
Motherboard Specification (**Confidential**)

Product Model : uATX Motherboard (**Cupertino**)
Title : *Functional Specification of Motherboard*
Date : *November 23, 2001 (Version 1.00)*

1. Form Factor

- uATX Form Factor
- 9.6"×9.6"×1.6T (4 Layers)

2. Main Core Chipset

- Intel Brookdale-DDR (845 B0-stepping) Chipset
 - Intel 82845 Memory Controller Hub (FC-BGA-593p)
 - Intel 82801BA I/O Controller Hub (EBGA-241p)
- Super I/O: SMC47M102 (PQFP-100p)
- Audio: AC97 CODEC-based subsystem
 - ADI AD1886 or Crystal CS4201(TQFP-48p)
- Flash BIOS: SST49LF002A 2Mb FWH (PLCC-32p)
- Ethernet: RealTek8100B (PQFP-100p)
- Clock Generator
 - ICS9250-38 (SOP-56p)
- DC to DC converter
 - HIP6301+HIP6601A for PWM Controller (SOP-20p)
 - HIP6503 for STR Power Management (SOP-20p)

3. Processor

- mBGA478 ZIF Socket (for mPGA-478 P4P)
- Intel Pentium-4 Processor (Northwood / Willamette)
- 400MHz FSB (100MHz System clock)
- Flexible integrated L2 cache in P4P.
 - 256K in Willamette / 512K in Northwood

4. System Memory

- Built-in Two DDR-SDRAM Channels (2 DIMM Sockets)
- PC200/266 supported
- Expansion: Up to 2.0GBytes with two 1GB modules

5. BIOS

- Phoenix BIOS in 2MB Flash Memory
- PCI2.2, PnP1.0a, SMBIOS2.3, CDROM Boot 1.01, UUID, AGP2.0, ACPI 1.0b

6. Expansion Slots

- PCI and AGP supported
 - One AGP slot (AGP 2.0 specification compliant)
 - Three PCI slots (PCI 2.2 specification compliant)

7. Power Management

- Supports S0,S1,S3 and S5 state of ACPI Rev1.0b
- LAN device : D3 cold state
- Support Wake-up USB
- Support Wake-up KB/Mouse
- Support I/O APIC

8. Rear I/O Port

- Serial Port: One Dsub-9 Connector for COM1
- Parallel Port: Dsub-25 Connector for LPT1
- USB Port: 2 USB Connection
- Ethernet Port: Stack RJ45 Connector on USB Port
- PS/2: One Stack PS/2 Connector for Mouse & Keyboard
- Multimedia Port
 - Type-1: MIC+L_IN+L_OUT+Joystick (Standard)
 - Type-2: MIC+L_IN+SPK

9. Header Connectors

- I/O Device
 - Storage device
 - Two E-IDE connector: 40pin Header (up to ATA100)
 - One FDD connector: 34pin Header
 - Audio Sound
 - CDROM sound: One 1*3 Locking Header
 - Video sound: 1*4 Locking Header (Option)
 - SPK_OUT: 1*3 Locking Header
 - Headphone: 1*5 Header (Option)
 - SPDIF: 1*4 Header (Option)
 - 2nd MIC: 1*4 Header (Option)
 - 2nd CDROM Audio: 1*3 Locking Header (Option)
 - Joystick / USB Header
 - 2*10 Header for Joystick and One USB Port
 - Front USB Header
 - 2*6 Header for Two USB Ports
 - Power Supply Connector
 - 20pin ATX Connector
 - 4pin Connector for Aux +12V
 - Indicator Connector: 2*10 Header
 - Power LED: 1*3 Connection (3-step mode)
 - HDD LED: 1*2 Connection
 - Key Lock: 1*2 Connection
 - Power, Reset & Sleep Button: Each 1*2 Connection
 - Speaker: 1*4 Connection
 - **1*8 Header dual Foot-Print for HP**
 - Power Management-based Connector
 - Three FAN Connector: CPU, Power Supply, and System
 - FAN RPM detection except P/S FAN.
 - FAN ON/OFF supported
- ### 10. Miscellaneous parts
- Battery: Coin Type (CR2032)
 - Speaker: Piezo Type