

CATS StrongARM Evaluation board specifications

Processor

Intel 21281 SA110 StrongARM operating at speeds up to 233MHz

Core Logic

The motherboard is built around the Intel 21285 StrongARM support chip, providing PCI, memory configuration and diagnostic UART, and the Acer Labs M1543c Southbridge, providing PCI-ISA bridge and integrated I/O.

Memory

50-66MHz fully buffered SDRAM memory bus, with two DIMM sockets, supporting PC66 compatible modules. (PL1 will support PC100 and PC133, PL2 will only support a single array PC66 module). 32 pin PLCC socket for a single byte wide flash device, which can be in-circuit, or JTAG programmable. A 2Mb device is normally supplied. 241B battery backed CMOS RAM integrated in real time clock module.

Real Time Clock

Real Time Clock module with integrated CMOS RAM and back-up battery (optional external power). Integrated 64 bit unique serial number

Standard I/O Ports

Two RS232, with MIDI compatible timing (second serial shared with 21285 diagnostic UART)
ECP/EPP IEEE 1284 parallel port
PS2 Keyboard and mouse
Dual channel UDMA-33 supporting up to four devices (UDMA-66 configuration optional)
DMA Floppy disc interface for up to two drives
Dual USB host controller

Expansion

Three 32 bit, 33MHz PCI 2.1 slots, configurable at time of manufacture to 5v or 3.3v VIO.
Four 16 bit ISA slots, with DMA support)
Fast IR Header (shared with second serial/21285 diagnostic UART)
One wire bus
SMBUS/IIC
JTAG headers

Power Management

Power management, integrated into the Southbridge, will "wake up" the system upon the following events:

- Alarm
- Power button
- Serial
- Wake-on header

Power Requirements

Standard 20 way ATX power connector, supporting PSU "soft power on".

+3v	1A
+5v	250mA
+5v Standby	15mA
-5v	0A (ISA slots only)
+12v	25mA (serial driver only)
-12v	25mA (serial driver only)

These ratings do not allow for any expansion cards.

Dimensions (Width x Length)

ATX compliant footprint
12.0 (W) x7.40 (L) inches (305x188mm)

Operating Temperature

32 to 140°F (0 to 60°C)

Integrated software

The board is supplied with a *Cyclone* firmware, programmed into the ROM. This allows for system booting via:

Ethernet using DHCP, BOOTP, TFTP, or, NFS
Local storage using the following file systems :

- Berkeley FSS
- Linux ext2
- ISO CD9660
- MS-DOS FAT 16

OS Supported

- NetBSD
- ARMLinux

Given the standard architecture of the CATS board, any OS that runs on a SA110/21285 design (such as the Intel EBSA285) should require minimal modification to run on the CATS board.