digital™

MicroVAX 3100

THE POWERFUL CHOICE

High Performance Systems
at Affordably Low Prices

Configuration Guide

Models 40/80/90

Models 10e/30

December 1992

Too often, a low price means having to compromise — but not with the MicroVAX 3100. Each system in this family offers the features and benefits inherent to all VAX systems: access to over 10,000 software packages; adherence to industry standards in both software – OpenVMS, POSIX – and hardware – SCSI, Ethernet™; and an investment protection upgrade capability, backed by Digital's worldwide service network. With the MicroVAX 3100, a modest investment gets you a big choice.

Model 10e — Lowest Price

This compact model is ideal for the small business looking for its first integrated computer system. As an entry point to the MicroVAX family, it offers a high level of system capability for the lowest investment.

Model 30 — Performance plus a Low Price

With 50–100% more performance than the Model 10e, this model offers a faster response, typically supporting 2–10 users.

Ordering information

Base Systems
(OpenVMS, without user licence)

		order as
Model 10e	4MB	DV-31DA1-A9/AA
Model 30	8MB	DV-31FAA-B9
Model 40	8MB	DV-31GAA-B9
Model 80	8MB	DV-31HAA-B9
Model 90	16MB	DV-31PAA-C9
Model 90	64MB	DV-31PAA-E9

Traditional Systems
(OpenVMS, 2-user licence, DECnet, Rdb Runtime)

		order as
Model 10e	4MB	DV-31DWA-A9/AA
Model 30	8MB	DV-31FTA-B9
Model 40	8MB	DV-31GTA-B9
Model 80	8MB	DV-31HTA-B9
Model 90	16MB	DV-31PTA-C9
Model 90	64MB	DV-31PTA-E9

Model 40 — Flexibility

This is ideal for users with large database needs or computer systems that extend beyond the local office environment. It offers extra growth potential, more in-box storage capacity and more communication options.

Model 80 — Flexibility and Power

With greater power, more memorycapacity and faster data retrieval, this model suits more demanding business needs. It supports more users and more complex applications.

Model 90 — Top of the Class

No business application is too large or complex for this model — an investment that can handle needs well into the future It offers unsurpassed power in a small system, plus enhanced system security through its use of ECC memory.

Ordering information

Packaged Systems – NAS
(OpenVMS without user licence, DECnet, Rdb Runtime, RRD42)

		order as
Model 40	16MB, NAS200, RZ25	DV-31GBA-CA
Model 80	40MB, NAS300, RZ26	DV-31HCB-DA
Model 90	64MB, NAS300, RZ26	DV-31PCA-EA

Packaged Systems – Pathworks
(OpenVMS, 2-user licence, DECnet, Rdb Runtime, MS-DOS TK50 kit, Pathworks/VMS TK50 kit, TZ30)

		order as
Model 30	16MB, RZ25	DJ-31FP1-A9
Model 40	16MB, RZ25	DJ-31GP1-A9
Model 80	16MB, RZ25	DJ-31HP1-A9
Model 90	16MB, RZ26	DJ-31PP1-C9
Model 90	64MB, RZ26	DJ-31PP1-E9

Note: Not all packaged systems are available in all countries.

GENERAL SPECIFICATIONS OF MicroVAX 3100 MODELS

	Model 10e	Model 30	Model 40	Model 80	Model 90
Performance	3·5 VUPS	5 VUPS	5 VUPS	10 VUPS	24 VUPS
Enclosures	BA42-A	BA42-A	BA42-B	BA42-B	BA42-B
Min/Max memory	4/32MB	8/32MB	8/32MB	8/72MB	16/128MB [1]
Max number of internal devices	3	3	5	5	5
Internal disk capacity	1·2GB	3·1GB	5·3GB	5·3GB	5·3GB
Total disk capacity	5·2GB	8·7GB	8·7GB	8·7GB	8·7GB
Communications on Base model	3D + 1M [2]	3D + 1M	3D + 1M	3D + 1M	3D + 1M
Asynchronous options	8D	8D or 4M	8D or 16D or 8M	8D or 16D or 8M	8D or 16D or 8M
Synchronous options	1 [3]	1	2	2	2

1. ECC memory.

2. D = data only, MMJ (DEC423) line   M = Modem (RS232) line.

3. The Model 10e DEC423 lines and Synchronous line are combined on one option card, the DSH32.

LICENCES

OpenVMS User Licence Upgrades

	U.S.A.	Europe
1-user	QL-XULA9 -BB	QL-XULA9-BB
2-user	" -BC	
4-user	" -BD	
8-user	" -BE	not
16-user	" -BF	available
32-user	" -BG	
64-user	" -BH	

OpenVMS ADL Upgrades

	U.S.A.	Europe
1-user	QL-NBZA9 -BB	QL-NBZA9-BB †
2-user	" -BC	
4-user	" -BD	
8-user	" -BE	not
16-user	" -BF	available
32-user	" -BG	
64-user	" -BH	

† The European order code QL-NBZA9-BB is only valid in countries where ADL is offered.
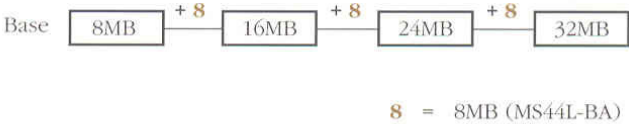
Model 10e — Parity Memory, Min/Max 4/32MB

Base system includes 4MB. Two additional memory options can be accommodated. Memory options can be mixed, for expansion to 8MB, 12MB, 16MB, 20MB, 24MB and 32MB.

```
                         + 4
                               8MB        + 4
                                                16MB
                         + 8
                               12MB       + 12
                                                24MB
Base     4MB             + 12
                               16MB       + 4
                         + 16
                               20MB       + 12
                                                32MB
```
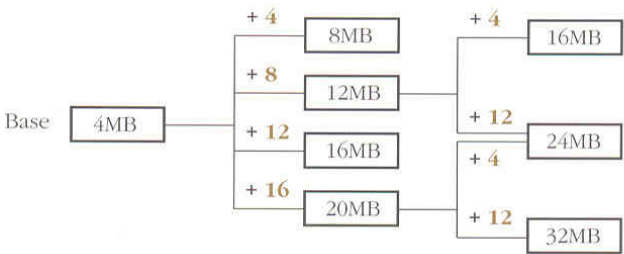
4 = 4MB (MS42-AB)		**12** = 12MB (MS42-BA)	
8 = 8MB (MS42-KA)		**16** = 16MB (MS42-CA)	

Model 30/40 — Parity Memory, Min/Max 8/32MB

Base system includes 8MB. Select additional memory if required, up to 32MB in 8MB increments.

```
Base    8MB    + 8    16MB    + 8    24MB    + 8    32MB
```

8 = 8MB (MS44L-BA)

Model 80 — Parity Memory, Min/Max 8/72MB

Base system includes 8MB. Two additional memory options can be accommodated. Memory options can be mixed, for expansion to 16MB, 24MB, 40MB, 48MB and 72MB.
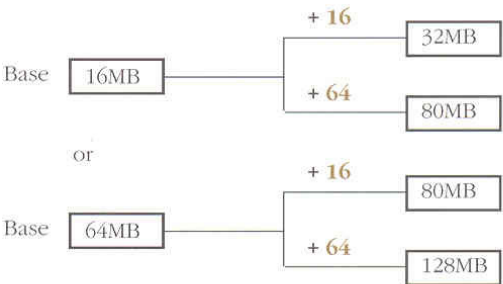
```
                   + 8               + 8
                         16MB              24MB
                   + 8               + 32
Base    8MB              16MB              48MB
                   + 32              + 32
                         40MB              72MB
```
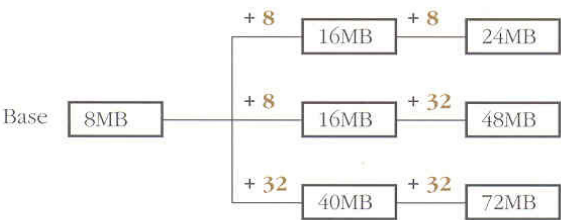
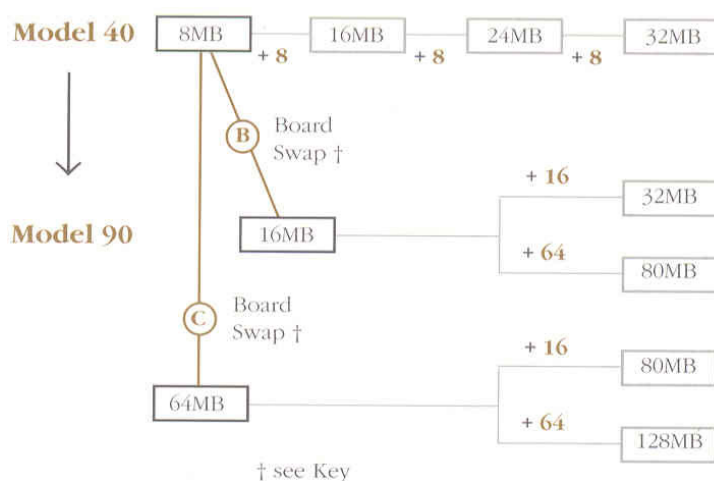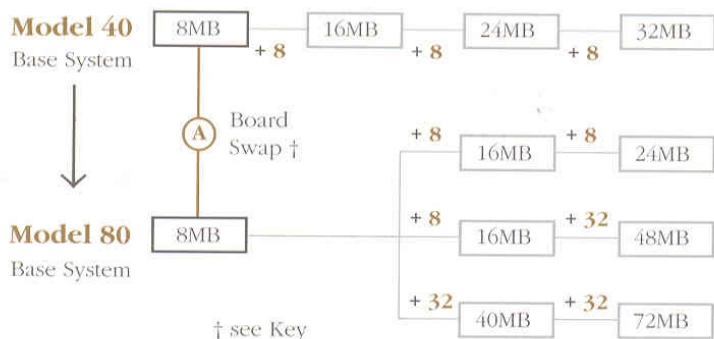|		
8 = 8MB (MS44L-BA)		**32** = 32MB (MS44-DA)

Model 90 — ECC Memory 16/128MB

Base system includes 16MB or 64MB. Select 16MB or 64MB increments for expansion to 32MB, 80MB and 128MB.

ECC is invoked on this system, with single bit errors being corrected and multiple bit errors being detected. This leads to a much higher level of system reliability.

```
                         + 16
                               32MB
Base    16MB
                         + 64
                               80MB

         or

                         + 16
                               80MB
Base    64MB
                         + 64
                               128MB
```

16 = 16MB (MS44L-BC)		**64** = 64MB (MS44-DC)

Model 40
Base System

| 8MB | + 8 | 16MB | + 8 | 24MB | + 8 | 32MB |

(A) Board Swap †

Model 80
Base System

8MB

+ 8 → 16MB + 8 → 24MB
+ 8 → 16MB + 32 → 48MB
+ 32 → 40MB + 32 → 72MB

† see Key

Model 40

| 8MB | + 8 | 16MB | + 8 | 24MB | + 8 | 32MB |

(B) Board Swap †

Model 90

16MB
+ 16 → 32MB
+ 64 → 80MB

(C) Board Swap †

64MB
+ 16 → 80MB
+ 64 → 128MB

† see Key

Example of upgrade: Model 40, 16MB → Model 80, 24MB

– Remove 8MB of memory from the 16MB Model 40,
  to make it a Base System; retain the 8MB for re-use.
– Replace the Base System board with a Model 80 board.
– Add the 8MB → 16MB; buy a further 8MB → 24MB.

Pages 6–7 give more details of memory options.
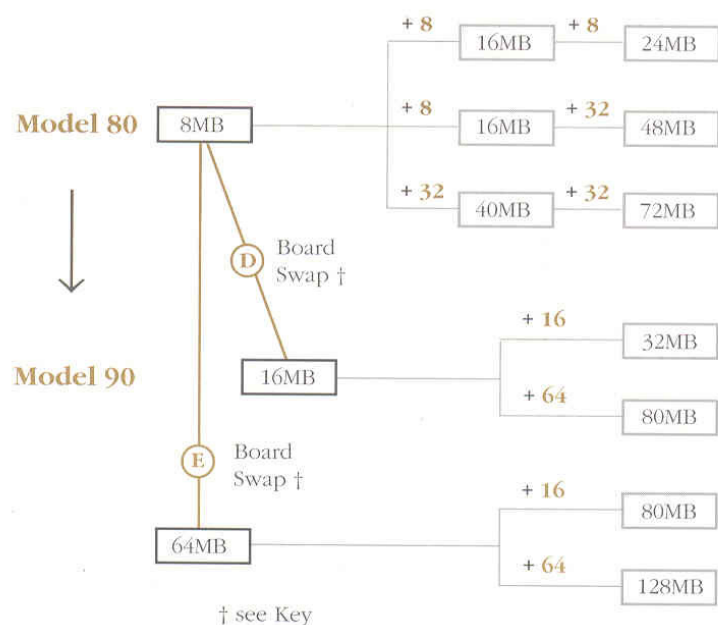
Model 80

8MB

+ 8 → 16MB + 8 → 24MB
+ 8 → 16MB + 32 → 48MB
+ 32 → 40MB + 32 → 72MB

(D) Board Swap †

Model 90

16MB
+ 16 → 32MB
+ 64 → 80MB

(E) Board Swap †

64MB
+ 16 → 80MB
+ 64 → 128MB

† see Key

Key

8, 16, 32, 64 =	8	= 8MB (MS44L-BA)	32	= 32MB (MS44-DA)
Memory Upgrades	16	= 16MB (MS44L-BC)	64	= 64MB (MS44-DC)

			order as
(A) = Board Swap, Model 40 → 80			47XR-AA
(B) = Board Swap, Model 40 → 90	47GAX-C9		47GEX-C9
(C) = Board Swap, Model 40 → 90	47GAX-E9		47GEX-E9
(D) = Board Swap, Model 80 → 90 *	47HAX-C9		47HEX-C9
(E) = Board Swap, Model 80 → 90 *	47HAX-E9		47HEX-E9

* Board Swaps (D) and (E)
each leave 8MB for further use

↑
Board,
without user
licence

↑
Board,
2-user
licence,
Rdb Runtime,
DECnet

Models 10e/30

Thick or thin wire
Ethernet standard

1 Sync Line

Wide Area
Network
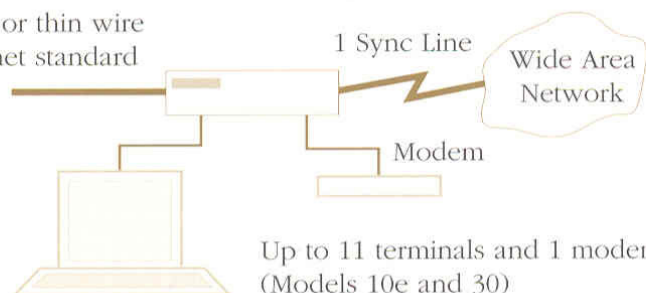
Modem

Up to 11 terminals and 1 modem
(Models 10e and 30)
or, for Model 30, up to 3 terminals
and 5 modems

Options — Model 10e

8 lines asynchronous and 1 line synchronous

Either	RS232/V24	— DSH32-BA
or	RS423/V10	— DSH32-BB
or	RS423/V11	— DSH32-BC

Asynchronous Options — Model 30

|		
Either	8 lines asynchronous (DEC423) (for a system total of 12 asynch. lines: 11 data only; 1 with modem control)	— DHW41-AA
or	4 lines RS232 with modem control option (for a system total of 8 asynch. lines: 3 data only; 5 with modem control)	— DHW41-BA

Synchronous Option — Model 30

1 line sync; includes RS232/V.24 cable   — DSW41-AA

Models 40/80/90

Thick or thin wire
Ethernet standard

2 Sync Lines

Wide Area
Network

Modem

Wide Area
Network
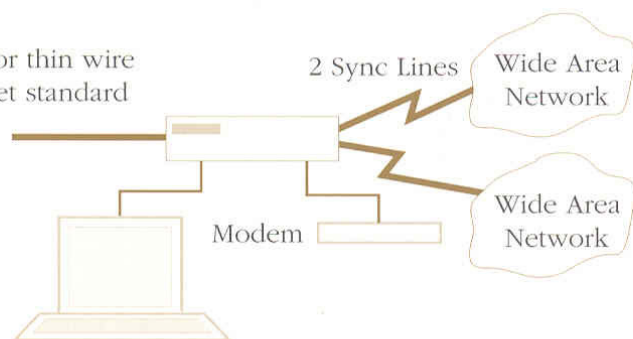
Up to 19 terminals and 1 modem or
up to 3 terminals and 9 modems

Asynchronous Options — Models 40/80/90

Option 1

Either	8 lines asynchronous (DEC423)	— DHW42-AA
or	16 lines asynchronous (DEC423)	— DHW42-BA
or	8 lines asynchronous RS232 with modem control option	— DHW42-CA

Option 2 (upgrade from pre-installed DHW42-AA)

from 8 to 16 lines
asynchronous (DEC423)   — DHW42-UP
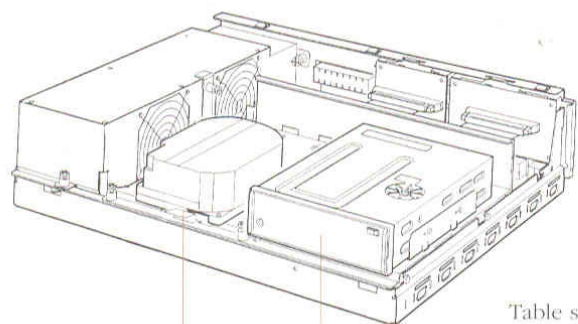
Synchronous Option — Models 40/80/90

2 line synchronous option;
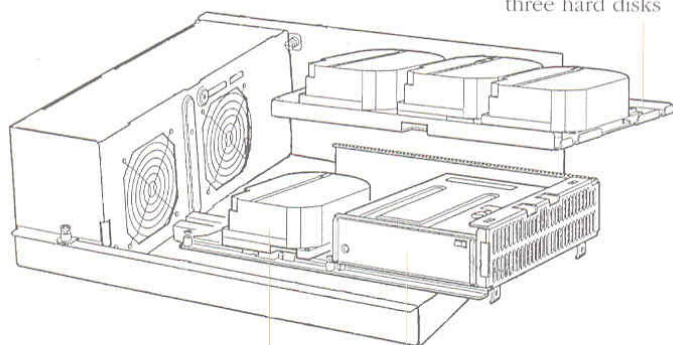RS232/V.24 cable is included   — DSW42-AA

Models 10e/30

Position ①   Position ②

Table shows what can go in positions ① and ②

① \ ②	—	Hard disk	Floppy	Tape	QIC & DAT	CD
—	✓	✓	✓	✓	✓	✓
Hard disk	✓	✓	✓	✓	✓	✓
2 Hard disk	✓	✓	✓	✗	✗	✗
Floppy	✗	✗	✗	✗	✗	✗
Tape	✗	✗	✗	✗	✗	✗
QIC & DAT	✗	✗	✗	✗	✗	✗
CD	✗	✗	✗	✗	✗	✗

Models 40/80/90

Top shelf — can take up to three hard disks

Position ❶   Position ❷ (see Table)

❶ \ ❷	—	Hard disk	Floppy	Tape	QIC & DAT	CD
—	✓	✓	✓	✓	✓	✓
Hard disk	✓	✓	✓	✓	✓	✓
Floppy	✓	✓	✓	✓	✓	✓
Tape	✗	✗	✗	✗	✗	✗
QIC & DAT	✓	✓	✓	✓	✓	✓
CD	✓	✓	✓	✓	✓	✓

Key

Hard disk			Floppy disk			QIC & DAT		
120MB	RZ23L		1·44MB	RX23		320/525MB	TZK10	
209MB	RZ24		2·88MB	RX26		4·0GB	TLZ06 (✗10e)	
245MB	RZ24L							
426MB	RZ25		Tape	95MB	TZ30	CD-Reader	600MB	RRD42 (✗10e)
1·05GB	RZ26 (✗10e)							

(✗10e) = unsupported on Model 10e

Options in SZ12 dual-drive enclosure *

Drive A / Drive B	426MB RZ25	665MB RZ56	1·0GB RZ57	1·35GB RZ58	1·4MB RX23	95MB TZ30	320/525MB TZK10	600MB RRD42
—	SZ12G-XA/XB	SZ12B-XA/XB	SZ12C-XA/XB	SZ12J-XA/XB	SZ12X-LA/LB	SZ12X-HA/HB	SZ12X-EA/EB	✗
426MB RZ25	SZ12G-GA/GB	✗	✗	✗	✗	SZ12G-HA/HB	SZ12G-EA/EB	SZ12G-FA/FB
665MB RZ56	✗	SZ12B-BA/BB	✗	✗	✗	SZ12B-HA/HB	SZ12B-EA/EB	SZ12B-FA/FB
1·0GB RZ57	✗	✗	SZ12C-CA/CB	✗	✗	✗	SZ12C-EA/EB	SZ12C-FA/FB
1·35GB RZ58	✗	✗	✗	SZ12J-JA/JB	✗	✗	SZ12J-EA/EB	SZ12J-FA/FB

* Older combinations, including 332MB (RZ55) and 1·2MB (RX33), are supported but not actively promoted.

Standalone options

DAT — TLZ04-FA/FB — 1·2GB

DAT — TLZ06-FA/FB — 4·0GB

Tape — TZ85-TA — 2·6GB

CD-Reader — RRD42-FA/FB — 600MB

TYPICAL SOFTWARE USED ON MicroVAX

Publishing	Database	Image Processing	Spreadsheet	Communications	Others
DECwrite, WordPerfect™ WPS-PLUS/VMS	dBase™, Oracle™ Rdb, Sybase™	ALL-IN-1 Image DECimage Express	20/20™, DECdecision Lotus 1-2-3™	2780/3780, SNA TCP/IP, DECnet	ALL-IN-1 DECpresent

These represent only a tiny sample. For example, MicroVAX software includes leading CASE tools, development compilers, batch and back-end SQL processors. For more information, consult the VAX/VMS software source book or Softbase on VTX.

Typical Application Areas

Distributed Processing in Banking— branch accounting, to process new accounts and to handle teller operations and automatic teller machines (ATMs)

Distribution — to link remote sales offices, to process orders, to run warehouses, to capture receipts, update inventory and print accurate picking and packing slips
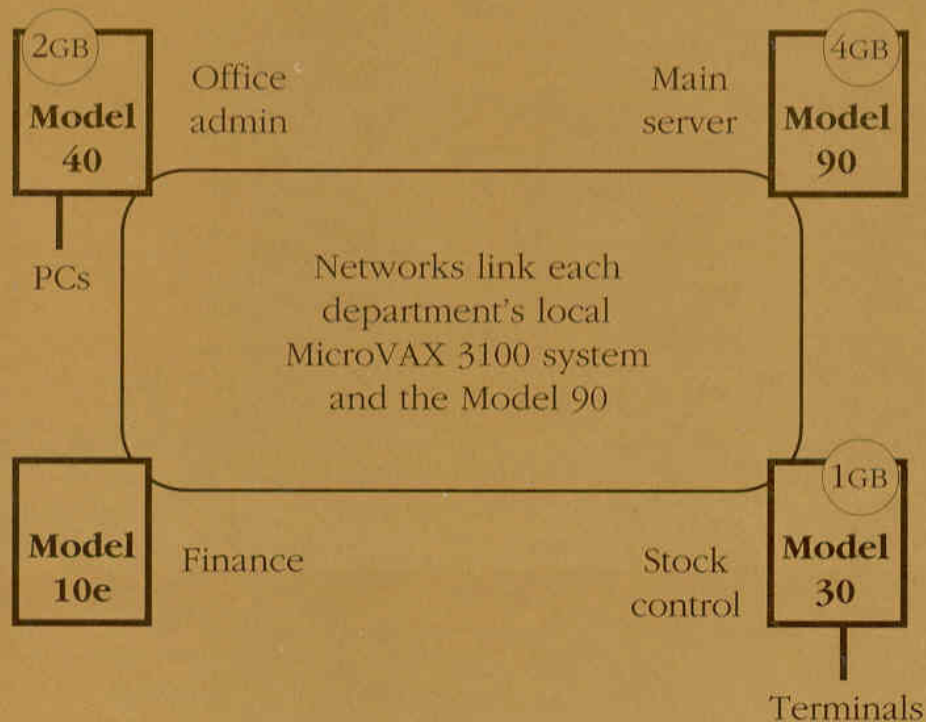
Insurance — to process claims, to perform client accounting, sales analysis and billing, to link remote office locations

Manufacturing — to unify manufacturing systems from shop floor to plant data acquisition, helping towards a paperless manufacturing environment

Retailing — for Sales, Stock, Inventory and Pricing, with after-hours batch communications between branches

Small Businesses — to support the vast majority of needs; over 10,000 applications are available, applications that will also run on any larger VAX as a small business grows.

THE MicroVAX 3100 FAMILY — POWERFUL SYSTEMS FOR DEPARTMENTAL & DISTRIBUTED APPLICATIONS

```
┌─────────┐                                      ┌─────────┐
│ (2GB)   │  Office              Main            │ (4GB)   │
│ Model   │  admin               server          │ Model   │
│  40     │                                      │  90     │
└────┬────┘ ┌──────────────────────────────────┐ └─────────┘
     │      │   Networks link each              │
    PCs     │   department's local              │
            │   MicroVAX 3100 system            │
┌─────────┐ │   and the Model 90                │ ┌─────────┐
│ Model   │ └──────────────────────────────────┘ │ (1GB)   │
│ 10e     │  Finance             Stock           │ Model   │
└─────────┘                      control         │  30     │
                                                 └────┬────┘
                                                      │
                                                  Terminals
```

MICROVAX 3100 CONTACTS

For further information and general support on MicroVAX 3100 products, contact your local Sales Office or Supplier.

Or contact ELS Marketing directly –
Phone (Scotland): +44 292 883264
or DTN 823 - 3264
Electronic Mail:
ELS_MARKETING @ AYO
ELSPBU : : MARKETING

(cover with local contact sticker if appropriate)