard (2 x 8259A compatible, nested using IRQ2)

Timers/Counters:

AT-compatible

PC Speaker Output:

Yes, Available on Mass I/O connector

LEDs:

- (1) System Status
- (1) Ethernet Link Status
- (1) Ethernet Activity Status

Memory and Address Bus:

32-Bit

Power Monitoring:

Dual 5% monitor - 5V rail and on-board 3.3V
Reset hold time - 130 ms minimum, 200 ms typical
Transient voltage immunity

Manual Reset:

Available on Mass I/O Connector
Debounced, generates minimum of 130ms reset on Low to High
Initiated by pulling Manual Reset signal line Low, then High

Keyboard:

PS/2-style Keyboard supported by Mass I/O Connector

Mouse:

PS/2-style Mouse supported by Mass I/O Connector

Printer/Parallel Port:

Full Bi-directional ECP/EPP Parallel Port supported

Serial/RS232 Ports:

(1) to (4) 16C550-compatible Serial Ports
16-byte FIFOs
Full EIA-RS232E and CCITT V.28 Transceivers included
Output swing $\pm 9V$ with all Transmitter Outputs
loaded with 3K ohms to Ground

Video CRT & Flat Panel:

Chips and Technologies HiQ 65550 GUI Accelerator
 On-board 2 MB of 60 ns Video EDO DRAM, 512Kx32
 Complete Analog CRT Video Interface
 Complete 24-Bit Flat Panel Interface
 Monochrome (64 gray scale) or color
 Hi-Res Passive STN, Active Matrix TFT/MIM LCD, EL
 Simultaneous CRT / Flat Panel operation supported
 Local bus interface - 32-Bit
 64-bit Graphics Accelerator engine (BitBLT), H/W cursor
 VGA register set compatibility
 Supports panels from popular manufacturers such as Sharp, Optrex,
 Toshiba, Hitachi, Fujitsu, Samsung, NEC, Sanyo and others
 Chips and Technologies drivers included

ATA/IDE Hard Drives:

(2) IDE drives supported

SCSI Bus:

Adaptec AIC6360 Fast SCSI-2 Controller
 (7) SCSI-2 devices
 Adaptec SCSI BIOS included
 Adaptec Drivers also supported
 Bootable from either SCSI or IDE drive
 Simultaneous use of both SCSI and IDE

Flash Array:

Soldered Flash EEPROM - 2, 4 or 8 MB

Flash Disk:

Socket for user-supplied M-Systems On-board Disk-on-Chip
 solid-state disk - 16 MB to 288+ MB
 Coexistence support for both Flash Array and Flash Disk

Ethernet:

Crystal CS8900 High-performance 10Base-T and AUI controller option
 IEEE 802.3 compliant MAC engine, full duplex operation
 On-chip RAM buffers - for Transmit & Receive frames
 AUI port for 10Base-2, 10Base-5 and 10Base-F
 10Base-T filters included
 10Base-T and AUI isolation transformers are included
 10Base-T port has automatic polarity detection and correction
 Auto negotiation function
 LED for inbound/outbound frames to/from local controller included
 LED for either valid 10Base-T link present, or other general function

Floppy Disk:

Integrated Floppy Disk Controller
 (2) 3.5" floppy disk drives supported
 IBM System 34 double density format (MFM)
 Sony EMCA format compatible
 Standard transfer rates - 500 Kb/sec, 300 Kb/sec and 250 Kb/sec

Real-Time Clock, Alarm:

Dallas-Certified DS1685 - Y2K Real-Time Clock Controller
 Periodic Interrupt Generator - settable to period of 122 us to 500 ms
 Alarm Interrupt Generator - settable to any time of day in 24 hour period
 242-byte NVRAM included
 12 or 24 hour format
 Daylight savings time support
 Unique 48-Bit Serial Number can be used for customer application

Watchdog:

Dallas DS1706 Watchdog Timer/Monitor
 Defaults at power-on time to software-disabled state
 Software enable/disable/strobe is supported
 Minimum strobe rate while enabled - 1 strobe/second
 Hardware enable/disable jumper option

Bios Software:

256 KB Flash EEPROM for BIOS
 Bios write protection (hardware)
 Chips & Technologies 65550 VGA Driver BIOS included
 AT compatible BIOS and Architecture

Connectors:

Power Connector -

- (1) standard 1x12 right-angle header, keyed, +5V
- (1) standard 1X5 vertical-pin header, keyed, +3.3V
- when "Dual Supply" option ordered

PC/104 Connectors -

- (1) 2x32 and (1) 2x20 pin and socket header
- stack-through and non stack-through
- board stacking is customer specified option

Ethernet Header -

- (1) 2x5 right-angle or vertical header

Mass I/O Connectors -

- (1) 5x22 and (1) 5x11 2mm HM
- total of 5x33 2mm grid
- AMP Z-PACK 2mm HM Connector System
- Type B22 and C
- Support all variations-
- straight and right-angle
- male and female
- Support top mounting (bottom by request)
- Support 2mm headers on request (including board stacking headers)
- IEC917 and IEC1076-4-101 compliant

All connectors except for the Power header are optional

Peripheral I/O Signals:

Mass I/O Connector and Ethernet Header Signal Pins

Ethernet - 10	Serial COM1 - 8
Floppy - 15	Serial COM2 - 8
IDE - 28	Serial COM3 - 8
Keyboard - 2	Serial COM4 - 8
Mouse - 2	Speaker - 1
Parallel I/O - 17	Video Analog (CRT) - 5
Reset Switch - 1	Video LCD Flat Panel - 32
SCSI - 18	Power & Ground

Supply Voltage:

Single supply at +5V 5%, or
 Dual supply at +5V 5% and +3.3V 5%

Supply Power Rating:

Minimum 2.0W-2.5W;
 Maximum depends upon CPU type & speed & options
 (excluding external peripheral requirements)

Supply Regulation:

+5V and +3.3V Supplies require regulation to within 5%
 +5V Supply maximum rise time (+3V to +5V) required within 100 ms
 On-board step-down regulation is provided for on-board +3.3V supply
 On-board power monitor for both 5V rail and on-board +3.3V supplies

Storage Temperature:

-50C to +125C, battery excluded

Operating Temperature:

Commerical 0C to +70C standard
 Industrial -20C to +85C available on request
 Industrial -40C to +85C available on request

Operating Software:

QNX, Linux, DOS, Windows, Windows 95/98

Application Software:

x86 compatible