

Altos 586 Series

The Altos 586 family of products is a line of powerful systems designed to meet multi-user and multitasking requirements. The 8086, 16 bit systems offer a complete systems solution with a wide selection of industry standard operating systems and languages, full communications and support of application software to meet any business need. The Altos 586 Series is designed to perform larger more comprehensive tasks for more users than 8 bit systems.



General Description

The 586 Series product line consists of 3 desktop microcomputer systems with the capabilities to handle up to 9 users simultaneously. Each system has a 1 MB 5 1/4 inch diskette drive, and support a range of hard disk options. Disk storage options range from 12 to 42 MB with an additional 42 MB add-on as second drive to any family system.

The 586 Series is a general purpose computer based on the Intel 8086 microprocessor family, offering the following features:

- Multiple processors 8086 — CPU
 Z80 — Serial I/O
 8089 — Hard Disk I/O
- 512K Bytes of Main Memory with parity
 Expansion to 1 M Byte
- Supports five users plus serial printer
 Expansion to nine users plus serial printer
- Intelligent Disc/Tape controller supports up to
 two Disk drives
- Self Diagnostics at power up
- Power fail detect
- Time of day clock with battery back up
- Altos Net and Ethernet for networking
 configurations

Features and Capabilities

Multiple processors

While the 8086 serves as the master CPU, the Z80 based intelligent I/O handles serial I/O functions and the 8089 based intelligent disk controller manages mass data storage with direct memory accessing.

Memory Management

586 Series carry a proprietary memory management system. It can subdivide up to 1 MB of memory into 4K blocks. It assigns a logical to physical address translation and various access attributes to each block so that non contiguous physical memory can be assigned to any given task. Also provides write protection and access protection to increase reliability and performance.

Memory Expansion

The design of the 586 systems includes as standard either 512K of random access main memory with byte parity error detection. Main memory is expandable to 1 MB on all 586 systems.

Integral Data Storage

All 586 systems are available with 1 MB of floppy storage. Hard disk are available with 12, 32, 42 MB variations. In addition, all series systems can support a second 42 MB disk up grade. This provides disk capacities ranging from 12 to 84 MB.

An intelligent hard disk controller is an integral part of all 586 systems. This controller takes full advantage of higher CPU speed and fast hard disk access providing enhanced throughput.

Communications

586 Series supports asynchronous, 3270/3276 IBM Clustered Terminal Emulation and 3780 IBM BiSynchronous Communications.

The 586 Series support an additional communications board for expanded serial and communication options. The Communications Expansion Board provides a Z80 — processor for support of 4 additional RS-232 Serial ports and an Altos Net port. A second option allows for the installation of an integral 1200 Baud modem in addition to four RS-232 ports. These options provide expanded support for additional videos, printers or Altos Net.

The 586 series of products also support the Altos local area network which allows for Altos to Altos communications. For larger networks, a low cost Ethernet interface is also available.

Magnetic Tape Back Up

All systems in the 586 family support an optional magnetic tape unit to provide high performance, high capacity back up for the hard disk.

Configurations

All 586 Series systems consist of 512K RAM, 1 MB floppy, 6 serial RS-232 Ports* and XENIX™ Run Time systems. Winchester disk option includes:

586-10	12 MB Winchester disk
586-30	32 MB Winchester disk
586-40	42 MB Winchester disk

* Altos Net requires one RS-232 port when not installed with Communication Board Expansion Option.

Specifications

Microprocessor

Model	8086
Technology	NMOS
Data/Instruction word size	16 bit
Clock Frequency	10 MHz

RAM Memory

Capacity	512K Bytes
Maximum	1M Byte
Cycle Time	375 NSEC

I/O Control

I/O Processor	Z80A
DMA processor	8089
Interrupt system	vectored
Serial ports	6 RS-232

Floppy Storage

Number of drives	1
Capacity	
Unformatted	1 MB
Density	Double
Side	Double
Data transfer rate	250 Kb/Sec
Access Time	132 msec

Winchester Drives

Number of Drives	1
Capacity Unformatted	
586-10	12 MB (10 MB Formatted)
586-30	32 MB (25 MB Formatted)
586-40	42 MB (33 MB Formatted)
Data Transfer Rate	5 mbits/sec
Average Access Time	
586-10	85 msec
586-30	45 msec
586-40	45 msec

Optional Add ons

- 42 MB (unformatted) Winchester disk
- 17 MB (unformatted) magnetic tape cartridge
- 512K Memory Add-on
- Communication Board Serial Port Expansion Option
- Communication Board Serial Port/Modem Expansion Option

Communications

Ethernet
Altos Net
3780 IBM Bisynchronous
3270 IBM Clustered Terminal Controller/Emulator
SNA/SDLC IBM Bisynchronous

Physical Characteristics

Width	16 7/8"
Height	6"
Depth	18"
Weight	33 pounds

Environmental and Safety Standards

Meets FCC docket 20780 Class A requirements
UL and CSA approved
Ambient Temperature Range
 15-32°C
 50-90°F
Relative Humidity
 non condensing 20-80%
Power dissipation
 250 Watts

XENIX is a trademark of Microsoft.

Altos Computer Systems

2641 Orchard Parkway
San Jose, CA 95134
(408) 946-6700

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