

68186

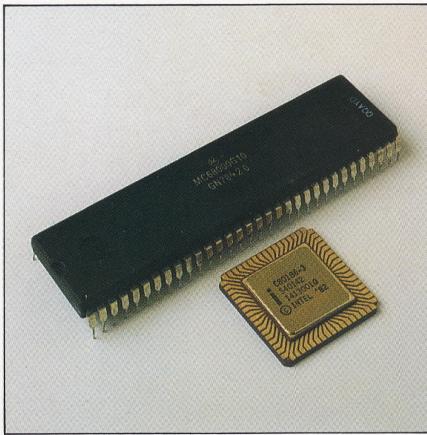
CHASE
SYSTEMS



UNIX BY DESIGN

UNIX™ has become an industry standard operating system for small multi-user computer systems. The Chase 68186 has been designed specifically to handle large UNIX based applications, providing support for from one to six users. In order to handle the large volumes of data and associated high processing throughput, the 68186 uses an innovative architecture combining two fast processors. This, together with the large main memory, gives a performance well in excess of existing micro-computers and rivalling that of many VAX™ systems. The power of the system is further enhanced by the use of a fast Winchester disk for mass storage, a removable hard disk cartridge for data transfer/back-up, Ethernet™ for local area network operation and an IEEE-488 interface for instrument control. The compact low-profile construction and high reliability is made possible by using a single printed circuit board.

Hardware



CPU

The 68186 uses two processors running simultaneously each with its own independent bus and memory. This together with the efficient inter-processor communication mechanism dramatically improves the performance of the system. It also allows sophisticated hardware integrity testing and diagnostics.

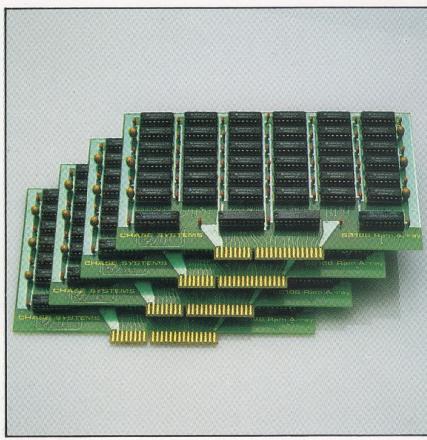
The two processors have different tasks, the performance of each being tailored to its function. The main processor is a Motorola MC68000, which is now established as the leading 32 bit microprocessor. The I/O processor is an Intel iAPX186, an extremely fast 16 bit device ideally suited to peripheral control.



Disk Storage

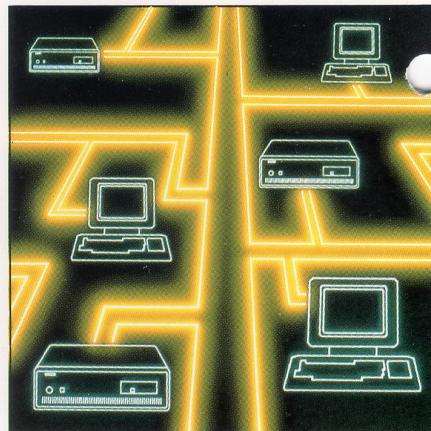
The main disk storage is provided by a Winchester hard disk using voice coil head positioning for very fast track to track access time and high reliability. This mechanical performance has been enhanced by the use of intelligent disk control software both in the operating system and in the I/O processor. The basic disk capacity offered can be from 36 Mbytes to 100 Mbytes and is easily upgraded.

A 5 Mbyte removable hard disk cartridge allows fast data transfer and provides a compact medium for long term data storage and backup.



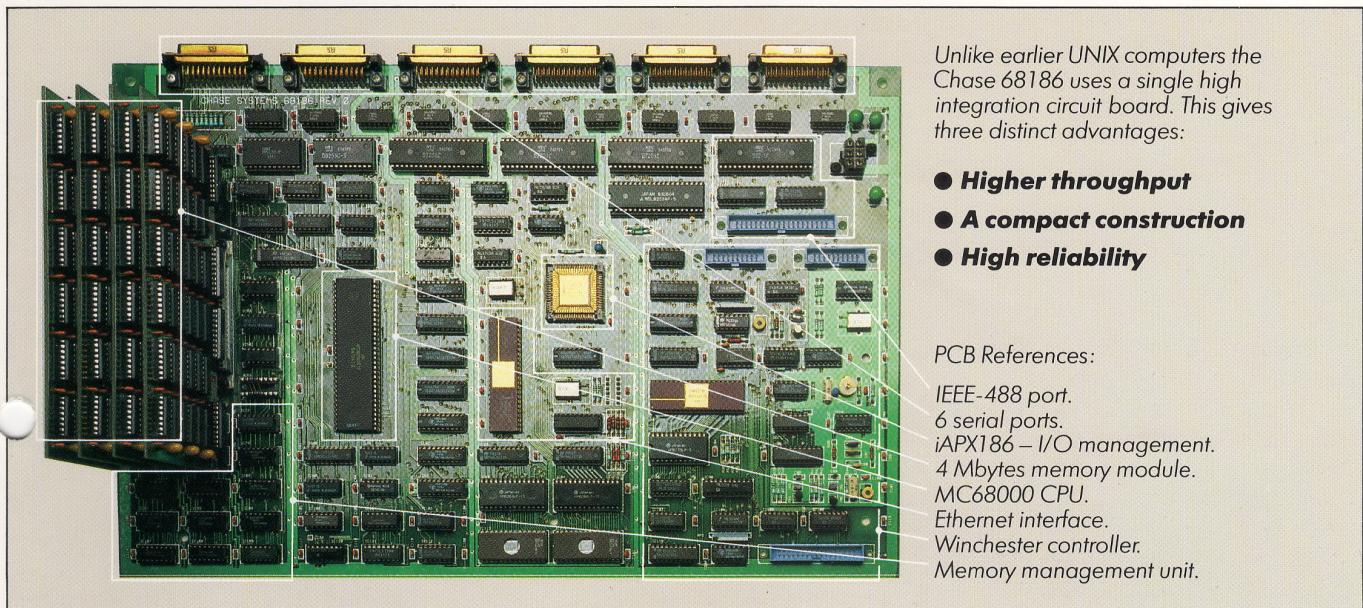
Memory

The main memory is from 1 to 4 Mbytes, with parity checking. The memory management unit uses high speed discrete logic in order to achieve full protection without introducing delay.



Input/Output

Six serial ports are provided as standard to support terminals, printers and other peripherals running at speeds up to 19.2k baud. Flexible peripheral and instrumentation control is achieved with an IEEE-488 bus interface (GP-IB). Finally, very high performance inter-machine networking is provided by a full speed Ethernet.



Unlike earlier UNIX computers the Chase 68186 uses a single high integration circuit board. This gives three distinct advantages:

- **Higher throughput**
- **A compact construction**
- **High reliability**

PCB References:

IEEE-488 port.
6 serial ports.
iAPX186 – I/O management.
4 Mbytes memory module.
MC68000 CPU.
Ethernet interface.
Winchester controller.
Memory management unit.

Software

The system software supplied with the Chase 68186 consists of two parts: the operating system and the communications interface. Each component runs on a separate processor with its own bus and memory. This gives a considerable speed advantage over a single processor system or where two processors share the same bus and memory.

The operating system runs on the 68000 series of processors. These have a 32 bit architecture which allows very large programs to be run efficiently and are widely used in UNIX systems.

The communications interface is designed to handle all the input/output functions that would normally burden the main processor with a high interrupt overhead. The interface also acts as a very intelligent disk controller improving disk speed, efficiency and lifetime. All the operations performed by the communications interface are completely invisible to user software running on the 68000 except as an improvement in the speed of the system as a whole.

The 68186 will be supplied with the latest

version of Microsoft's Xenix™ commercial operating system Xenix 3.0. This is compatible both with earlier versions of Xenix and AT&T's UNIX System III.

As an alternative to Xenix Chase will also be supporting UNIX System V. This AT&T system is intended to be the definitive version of UNIX and to prevent compatibility problems between different implementations.

The languages supported on both these versions of UNIX will include: C, COBOL, FORTRAN, PASCAL and BASIC, together with a wide range of applications packages.



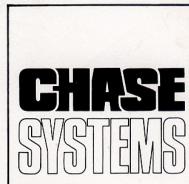
TECHNICAL SUMMARY

CPU	speed	MC68000 8MHz (no wait states) 12.5MHz (1 wait state)*
I/O processor	speed	iAPX186 8MHz (no wait states)
MMU		high speed discrete logic 4 segment base and bound
Main memory		1-4 Mbytes (parity checked)
Winchester disk	capacity access time	36-100 Mbytes formatted 3ms track to track 30ms average
Removable cartridge disk	capacity access time	5 Mbyte formatted 10ms track to track 70ms average
Streaming cartridge tape (1/4")	capacity	60 Mbytes*
IEEE-488-1978 interface	functions	SH1, AH1, T5/TE5, L5/LE5, SR1, RL1, PP1/PP2, DC1, DT1, C1, C2, C3, C4, C5
Serial ports	speed mode format	RS232c 50-19.2 kBaud asynchronous fully programmable
Ethernet interface	speed	Intel 82586/82501* 10 Mbits/sec
Power requirements	voltage frequency power (max)	240 or 110 volts A.C. ±10% 50/60 Hz ±5% 150W
Dimensions		147 x 471 x 362 mm
Weight		11 kg
Temperature		4-40°C
Humidity		10-80% non-condensing

Chase reserves the right to alter any of these specifications without notice.
 *Available 2nd quarter 85.

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