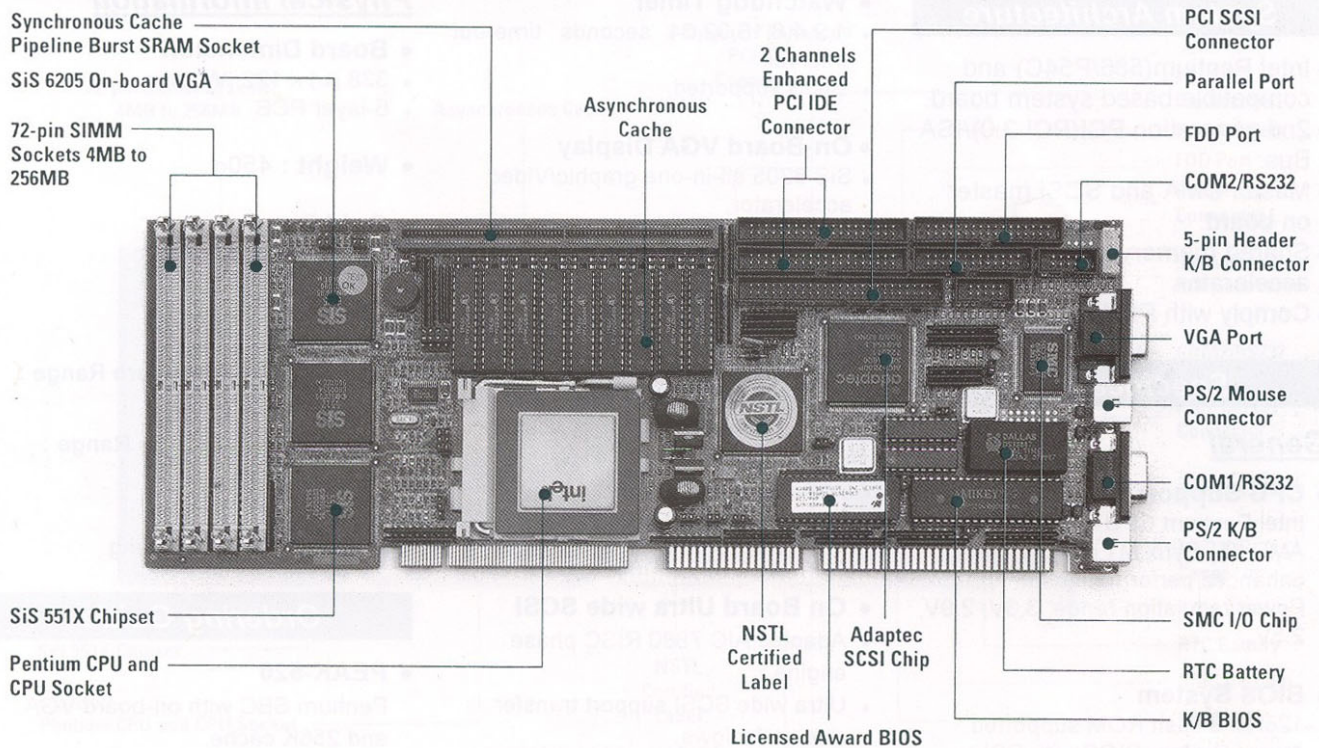


P-520/520S

PCI/ISA AIO Pentium SBC with VGA Display and Ultra-Wide SCSI



- Most cost-effective server platform with SCSI master & on-board VGA shared memory.
- 7 PCI devices connectivity(3 on board, 4 master slots on back-plane).
- Highest disk I/O on-board for 40MB/s(Ultra-Wide SCSI).
- Comply with PICMG PCI/ISA bus standard.
- NSTL Approved for most popular O/S compatibility.

General Description

To integrate most necessary functionality on a limited board space seems a challenge to those SBC (Single Board Computer) designers. P-520S is the "State of the Art" SBC, which shows our outstanding technology to emerge all the leading features of ultra-wide SCSI, PCI VGA display capability and Pentium computing power together. We believe that P-520 series SBC will be a mile stone of computer evolution and will bring a lot of benefits for the high-end applications.

Industrial Standard - PICMG

As all industrial users know, to follow the industrial PCI/ISA bus standard, PICMG, is the best way to optimize the application resources. Complying with this standard, P-610 series SBC can be used with various backplanes come from different companies. It can save your cost, fully utilize your investment and also enjoy the same performance.

On-board VGA Display

Shared-memory display design is a new trend which can save the space and cost of video RAM. It also keeps the flexibility to allocate any specified memory size. This advantage makes P-520/520S suitable for different applications like servers, image processing systems, ... etc.

On-board Adaptec SCSI

Adaptec's AIC-7880 is a fully integrated SCSI host adapter for PCI applications. All SCSI sequences are managed by the Phase Engine, a high performance on-chip 10 MIPS RISC processor. The Ultra Wide SCSI can have transfer-speed up to 40MB/sec and maximize I/O through-put in high performance PCs for optimization of the 132MB/sec in PCI local bus. The AIC-7880 is tested extensively over a large matrix of O/S, peripherals and systems to ensure a high degree of compatibility and reliability.

System Architecture

- Intel Pentium(586/P54C) and compatible based system board.
- 2nd generation PCI(PCI 2.0)/ISA Bus.
- Master DMA and SCSI master on board.
- Shared memory graphic/video accelerator.
- Comply with PICMG standard.

Specifications

General

• CPU Support

- Intel Pentium CPU up to 166 MHz.
- AMD K5, Cyrix M1 compatible and enhanced performance.
- Power regulation range: 3.3V, 2.9V, 2.5V.

• BIOS System

- 128K x 8 flash ROM supported.
- Award System BIOS with PCI, Green, P-n-P supported.
- SiS VGA BIOS.
- Adaptec AIC 7880 BIOS.

• Cache Memory

- Asynchronous and synchronous cache (pipeline burst SRAM) supported.
- 256KB standard, 1MB Max.
- Socket reserved for 32Kx8, 64Kx8, 128Kx8 Async, SRAMs.
- One expansion slot reserved for synchronous cache module.

• DRAM

- Fast Page Mode(FPM)/EDO DRAM supported.
- Single simm power on and run.
- 4MB min. up to 256MB Max.
- 4 simm sockets reserved.

• Chip Set

- SiS 551X PCI chipset.
- PCI 2.0 fully implemented up to 132MB/s bandwidth.
- Two IDE channel up to mode 4 supported.
- DMA master up to mode 2.
- P-n-P/Green features.

• Watchdog Timer

- 1,2,4,8,16,32,64 seconds time-out interval.
- BIOS supported.

• On-Board VGA Display

- SiS 6205 all-in-one graphic/Video accelerator.
- Shared memory architecture with system memory up to 1MB. (No graphic DRAM needed.)
- Video play back built-in.
- Maximum resolution/color/refresh rate.
 - * 800x600/true color/75Hz.
 - * 1024x768/high color/75Hz.
 - * 1280x1024/256 color/60Hz.
- VGA drivers supported. DOS, Windows 3.1, Windows NT 3.5, OS/2 Warp 3.0, Windows 95.

• On Board Ultra wide SCSI

- Adaptec AIC 7880 RISC phase engine.
- Ultra wide SCSI support transfer rate as follows.
 - * 8 bit(narrow) : 20MB/s.
 - * 16 bit(wide) : 40MB/s.
- Backward compatible with SCSI I, SCSI II and also Wide SCSI.
- 15 devices connectivity.
- Drivers supported : DOS, Windows 95, Windows NT, Novell Netware, SCO Unix, OS/2 Warp 3.0, ... etc.

• On-Board I/O

- SMC 37C665 super I/O on board.
- support Two SIO(16550 fast UARTs compatible).
- One bi-directional PIO with EPP/ECP supported.
- Floppy Disk controller :
 - * 5.25" : 360K/1.2MB
 - * 3.5" : 720K/1.44MB/2.88MB
- Mini DIN PS/2 mouse and keyboard connector.
- 5 pin header for KBD connector on back plane.

• Power Good

- Power good generation with reset time, 300~500ms.

• Power Requirement

- +5V @ 6.0A, -12V @ 20mA.
- +12V @ 1.2A

Physical Information

• Board Dimension

- 338 (L) x 122 (W) mm.
- 6-layer PCB.

• Weight : 450g.

• Gold Fingers

- 30 Miles gold plating.

Environment

• Operating Temperature Range :

0 to 55 °C

• Storage Temperature Range :

-40 to +100 °C

• Relative Humidity :

- 5 to 95% non-condensing.

Ordering Guide

• P-520

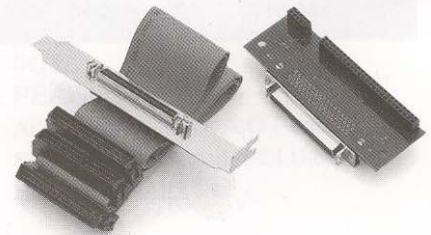
- Pentium SBC with on-board VGA and 256K cache.

• P-520S

- Pentium SBC with on-board VGA display, PCI W-SCSI and 256k cache.

• Option :

- 68 pin wide SCSI adapter with cable for P-520S to connect the wide SCSI drives.



• The 68-pin Wide SCSI cable