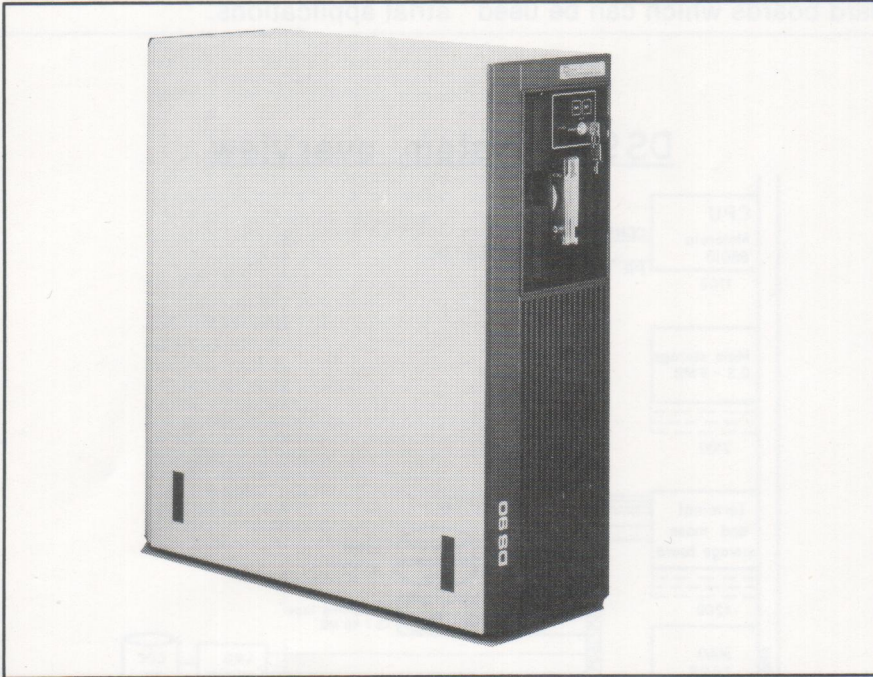


Multi-user 16/32 bit supermicro computer



The DIAB Series 90 — DS90 — is a multi-user system employing the UNIX operating system. The system, which has been developed by DataIndustrier AB, Sweden, has been designed to operate in conjunction with ordinary terminals, personal computers and other computers.

The DS90 is a supermicro computer with a 16/32 bit structure. Keeping in pace with progress, DataIndustrier has developed and implemented the UNIX compatible real time operating system D-NIX for the DS90.

Modular design has been employed throughout the system — in hardware as well as in software. The modular design has obvious advantages as concerns the real time characteristics of the D-NIX operating system. Furthermore, modular design allows for simplified and faster servicing through simple exchange of units. Last but not least, modular design gives great freedom and flexibility to follow the best ways in improving hardware and software.

The system is very compact and is designed for installation in an ordinary office environment.

THE D-NIX OPERATING SYSTEM

D-NIX is compatible with the

UNIX standard as proposed by the UNIX User Group 1984. However, D-NIX has a smaller and more efficient kernel which allows for considerably better real time characteristics.

The file handling performance has also been extended by improvement of the D-NIX file handler in many respects as compared with the standard UNIX.

The D-NIX does, for instance, handle contiguous files which increases file handling capacity and safety.

Apart from the D-NIX file handler, ABC-DOS for ABC computers and OS.8 for DataBoard are offered as options. File handlers for CP/M and MS/DOS will be implemented as options.

D-NIX being compatible with UNIX implies that software easily can be moved between different computers. The compatibility also implies that all software written in C under UNIX or XENIX can be run under D-NIX.

SYSTEM DESIGN AND APPLICATION PROGRAMMING TOOLS

The DS90 basic system comes with the database handler which is included in the relational database MIMER developed by MIMER Information Systems. Further MIMER modules are available as options.

Another database utility is the ISAM which is included in Basic.

D-Basic III, which is compatible with the Basic II for the ABC and other computers from DataIndustrier, is an in-house program development language which is in-

DS90 BASIC SYSTEM — CONFIGURATIONS

MODEL	90/20	90/20S	90/60S	90/120 Expansion unit
Processor	Motorola 68010	Same	Same	
Primary memory	1 Mbyte	Same	Same	
Floppy disk unit	1 Mbyte 8"	Same	Same	
Winchester disk	23 Mbyte	23 Mbyte	60Mbyte	126 Mbyte
Magnetic tape streamer	No	45/60 Mbyte	45/60 Mbyte	45/60 Mbyte
Terminal and printer connections V24	6	6	6	6
Board space DS90/DMI bus	5	5	5	5
Board space 4680 rack	5	5	5	5
D-NIX OS	Yes	Yes	Yes	Yes
MIMER relational database handler	Yes	Yes	Yes	Yes
D-Basic III with ISAM	Yes	Yes	Yes	Yes

cluded in the basic system. Pascal, Fortran, APL, C, COBOL and Assembler are offered as options.

HARDWARE

The basic DS90 system uses the Motorola 68010 processor. The data bus, which is called the DMI bus, is however designed in such a way that future processors can be adopted.

The primary memory consists of boards housing 512 kbyte or 2 Mbyte memory each. The system can be upgraded to a total of 8 Mbyte. The basic system is delivered with a 1 Mbyte primary memory as standard. For program distribution and backup copying purposes there is a 1 Mbyte 8" diskette unit.

All basic system versions are delivered with Winchester disk memories with different capacities as detailed in the configuration list. Certain models can be supplied with magnetic tape streamers.

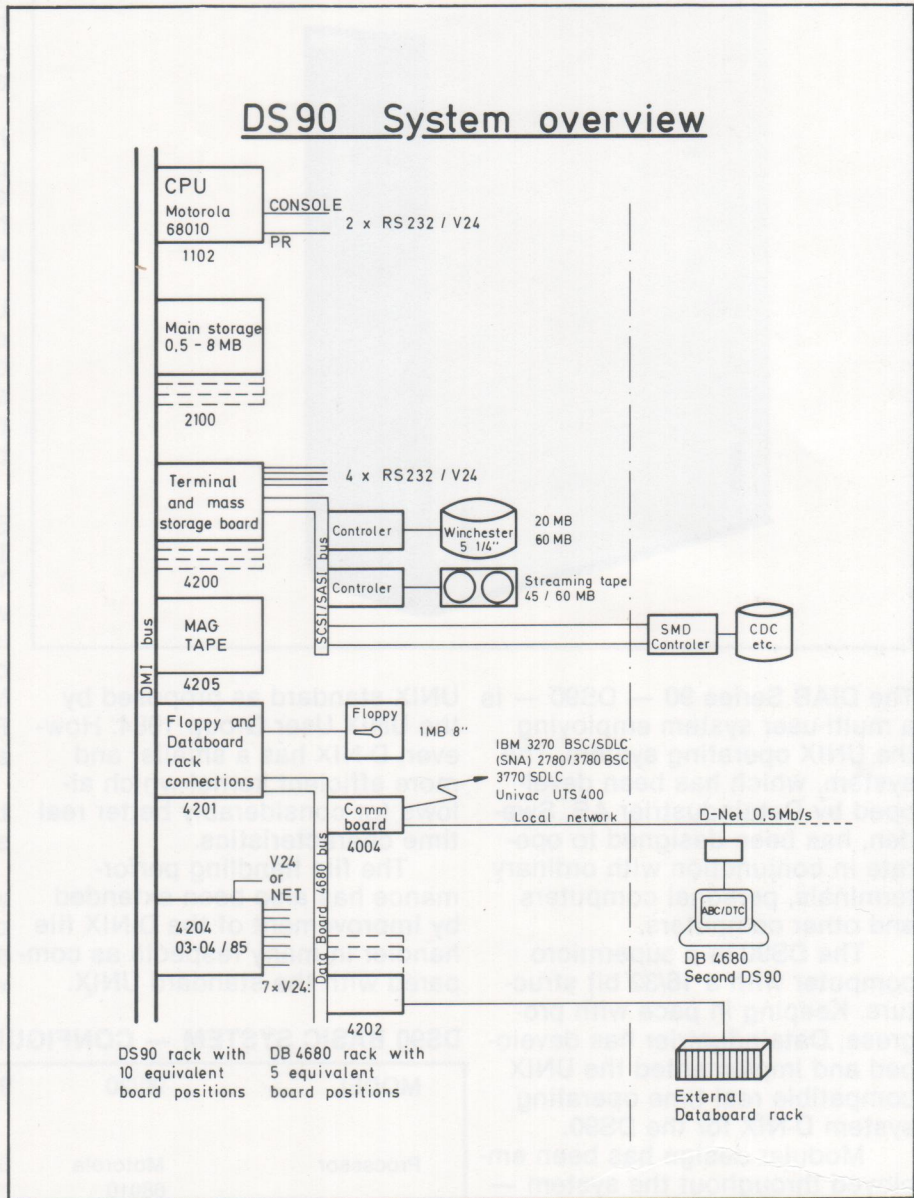
The working stations, which preferably should be VT100 or ADM3A compatible, can be connected star-wise locally through V24 interfaces. Printers are also connected through V24. Each I/O board has four V24 channels and one SCSI/SASI connection for Winchester and other external mass storage devices. Furthermore, there are two V24 connections on the CPU board. Thus there is a total of six V24 connections as standard.

As an alternative, DataBoard computers and other DS90 systems can be connected to the DS90 through the local area network D-NET (option). Ethernet will

be available by the end of 1985.

All basic versions of the DS90 houses a DataBoard 4680 I/O rack with space for five Data Board boards which can be used

for LAN connection, external communication and process control interfaces. This gives the DS90 a strong position in industrial applications.



TECHNICAL DATA

Processor	68010	External communication D-NET	
Data	16/32 bits	Transfer rate	512 kbit/sec
Internal address	24 bits	Distance	1000 m
Bus	DMI	Synchronous communication	V24/RS232C
Address	32 bits	Transfer rate	9600 bits/sec
Data	32 bits	Power supply	
Bus clock	10 MHz	Voltage	190—260 V
Bandwidth	13,3 Mbyte/s max	Frequency	47—400 Hz
Primary memory	512 kbyte/board or 2 MB/board	Power consumption	175 W (basic system)
Data storage	18 bits (byte parity)	Safety standard	SEMKO
Memory chips	64 kbit	Physical characteristics	
Access time	200 ns	Dimensions (W x H x D)	220 x 645 x 600 mm
Mass storage devices		Weight	40 kg
Floppy disk	1 Mbyte 8"	Noise	44 dB(A)
Winchester disk	20, 60 or 126 Mbyte 5 1/4"	Environment	
Interface	SCSI/SASI	Temperature range	+10 to +35 °C (operating), -40 to +60 °C (in store or transport)
Backup copying		Humidity	20 to 80%
Floppy disk	1 Mbyte 8"		
Magnetic tape streamer	45/60 Mbyte (for DC 450/600 XL resp)		
Terminal and printer connection	V24/RS232C		
Transfer rate	50—19200 bits/sec		