

General Information

This chapter gives background information of the mainboard.

Sections Include:

- Board Specifications
- Layout and Dimensions

Introduction

The SBC-776 is an all-in-one Single Board Computer (SBC) capable of handling the Intel Celeron 300~766MHz (with system bus frequencies of 66MHz) and Pentium III 500~850 MHz (with system bus frequencies of 100MHz). Reliability, performance, flexibility are essential qualities for SBC's and SBC-776 offers all of these.

Onboard is the versatile Intel 815E chipset, controlling LAN, LCD, and AUDIO. The VGA has a display memory size of 4 MB, with resolutions up to 1024 x 768 at 256K. Ethernet connections can be easily carried out through two RJ-45 connectors.

This full-sized SBC supports M-Systems DiskOnChip 2000 family of flash disk products that are small, plug and play, solid state disks in a standard 32-pin DIP package with capabilities ranging from 8MB to 288MB. There are also three 168-pin DIMM sockets providing a maximum of 512MB. A compact flash connector is provided on the solder side of the board.

The additional Advansys ASC38C0800, Ultra II Wide SCSI coordinates up to 15 devices that are simultaneously connected to your mainboard. Connection with the onboard chipset is made through a 68-pin SCSI connector.

SBC-776 supports two IDE devices, two floppy disks, four USB ports, two serial ports that can be configured as COM1, COM2, COM3 and COM4. The single bidirectional parallel port can support SPP, ECP and EPP modes. The standard ATX power connector enables this full-sized SBC to be operated without any backplane if necessary.

Features

- Supports Intel Celeron /Pentium III FC-370 CPUs
- High Speed AGP 2X for VGA function onboard (Intel 815E built in)
- Two 10/100 Base-T Fast Ethernet (Intel 815 E built in and Intel 82559ER)
- Supports H/W status monitoring
- Integrated AC-97 2.1 SoundBlaster compatible PCI 3D Audio
- Onboard Intel 815E controller supports 18/36-bit TFT panel
- Supports Compact Flash Memory
- Four USB ports onboard
- Two COM ports onboard
- Ultra II Wide SCSI interface onboard
- Supports DiskOnChip

Specifications

Standard LPX-size SBC functions

- **CPU:** FC-370 Pentium III (Coppermine), Celeron, and compatible CPUs (With system bus frequencies of 66/100/133MHz).
- **CPU socket:** Intel Socket 370
- **Bus interface:** PICMG Compliant
- **BIOS:** Award 4 MB Flash BIOS
- **Chipset:** Intel 815E
- **I/O chipset:** Winbond W83627HF. Fully 16-bit I/O decoded
- **ISA bus interface: Winbond W83626 LPC to ISA bridge** Full ISA bus function except master mode support
- **Memory :** Onboard three 168 pins DIMM socket supports up to 512Mbytes SDRAM (PC-133 SDRAM supported).
- **Enhanced IDE:** Supports two IDE channel. Support Ultra DMA/ 100 mode with data transfer rate of 100MB/sec.
- **FDD interface:** Supports two floppy disk drives, 5.25" (360KB and 1.2MB) and/or 3.5" (720KB, 1.44MB, and 2.88MB).
- **Parallel port:** One bi-directional parallel ports. Supports SPP, ECP, and EPP modes.
- **Serial port:** One RS-232 and one RS-232/422/485 serial port. Ports can be configured as COM1, COM2, COM3, COM4, or disabled individually and of which one and be configured as RS-232/422/485 (COM2). (16C550 equivalent).
- **KB/Mouse connector :** 6-pin mini-DIN connector supports PC/AT keyboard and PS/2 mouse and wake on KBD function.
- **USB connectors:** 10-pin onboard connector supports four USB ports.
- **Battery:** Lithium battery for data retention
- **Watchdog timer:** Can generate a system reset, IRQ15, or NMI. Software selectable time-out interval (1 sec. ~ 255 min., 1 sec./step or 1 min./step)
- **DMA:** 7 DMA channels (8237 equivalent)

- **Interrupt:** 15 interrupt levels (8259 equivalent)
- **Power management:** Supports ATX power supply. I/O peripheral support power saving and doze/standby/suspend modes. APM 1.2 compliant.
- **H/W status monitoring:** Embedded in W83267HF supports power, supply voltages, and temperature monitoring.

Flat Panel/CRT Interface

- **Chipset:** embedded In Intel 815E
- **Chipset output VGA signal:** AGP 4X
- **Display memory:** Share system memory 4MB SDRAM (Max)
- **Display type:** Supports non-interlaced CRT and up to 18/36 bit LCD (TFT, LCD, only). Can display both CRT and Flat Panel simultaneously.
- **Resolution:** Up to 1024 x 768 @ 256 K colors

Audio Interface

- **Chipset:** Intel 815E
- **Audio interface:** One 14 pin header (2.00mm)
- **Codec:** ALC 200

Ethernet Interface

- **Chipset:** Intel 815E embedded in ICH2 and Intel 82559ER
- **Ethernet interface :** 82559ER does not support WOL and AOL
82562ET support WOL and do not support AOL
82562EM support WOL and AOL. 776 offers 82559ER and 82562 ET on board.

Compact Flash socket onboard

- Compact flash connector onboard support type 2 CFD

Ultra Wide II SCSI Interface

- **Chipset:** AdvanSys ASC38C0800
- **Connector:** 68-pin internal
- **Termination:** Auto termination

SSD Interface

- One 32-pin DIP socket supports M-Systems DiskOnChip 2000 series

Mechanical and environmental

- **Power supply voltage:** ATX power supply
- **Operating temperature:** 32 to 140°F (0 to 60°C)
- **Board size:** 13.3"(L) x 4.8"(W) (338mm x 122mm)
- **Weight:** 1.2 lb. (0.3 Kg)

Board Dimensions

