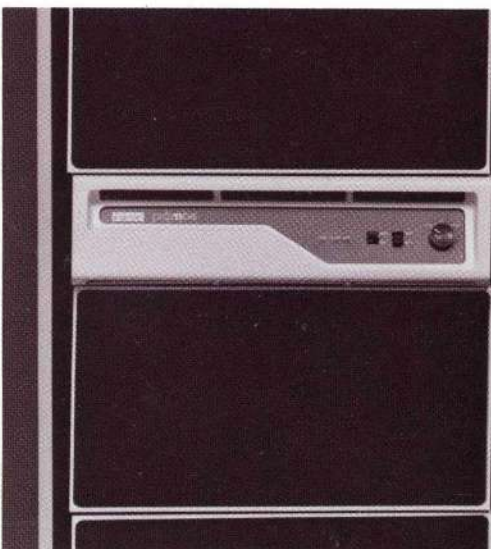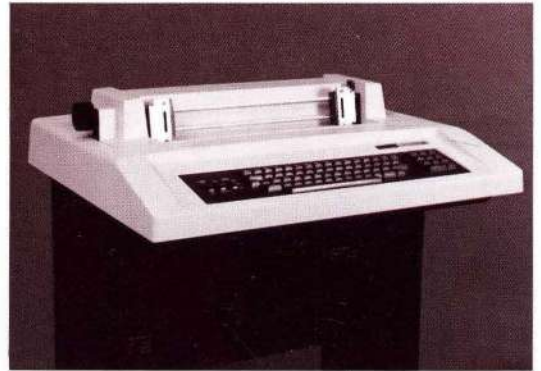DIGITAL EQUIPMENT CORPORATION

pdp11

OEM Hardware and Software Product Summary

digital

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INTRODUCTION

DIGITAL manufactures a wide variety of standard products for the full range of OEM applications.

DIGITAL products and services listed here are more fully described in technical brochures, product bulletins, and the series of PDP-11 handbooks.

Information is given for the options under the following headings:

Option Number

All options should be referred to by the exact Option Number as shown in this product summary. This Option Number is recognized by our internal Order Processing System, and is used to expedite the handling of the many possible combinations.

The first entry is the number for the option, with 115 Vac, 60 cycle power. If a different option number is used for 230 Vac, 50 cycle power, it is shown immediately below, in italics. All PDP-11/45 and PDP-11/70 systems require three phase power.

Description

The basic features and specifications of each option are given.

Prerequisite

Hardware or software needed as a prerequisite for the option is listed. The term "11/CPU" means any PDP-11 central processor unit.

Mounting Code

The mounting codes indicate how the option mounts in a system.

CAB   = Cabinet mounted.
FS   = Free standing unit.
TT   = Table top unit.
PAN   = Panel mounted. Front panel height is $10\frac{1}{2}$ inches (26.67 cm).
SM PAN = Small panel. Front panel height is $5\frac{1}{4}$ inches (13.33cm).
SU   = System Unit. SU mounting assembly is included with the option.
SPC   = Small Peripheral Controller. Option is a module that mounts in an SPC slot. (Quad sized controllers are assumed unless SPC (hex) is shown as the mounting code.)
DF   = Option occupies 2 single DF11 slots in a DD11-B Peripheral Mounting Panel.
CPU   = Mounts in a dedicated CPU slot.
MOD   = Module.
( )   = Option mounts in the same place as the equipment shown within the parentheses.

Some options include 2 separate physical parts and are indicated by use of a plus (+) sign.

Bus Load

The number of loads the option puts on the UNIBUS. There can be a total of 20 bus loads before a DB11-A Bus Repeater is needed.

For processors the figure represents bus loads available.

For options the figure represents bus loads used.

Amps @ +5V

The +5V current required by the option is shown. Parentheses ( ) around the number indicate that the option supplies power.

System Software

The major operating systems that support the option, or have other software available to run the option. This is not a minimum supported system.

CAPS-11	Cassette Programming System
RT-11	Real-Time Single User System
RSX-11S	Core-only Real-Time Operating System
RSX-11M	Small Real-Time Operating System
RSX-11D	Advanced Real-Time Operating System
RSTS/E	Resource Time-Sharing System (Extended)
IAS	Interactive Application System
DBMS	Data Based Management System
RMS	File Management System

PDP-11/03 MICROCOMPUTERS

- 11/03 Central Processor (KD11-F or KD11-J)
- 16-Bit READ/WRITE MOS or Core Memory
- Operator's Console
- ASCII Console Emulator
- Bootstrap Loader
- Line Time Clock
- Automatic Power Fail Detection/Restart Capability
- Single-Level Automatic Priority Interrupt
- Direct Memory Addressing
- Basic Mounting Chassis and Power Supply
  $3^1/_2'' \times 19'' \times 13^1/_2''$
- OEM Basic Diagnostics
- 30-Day Return-to-Factory Warranty

Sub-UNIBUS

Option Number (ital = 230v)	Memory Total	Chassis Maximum	Sub-UNIBUS Slots Available	Mtng Code	Bus Loads Available	Amps @ +5V Available	System Software
11/03-EA	4K	28K	6	$3^1/_2''$ PAN	(15)	(16.2)	RT-11
11/03-EB	(MOS)	(MOS Add-on)					RSX-11S
11/03-FA	4K	28K	4	$3^1/_2''$ PAN	(14)	(11.6)	RT-11
11/03-FB	(Core)	(MOS Add-on)					RSX-11S

PDP-11/03 Options

Option Number	Description	Prerequisite	Mtng Code	Bus Loads	Amps @ +5V	System Software
KEV11	Extended Instructions (EIS) and Floating Point (FIS)	11/03	I.C. (On KD11-F) Or KD11-J	0	—	—

PDP-11V03 MICROCOMPUTERS

- 11/03 Central Processor (KE11-F)
- 16-Bit READ/WRITE MOS Memory (8K Words)
- Dual Drive Floppy Disk (512K Bytes)
- LA36 (EA, ED) or VT52 (AA, AD) Terminal
- Operator's Console
- ASCII Console Emulator
- Bootstrap Loader
- Line Time Clock
- Automatic Power Fail Detection/Restart Capability
- Single-Level Automatic Priority Interrupt
- Direct Memory Addressing
- Mounting Cabinet, Power Supplies, Cables
- OEM Basic Diagnostics
- 30-Day Return-to-Factory Warranty

Option Number (ital = 230v)	Memory Total	Chassis Maximum	Sub-UNIBUS Slots Available	Mtng Code	Bus Loads Available	Amps @ +5V Available	System Software
11V03-AA	8K	16K	2	$25^1/_2''$ CAB	(11)	(11.5)	RT-11
11V03-AD	(MOS)	(MOS Add-on)					
11V03-EA	8K	16K	2	$25^1/_2''$ CAB	(11)	(11.5)	RT-11
11V03-ED	(MOS)	(MOS Add-on)					

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Option Number	Description	Prerequisite	Mtng Code	Bus Loads	Amps @ +5V	System Software
SUB-UNIBUS MEMORY OPTIONS						
MMV11-A	4K words of 16-bit Read/Write core memory. 1.15µs cycle time	11/03	two-11/03 slots	1	7.0	RT-11 RSX11-S
MRV11-AA	512 word, expandable to 4K words, pro-grammable Read-Only Memory (PROM)	11/03	one-11/03 slot	1	2.8	User pro-grammable
MRV11-AC	412 x 4 bit PROM chip, un-programmed	MRV11-AA	I.C.	—	—	—
MSV11-B	4K words of 16-bit Read/Write MOS Memory 550ns access time	11/03	one-11/03 slot	1	0.6	RT-11 RSX11-S
MSV11-CB	16K x 16-bit MOS Read/Write Memory. 390ns access time. 750ns cycle time.	11/03	two-11/03 slots	1	—	RT-11 RSX11-S
SUB-UNIBUS COMMUNICATION OPTIONS						
DLV11	Asynchronous Serial Line Interface. 20 mA and EIA (jumper selectable). 15 Baud Rates (jumper selectable) From 50-9600. Does NOT Provide Modem Control And Does NOT Include Cable.	11/03	one-11/03 slot	1	1.0	RT-11 RSX-11S
SUB-UNIBUS INTERFACE OPTIONS						
ADV11-A	12-bit, 16 channel single ended (8 channel differential), A/D Converter. Input ranges: ±5.12V, 0-10.24V. Sample and hold circuitry. 50 µs conversion time.	11/03	two-11/03 slots	1	—	RT11
AAV11-A	12-bit, 4 channel (buffered), D/A converter. Output ranges: ±2.56V, ±5.12V, ±10.24V, 0-5.12V, 0-10.24V.	11/03	two-11/03 slots	1	—	RT11
DRV11	General purpose 16-bit in/16-bit out interface module. Diode clamped inputs, latched driver outputs, TTL levels, cable connectors. Does NOT include cables.	11/03	one-11/03 slots	1	0.9	—
DRV11-B	General purpose 16-bit in/16-bit out DMA interface module. 250K words/sec transfer rate, (cycle-steal) 500K word/sec-burst. Does NOT include cables.	11/03	two-11/03 slots	1	—	—
DRV11-P	Interface foundation module for custom interfaces. Includes Sub-UNIBUS interface and wire-wrappable area for customer interfacing.	11/03	two-11/03 slots	1	—	—
KWV11-A	Programmable Crystal Clock with frequencies from 100 Hz to 1 MHz plus 60 cycle and external input.	11/03	two-11/03 slots	1	—	RT11

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
SUB-UNIBUS MASS STORAGE OPTIONS						
RXV11-AA *RXV11-AD*	128K Word (single-drive) Flexible Disk System. 24μs/byte transfer rate, 488 ms average access time	11/03	PAN and one-11/03 slot	1	1.5 (interface)	RT-11 RSX-11S
RXV11-BA *RXV11-BD*	256K Word (dual-drive) Flexible Disk System. 24μs/byte transfer rate, 488 ms average access time	11/03	PAN and one-11/03 slot	1	1.5 (interface)	RT-11 RSX-11S
SUB-UNIBUS LINE PRINTERS						
LAV11-PA *LAV11-PD*	180 CPS Parallel Printer. 3″ to 132 Column width, 96 Character ASCII set	11/03	FS and one-11/03 slot	1	(interface)	RT-11 RSX-11S
LA180-CA *LA180-CD*	Same LAV11 except serial I/O revision 20 ms interface	11/CPU and DLV11	FS and one-11/03 slot	1	—	ALL
LA180-EA *LA180-ED*	Same as LA180-C except EIA interface	11/CPU and DLV11	FS and one-11/03 slot	1	—	ALL
SUB-UNIBUS EXPANSION OPTIONS						
BA11-ME *BA11-MF*	11/03 Expander box Includes power supply (18A @ +5v, 2.5A @ +12) and H9270 Backplane. Does NOT include expansion cables.	11/03	3½″ PAN	0	18.0	—
BC03L-05	Local Serial I/O Cable, EIA for 11/03	—	—	—	—	—
BC05C-25	Serial I/O Cable, EIA for 11/03	—	—	—	—	—
BC05M-04	Serial I/O Cable, 20 mA for 11/03	—	—	—	—	—
BC07D-10	Parallel I/O Cable, 10 foot, for 11/03	—	—	—	—	—
BC07D-15	Parallel I/O Cable, 15 foot, for 11/03	—	—	—	—	—
BC07D-25	Parallel I/O Cable, 25 foot, for 11/03	—	—	—	—	—
BC08R-01	Parallel I/O Maintenance Cable for 11/03	—	—	—	—	—
BCV1B-04	4-foot Sub-UNIBUS EXPANSION cable assembly. Required for connecting 11/03 to first expander box (BA11-ME, MF).	11/03	one-11/03 slot	—	—	—
BCV1B-06	Same as -04 except 6-feet long.	11/03	one-11/03 slot	—	—	—
BCV1A-10	10-foot Sub-UNIBUS EXPANSION cable assembly. Required for connecting first expander box to second expander box.	BA11-ME BA11-MF	one-11/03 slot	—	—	—
H909-C	5¼″ x 19″ Expander Box includes H0341. Space for DDV-11-B. Does NOT include Power supply.	—	SM PAN	—	—	—
H984-BA *H984-BD*	25½″ Cabinet (11V03 style) space for 2-3½″ boxes + 1 — 10½ PAN. Includes power controls Does NOT include Fans.	—	25½″ CAB	—	—	—
REV11-A	Floppy Disk Boot, MOS Memory refresh system diagnostics. BOS terminator	11/03	one-11/03 slot	1	1.6	RT-11 RSX11-S
REV11-C	Same as above, w/o bus terminator. For use in systems with DMA devices	11/03	one-11/03 slot	1	1.6	RT-11 RSX11-S
TEV11	Sub-UNIBUS TERMINATOR Required if expanding beyond 11/03 basic box. NOT required if an REV11-A is included in configuration.	BA11-ME BA11-MF	one-11/03 slot	1	0.5	—

PDP-11/04 COMPUTERS

- 11/04 Central Processor (KD11-D)
- 16-Bit Read/Write MOS Memory
- Operators Console
- ASCII Console Emulator
- Bootstrap Loader
- Automatic ROM Diagnostic
- Automatic Power Fail Detection/Restart Capability
- 4-Level Automatic Priority Interrupt
- Direct Memory Addressing
- Basic Mounting Chassis and Power Supply
- OEM Basic Diagnostics

5¹/₄″ (13.3cm) High Mounting Box (5¹/₄″ x 19″ x 25″ or 13.3cm x 48.3 cm x 63.5cm) With MOS Memory

Option Number (ital = 230v)	Memory Total Included		Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ +5V Available	System Software
11/04-BC 11/04-BD	8K	(MOS)	28K	0	7	SM PAN	(16)	(16)	CAPS-11 RT-11 RSX-11S RSX-11M
11/04-DC 11/04-DD	16K	(MOS)	28K	0	7	SM PAN	(16)	(15)	RT-11 RSX-11S RSX-11M
11/04-LC 11/04-LD	28K	(MOS)	28K	0	6	SM PAN	(15)	(13)	RT-11 RSX-11S RSX-11M

5¹/₄″ (13.3cm) High Mounting Box (5¹/₄″ x 19″ x 25″ or 13.3cm x 48.3cm x 63.5cm) With Core Memory

Option Number (ital = 230v)	Memory Total Included		Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ +5V Available	System Software
11/04-FC 11/04-FD	8K	(CORE)	28K	0	6	SM PAN	(16)	(12)	RT-11 RSX-11S RSX-11M
11/04-HC 11/04-HD	16K	(CORE)	28K	0	6	SM PAN	(16)	(12)	RT-11 RSX-11S RSX-11M
11/04-MC 11/04-MD	28K	(CORE)	28K	0	4	SM PAN	(15)	(8)	RT-11 RSX-11S RSX-11M

10¹/₂″ (26.6cm) High Mounting Box (10¹/₂″ x 19″ x 25″ or 26.6cm x 48.3cm x 63.5cm) With MOS Memory

Option Number (ital = 230v)	Memory Total Included		Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ +5V Available	System Software
11/04-DH 11/04-DJ	16K	(MOS)	28K	3	7	PAN	(16)	(40)	RT-11 RSX-11S RSX-11M
11/04-LH 11/04-LJ	28K	(MOS)	28K	3	6	PAN	(15)	(38)	RT-11 RSX-11S RSX-11M

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10¹/₂″ (26.6cm) High Mounting Box (10¹/₂″ x 19″ x 25″ or 26.6cm x 48.3cm x 63.5cm) With Core Memory

Option Number (ital = 230v)	Memory Total Included		Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ +5V Available	System Software
11/04-HH *11/04-HS*	16K	(CORE)	28K	3	6	PAN	(16)	(37)	RT-11 RSX-11S RSX-11M
11/04-MH *11/04-MJ*	28K	(CORE)	28K	3	4	PAN	(15)	(33)	RT-11 RSX-11S RSX-11M

PDP-11/04 OPTIONS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Loads	Amps @ +5V Available	System Software
H775-AA *H775-AB*	Battery Back-Up	11/04	external	—	—	—
KY11-LB	Programmer Console	11/04	SPC	1	(3)	—

PDP-11/05 COMPUTERS

- 11/05 Central Processor (KD11-B)
- 16-Bit Read/Write Core Memory
- Programmer Console
- Asynchronous Serial Interface for Console Terminal
- Line Frequency Clock (KW11-L)
- Automatic Power Fail Detection/Restart Capability
- 4-Level Automatic Priority Interrupt
- Direct Memory Addressing
- Rack Mountable Slides
- Basic Mounting Chassis and Power Supply
- OEM Basic Diagnostics (QJ115-AB)
- System Schematics

5¼" (13.3cm) High Mounting Box (19" (48.3cm) wide, 20" (50.8cm) deep)

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ −5V Available	System Software
11/05-KA 11/05-KB	4K	4K	—	4	SM PAN	(18)	(6)	CAPS-11 RT-11 RSX-11S RSX-11M
11/05-LA 11/05-LB	8K	8K	—	4	SM PAN	(18)	(6)	CAPS-11 RT-11 RSX-11A RSX-11M

10½" (26.6cm) High Mounting Box (19" (48.3cm) wide, 23" (58.4cm) deep)

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ +5V Available	System Software
11/05-NC 11/05-ND	8K	28K	3	—	PAN	(18)	(15)	CAPS-11 RT-11 RSX-11S RSX-11M

10½" (26.6cm) High Mounting Box (19" (48.3cm) wide, 25" (63.5cm) deep)

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ +5V Available	System Software
11/05-SC 11/05-SD	16K	28K	3	3	PAN	(18)	(25)	CAPS-11 RT-11 RSX-11S RSX-11M

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PDP-11/05 OPTIONS

Option Number	Description	Prerequisite	Mtng Code	Bus Loads	Amps @ +5V Available	System Software
KE11-A	Extended Arithmetic Element (EAE). Provides signed integer multiply and divide, multiple shifts, and normalization.	11/05	SU	1	4.0	RT-11 RSX-11S RSX-11M
KE11-B	Hex-mounted Extended Arithmetic Element (EAE). Provides signed integer multiply and divide, multiple shifts, and normalization.	11/04, 11/05	SPC (hex)	2	4.0	RT-11 RSX-11S RSX-11M

PDP-11/05 DOCUMENTATION

DEC-11-H5SPK-A-D	PDP-11/05 Hardware Manual Set

PDP-11/34 COMPUTERS

- 11/34 Central Processor
- 16 Bit Read/Write Parity MOS or Core Memory
- Operators Console
- ASCII Console Emulator
- Bootstrap Loader
- Automatic ROM Diagnostic
- Automatic Power Fail Detection/Restart
- Memory Management
- Extended Instruction Set (EIS)
- Direct Memory Access (DMA)
- Expandable to 124K words
- 4-Level Automatic Priority Interrupt
- 8-Internal general purpose Registers
- Basic Mounting Chassis and Power Supply
  5$^1/_4$″ x 19″ x 25″   (13.3 cm x 48.3 cm x 63.5 cm)
  10$^1/_2$″ x 19″ x 25″   (26.7 cm x 48.3 cm x 63.5 cm)
- OEM Basic Diagnostics
- 30 day Return to factory Warranty

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	HQ SPC Slots Available	Mtng Code	Bus Loads Used	Amps @ +5V Available	System Software
11/34-DC 11/34-DD	16K(M)*	64K	0	3/3	SM PAN	4	10	RT-11 RSX-11S RSX-11M RSTS/E
11/34-DH 11/34-DJ	16K(M)	124K	3	3/3	PAN	4	34	RT-11 RSX-11S RSX-11M RSTS/E
11/34-DM 11/34-DN	16K(M)	124K	3	3/2	PAN	5	32	RT-11 RSX-11S RSX-11M RSTS/E
11/34-HC 11/34-HD	16K(C)*	32K	0	3/2	SM PAN	4	7	RT-11 RSX-11S RSX-11M RSTS/E
11/34-HH 11/34-HJ	16K(C)	64K	3	3/2	PAN	4	32	RT-11 RSX-11S RSX-11M RSTS/E
11/34-HM 11/34-HN	16K(C)	64K	3	2/2	PAN	5	30	RT-11 RSX-11S RSX-11M RSTS/E
11/34-LC 11/34-LD	32K(M)	64K	0	3/2	SM PAN	5	8	RT-11 RSX-11S RSX-11M RSTS/E
11/34-LH 11/34-LJ	32K(M)	124K	3	3/2	PAN	5	32	RT-11 RSX-11S RSX-11M RSTS/E

* M-MOS
  C-CORE

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Loads Used	Amps @ +5V Available	System Software
11/34-LM 11/34-LN	32K(M)	124K	3	2/2	PAN	6	30	RT-11 RSX-11S RSX-11M RSTS/E
11/34-MC 11/34-MD	32K(C)	32K	0	3Q	SM PAN	5	3	RT-11 RSX-11S RSX-11M RSTS/E
11/34-MH 11/34-MJ	32K(C)	64K	3	3Q	PAN	5	28	RT-11 RSX-11S RSX-11M RSTS/E
11/34-MN 11/34-MN	32K(C)	64K	3	2Q	PAN	6	26	RT-11 RSX-11S RSX-11M RSTS/E

PDP-11F34 COMPUTERS

- PDP 11/34 Central Processor (10½ in.) 26.7cm. chassis
- 16K words of parity MOS or CORE memory
- Bootstrap (M9301)
- Clock (DL11W)
- LA36 Terminal and Control
- Dual-Drive RX11-B Subsystem
- H960CA Cabinet

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Loads Used	Amps @ +5V Available	System Software
11F34 AA 11F34 AB 11F34 AD	16K(M)	124K	3	3/1	PAN CAB	7	7.3	RT-11 RSX-11S
11F34 BA 11F34 BB 11F34 BD	16K(C)	64K	3	2/1	PAN CAB	7	5.3	RT-11 RSX-11S

PDP-11S34 COMPUTERS

—PDP 11/34 Lm (or mm) Central Processor with
- 26.7 cm (10½") chassis
- 32K words of MOS or CORE parity memory
- Serial line interface (DL11W)
- Memory Management
- Extended Instruction Set
- Auto Load Bootstrap (M9301)
- Clock (DL11W)

—Controller for up to 8 RK06 drives (RK611)

—Dual RK06 Drives in separate pedestal cabinets

—LA36 DECwriter and control

—System cabinet (H960-CA)

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Loads Used	Amps @ +5V Available	System Software
11S34 AA *11S34 AB*	32K(M)	64K	1	4/3	PAN CAB 2 FS	7	15	RT-11 RSX-11M, S RSTS/E
11S34 BA	32K(C)	32K	1	2/3	PAN CAB 2 FS	7	11	RT-11 RSX-11M, S RSTS/E

PDP-11T34 COMPUTERS

- PDP 11/34 Central Processor, 26.7 cm (10½ in.) Chassis
- 32K words of parity MOS or CORE memory
- Bootstrap (M9301)
- Line Frequency Clock (DL11W)
- LA36 Terminal and serial line control (DL11W)
- Dual Drive RK11/RK05J Subsystem
- H960C Cabinet

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	HQ SPC Slots Available	Mtng Code	Bus Loads Used	Amps @ +5V Available	System Software
11T34-AA *11T34-AB*	32K(M)	124K	2	2/2	PAN CAB	7	21	RT-11 RSX-11S RSX-11M RSTS/E
11T34-AC *11T34-AD*	32K(M)	124K	2	2/2	PAN CAB	7	21	RT-11 RSX-11S RSX-11M RSTS/E
11T34-BA *11T34-BB*	32K(C)	64K	2	2 Q	PAN CAB	7	19	RT-11 RSX-11S RSX-11M RSTS/E
11T34-BC *11T34-BD*	32K(C)	64K	2	2 Q	PAN CAB	7	19	RT-11 RSX-11S RSX-11M RSTS/E
11T34-CA *11T34-CB*	32K(M)	124K	2	2/2	PAN CAB	7	21	RT-11 RSX-11S RSX-11M RSTS/E
11T34-DA *11T34-DB*	32K(M)	124K	2	2/2	PAN CAB	7	21	RT-11 MU BASIC
11T34-EA *11T34-EB*	32K(M)	124K	2	2/2	PAN CAB	7	21	RSX-11
11T34-FA *11T34-FB*	32K(M)	124K	2	2/2	PAN CAB	7	21	RSTS/E
11T34-HA *11T34-HB*	32K(C)	64K	2	2 Q	PAN CAB	7	19	RT-11
11T34-JA *11T34-JB*	32K(C)	64K	2	2 Q	PAN CAB	7	19	RT-11 MU BASIC
11T34-KA *11T34-KB*	32K(C)	64K	2	2 Q	PAN CAB	7	19	RSX-11M

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	HQ SPC Slots Available	Mtng Code	Bus Loads Used	Amps @ +5V Available	System Software
11T34-LA *11T34-LB*	32K[C]	64K	2	2 Q	PAN CAB	7	19	RSTS/E

Note: PDP-11/T34 maud P series includes 1—RK05J and 1—RK05F instead of 2—RK05J's

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	HQ SPC Slots Available	Mtng Code	Bus Loads Used	Amps @ +5V Available	System Software
11T34-MA *11T34-MB*	32K[M]	124K	2	2/2	PAN CAB	8	21	RT11 RSX11S, M RSTS/E
11T34-PA *11T34-PB*	32K[C]	64K	2	2 Q	PAN CAB	8	19	RT11 RSX11S, M RSTS/E

Option Number	Description	Prerequisite	Mtng Code	Bus Loads	Amps @ +5V	System Software
MS11-JP	16K word parity MOS memory, 700Nsec access time	11/04 11/34	1 HEX SPC	1	2	—
MM11-DP	16K word parity CORE memory, 575Nsec access time	11/34	2 HEX SPC	1	4	—
M7850	Parity control for each DD11-C, D with MS11-JP or MMLL-DP	MS11-JP 11/04 or MM11-DP 11/34	DOUBLE HEIGHT	1	1	—
M9301-YA	Oper. Boot, ASCII console, Diagnostic	11/04 11/34	DOUBLE HEIGHT	1	2	—
M9301-YB	ASCII Boot and Console Diagnostic	11/04 11/34	DOUBLE HEIGHT	1	2	—
DL11-W	Serial line controller and line frequency clock	11/04 11/34	1 QUAD SPC	1	3	—
KY11-LB	Programmers octal keypad console	11/04 11/34	1 QUAD SPC	1	3	—
H775-A	MOS battery backup 5¼" chassis only	11/04-11/34 MS11-JP	SMALL PAN	—	—	—
FP11-AU	Floating point processor with 32 bit and 64 bit accuracy, instruction set compatible with 11/45 and 11/70	11/34	1 HEX SPC	1	7	—
DD11-C	Backpanel providing 2 HEX and 2 QUAD SPC slots	11/34	1 SU	—	—	—
DD11-D	Backpanel providing 7 HEX and 2 QUAD SPC slots	11/34	2 SU	—	—	—
FP11-AU	Floating Point Processor, 32 and 64-bit Single & Double precision	11/34	HEX	—	7a	—
DD11-C	Backpanel supplying 2 HEX and 2 QUAD SPC slots	11/04 11/34	SU	—	—	—
DD11-D	Backpanel supplying 7 HEX and 2 QUAD SPC slots	11/04 11/34	2 SU	—	—	—
MM11-CP	8K word, parity, CORE memory, 575 Nsec access time	11/04	1 HEX SPC	1	3	—
MS11-FP	8K word, parity, MOS memory, 700 Nsec cycle time	11/04	1 HEX SPC	1	1.3	—

PDP-11/35 COMPUTERS

- 11/35 Central Processor (KD11-A)
- 16-bit Read/Write Core Memory
- Programmer Console
- Automatic Power Fail Detection/Restart Capability
- 4-Level Automatic Priority Interrupt
- Rack Mountable Box with Slides and Power Supply or Standard Cabinet and Power Supply
- Pre-wired Module Slots for the following options:

  Line Frequency Clock (KW11-L)

  Extended Instruction Set (EIS) Unit including Signed Integer, Multiply and Divide (KE11-E)

  Floating Point (FIS) Unit (KE11-F)

  Memory Management Unit (KT11-D)

  Stack Limit Unit (KJ11-A)

  Maintenance Option (KM11-A)
- OEM Basic Diagnostics (QJ116-AB)
- System Schematics

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ +5V Available	System Software
11/35-SE 11/35-SF	16K Parity	40K	1	1	PAN	(17)	(24.8)	RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D RSTS/E

*11/35-JE (JF) consists of a CPU mounting box (PAN) and a memory mounting box (SM PAN).

Standard Cabinet (H960-C) Mounted

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ +5V Available	System Software
11/35-FC 11/35-FD	28K Parity	64K	5	1	CAB	(16)	(43.0)	RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D RSTS/E

PDP-11/35 OPTIONS

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V Available	System Software
KE11-E	Extended Instruction Set (EIS) option. Provides extended manipulation of fixed point numbers, signed integer multiply and divide, and long shifts.	11/35	(11/35)	—	—	RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D RSTS/E
KE11-F	Floating Point (FIS) option. Enables faster calculations, floating point add, subtract, multiply and divide.	KE11-E	(11/35)	—	—	RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D RSTS/E

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
KJ11-A	Stack Limit option. Permits a soft stack limit violation.	11/35	(11/35)	—	—	RSX-11M RSX-11D RSTS/E
KT11-D	Memory Management option. Permits access to 124K words of memory and provides protection and relocation. Includes KJ11-A.	11/35	(11/35)	—	—	RSX-11M RSX-11D RSTS/E

			Mtng Code	Bus Load	Amps @ +5V	System Software

PDP-11T35 SYSTEM

- 11/35 Control Processor (KD11-A)
- 32K Word Parity Memory
- Programmer Console
- Automatic Power Fail Detection/Restart Capability
- Four-level Automatic Priority Interrupt
- Line Frequency Clock (KW11-L)
- DECwriter II Console Terminal (LA36-CE)
- Memory Management Unit (KT11-D)
- Terminal Control (DL11-A)
- Dual Cartridge Disk and Control (RK11J-D)
- Two Cartridge Disks (RK05-J)
- Bootstrap Loader (BM873-4A)

32K WORD MEMORY SYSTEMS

Option Number (ital = 230v)	Memory	Chassis Maximum	Sub-UNIBUS Slots	SPC Slots	Mtng Code	Bus Load	Amps @ -5V Available	System Software
11T35-AA	32K	64K	3	3	2 CAB	(12)	40	RT-4
11T35-AB	Parity							DOS/BATCH
								RSX-11M
								RSX-11D
								RSTS/E

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PDP-11/45 COMPUTERS

- 11/45 Central Processor (KB11-A or -D)
- 32K Parity Core Memory—16-Bit Read/Write
- Programmer Console
- Automatic Power Fail Detection/Restart Capability
- 4-Level Automatic Priority Interrupt
- Hardware Multiply, Divide, and Extended Instruction Set
- DECwriter II Console Terminal (LA36-CE)
- Terminal Control (DL11-A)
- Standard Cabinet and Power Supply
- Pre-wired Module Slots for the Floating Point Processor (FP11-B or -C)*
- Line Frequency Clock (KW11-L)
  Memory Management Unit (KT11-C or -D)
- Up to 32K Words MOS Memory
- OEM Basic Diagnostics
- System Schematics

32K WORD MEMORY SYSTEMS

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ −5V Available	System Software
11/45-BW 11/45-BY	32K Parity Core	32K	1	1	CAB	(17)	(14.9)	RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D IAS
11/45-DW 11/45-DY	32K Parity Core	32K	1	1	CAB	(16)	(14.9)	RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D RSTS/E IAS

*FP11-B Floating Point Processor is available with the—11/45-BW, BY only.
 FP11-C Floating Point Processor is available with the—11/45-DW, DY only.

PDP-11/55 COMPUTERS

- 11/55 Central Processor (KB11-D)
- 16K or 32K Semiconductor or Core Memory—16-Bit Read/Write
- Programmer Console
- Automatic Power Fail Detection/Restart Capability
- 4-Level Automatic Priority Interrupt
- Hardware Multiply, Divide, and Extended Instruction Set
- DECwriter II Console Terminal (LA36-CE)
- Terminal Control (DL11-A)
- Standard Cabinet and Power Supply
- Pre-wired Module Slots for FP11-C Floating Point Processor
- Bootstrap (BM873-YB)
- Line Frequency Clock (KW11-L)
  Memory Management Unit (KT11-CD)
- Up to 32K Words of Bipolar Memory in 4K increments
- OEM Basic Diagnostics
- System Schematics

16K WORD MEMORY SYSTEMS

Option Number (Ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ +5V Available	System Software
11/55-BA 11/55-BB	32K Parity Bipolar	32K	3	2	CAB	(15)	(11.5)	RT-11 RSX-11M RSX-11D IAS FORTRAN IV PLUS
11/55-BC 11/55-BD	16K Parity Core and 16K Parity Bipolar	32K	1	2	CAB	(12)	(11.5)	RT-11 RSX-11M RSX-11D RSTS/E IAS FORTRAN IV PLUS

PDP-11T55 SYSTEM

- 11/55 Central Processor (KB11-D)
- 32K Word Memory
- Programmer Console
- Automatic Power Fail Detection/Restart Capability
- 4-Level Automatic Priority Interrupt
- Hardware Multiply, Divide, and Extended Instruction Set
- DECwriter II Console Terminal (LA36-CE)
- Terminal Control (DL11-A)
- Standard Cabinet and Power Supply
- FP11-C Floating Point Processor
- Memory Management Unit (KT11-CD)
- Up to 32K Words of Bipolar Memory in 16K Increments
- OEM Basic Diagnostics
- System Schematics
- Dual Cartridge Disk and Control (RK11J-D)
- Two Cartridge Disks (RK05-J)

16K WORD MEMORY SYSTEMS

Option Number (ital = 230v)	Memory Total Included	Chassis Maximum	Sub-UNIBUS Slots Available	SPC Slots Available	Mtng Code	Bus Load	Amps @ −5V Availiable	System Software
11T55-BA *11T55-BB*	32K Parity Bipolar	64K	2	2	2 CAB	(13)	(7.5)	RT-11
11T55-BC *11T55-BD*	16K Parity Bipolar and 16K Parity Core	64K	0	2	2 CAB	(11)	(7.5)	RSX-11M RSX-11D IAS FORTRAN IV PLUS RSTS/E

FLOATING POINT OPTIONS

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
FP11-B	Floating Point Processor. Performs hardware operations on 32-bit and 64-bit floating point numbers as well as integer to floating conversions.	11/45 or 11/70	(11/45 or 11/70)	—	—	RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D RSTS/E IAS
FP11-C	Floating Point Processor. Performs hardware operations on 32-bit and 64-bit floating point numbers as well as integer to floating conversions.	11/55 or 11/70	(11/55 or 11/70)	—	—	RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D RSTS/E IAS

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PDP-11/70 COMPUTERS

- 11/70 Central Processor (KB11-B) with Hardware Memory Management
- 1K Word (2K byte*) Parity Bipolar Cache Memory
- 64K Word (128K byte*) Parity Core Memory (MJ11-AA, -AB plus MJ11-AE, -AF)
- Bootstrap/Diagnostic Loader (M9301-YC)
- Line Frequency Clock (KW11-L)
- DECwriter II Console Terminal (LA36-CE)
- Terminal Control (DL11-A)
- 2 Cabinets (1 for the Central Processor and 1 for Core Memory)
- Pre-Wired Module Slots for the following options:
  Floating Point Processor (FP11-C)
  4 High-Performance Mass Storage Control Units for RW P04, RWS03, RWS04, TWU16
- OEM Basic Diagnostics
- System Schematics

BASIC PROCESSOR OPTIONS

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
CLOCKS						
KW11-L	Line Frequency Real-Time Clock. Divides time into intervals of 16⅔ msec (20 msec at 50 Hz line frequency). Mounts in a dedicated CPU slot.	11/35 or 11/45	(CPU)	1	0.8	RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D RSTS/E IAS
KW11-P	Programmable Real-Time Clock. Program selectable inputs of 100 kHz, 10kHz, line frequency or external signal.	11/CPU	SPC	1	1.0	DOS/BATCH RSX-11M RSX-11D RSTS/E
MEMORY						
MF11-L	8K word core memory and control with expansion capability to 24K (by addition of MM11-Ls or MM11-LKs). 900 nsec cycle time. Not compatible with BA11-ES box.	11/CPU (not 11/70)	2SU	1	3.4	(all)
MF11-LP	8K word parity core memory and control with expansion capability to 24K (by addition of MM11-LPs). 900 nsec cycle time. Not compatible with BA11-ES box.	11/CPU (not 11/70)	2SU	2	4.8	RSX-11M RSX-11D RSTS/E IAS
MF11-UB	32K word core memory and control. 980 nsec cycle time. Not compatible with BA11-ES box.	11/35 or 11/45	2SU	2	11.5	CAPS-11 RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D IAS

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Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ −5V	System Software
MF11-UC	64K word core memory and control. 980 nsec cycle time. Not compatible with BA11-ES box.	11/35 or 11/45	4SU	4	23.0	CAPS-11 RT-11 DOS-BATCH RSX-11A RSX-11M RSX-11D IAS
MF11-UP	16K word parity core memory and control with expansion capability to 32K (by addition of MM11-UP). 980 nsec cycle time. Not compatible with BA11-ES box.	11/CPU (not 11/70)	2SU	2	7.3	RSX-11M RSX-11D RSTS/E IAS
MF11-UR	32K word parity core memory and control. 980 nsec cycle time. Not compatible with BA11-ES box.	11/35 or 11/45	2SU	3	12.7	RSX-11M RSX-11D RSTS/E IAS
MF11-US	64K word parity core memory and control. 980 nsec cycle time. Not compatible with MA11-ES box.	11/35 or 11/45	4SU	6	25.4	RSX-11M RSX-11D RSTS/E IAS
MJ11-AA MJ11-AB	32K word parity core memory unit with expansion capability to 128K words (by addition of MJ11-AEs). 1 usec cycle time.	11/70	(11/70) or (MJ11-AC, -AD)	—	—	RSX-11D RSTS/E IAS
MJ11-AC MJ11-AD	128K word parity core memory system. Includes cabinet, power supplies and control. Expansion capability to 512K words (by addition of up to three MJ11-AGs (AHs) or MJ11-AAs (ABs)). 1 usec cycle time.	11/70	CAB	—	—	RSX-11D RSTS/E IAS
MJ11-AE	32K words parity expander core memory. Mounts in MJ11-AA, -AB. 1 usec time.	11/70 or MJ11-AA, -AB	(11/70) or (MJ11-AA, -AB)	—	—	RSX-11D RSTS/E IAS
MJ11-AG MJ11-AH	128K word parity core memory expansion frame. Includes power supplies and control. 1 usec cycle time.	11/70 or MJ11-AC, -AD	(MJ11-AC, -AD)	—	—	RSX-11D RSTS/E IAS
MJ11-BA MJ11-BB	64K word parity core memory unit with expansion capability to 256K words (by addition of MJ11-BE) 1.2Msec cycle time.	11/70	MJ11-BC MJ11-BD MJ11-BG MJ11-BH	—	—	RSX-11D RSTS/E IAS
MJ11-BC MJ11-BD	256K word parity core memory system. Includes cabinet, power supplies and control. Expansion capacity to 1025K words (by addition of up to three MJ11-BA's (BB's) 1.2Msec cycle time.	11/70	CAB	—	—	—
MJ11-BG MJ11-BH	256 word parity core memory unit. 1.2Msec cycle time.	11/70	MJ11-BC MJ11-BD MJ11-BG MJ11-BH	—	—	—
MJ11-BE	64K word parity core memory. Mounts in MJ11-AA-AB. 1.2Msec cycle time.	11/70V MJ11-BA MJ11-BB MJ11-BC MJ11-BD MJ11-BG MJ11-BH	—	—	—	—

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ —5V	System Software
MM11-CP	8K word parity core memory	11/04 or 11/34	1 HEX SPC PLUS 1 QUAD SPC	3	—	—
MM11-DP	16K word core memory.	11/34 or 11/04	2 HEX SPC	1	4	—
MM11-UP	16K word parity expander core memory. Mounts in MF11-UP. 980 nsec cycle time.	MF11-UP	(MF11-UP)	1	5.4	RSX-11M RSX-11D RSTS/E IAS
MMV11-A	4K x 16 word core memory.	—	—	—	—	—
MRV11-AA	4K x 16 word core memory.	—	—	—	—	—

MEMORY CONVERSION KIT

FM11-U	16K sense memory conversion kit.	—	—	—	—	—

SEMICONDUCTOR MEMORY

MS11-AP	4K word bipolar memory. 300 nsec cycle time.	MS11-CC	(11/55)	—	—	CAPS-11 RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D IAS
MS11-CC	Bipolar Memory Control. Controls up to four MS11-AP memories.	11/45	(11/55)	1	—	(all)
MS11-FP	8K word parity MOS memory.	11/04 or 11/34	1 HEX SPC	1	2	—
MS11-JP	16K word parity MOS memory.	11/04 or 11/34	2 HEX SPC	1	4	—
MS11-BC	First MOS Memory Control. Controls up to four MS11-BR or MS11-BT memories.	11/45	(11/45)	1	—	(all)
MS11-BD	Second MOS Memory Control. Controls up to four additional MS11-BR or MS11-BT memories.	MS11-BC	(11/45)	1	—	(all)
MS11-BR	4K word MOS memory. 495 nsec cycle time.	MS11-BC	(11/45)	—	—	CAPS-11 RT-11 DOS/BATCH RSX-11A RSX-11M RSX-11D IAS
MS11-BT	4K word MOS memory with byte parity. 495 nsec cycle time.	MS11-BC	(11/45)	—	—	RSX-11M RSX-11D RSTS/E IAS

Note: There can be a maximum of 2 semiconductor memory controls per system. 32K bipolar, or 32K MOS, or 16K bipolar + 16K MOS is the maximum semiconductor memory in a system.

READ ONLY MEMORY/BOOTSTRAP LOADERS

BM792-YC	Card reader bootstrap loader (CR11).	11/05, 11/35, or 11/45	SPC	1	0.3	—
BM873-YA	Restart loader contains ROM with bootstrap program for paper tape, disk (RK11, RP11), magnetic tape (TU10), DECtape, and DECassette.	11/05, 11/35, or 11/45	SPC	1	1.0	(all)

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
BM873-YB	Restart Loader. Contains ROM with bootstrap program for paper tape, disks, (RK11, RP11, RJS03, RJS04, and RJP04), magnetic tape (TU10 and TU16). DECtape and DECcassette.	11/05, 11/35, or 11/45	SPC	1	1.0	(all)
BM873-YC	Restart loader. Contains ROM with bootstrap program for paper tape, disk (RK11, RP11), magnetic tape (TU10) DECtape, DECassette, and DVII (sync. line interface).	11/CPU	SPC	1	1.0	—
H324	Switch panel for use with BM873-YA or BM873-YB.	11/05, 11/35, or 11/45	SM PAN	—	—	(all)
M792	Customer programmed bootstrap. 32-word read-only diode memory; customer programmable by the removal of selected diodes.	11/CPU	1 SPC	1	0.3	—
REV11-A REV11-C	Use memory insert.					

MASS STORAGE

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
RJS03-BA RJS03-BD	256K word fixed head disk drive and control unit. Expandable to a total of 8 drives (RS03 or RS04). 4 or 8 usec/ word transfer rate, 8.5 msec average access time. (4.8 or 9.6 usec/word transfer rate, 10.2 msec average access time at 50 Hz.) Included cabinet has space for 2 additional disk drives.	11/CPU	CAB + 2SU	1	—	RSX-11M RSX-11D RSTS/E IAS
RJS04-BA RJS04-BD	512K word fixed head disk drive and control unit. Expandable to a total of 8 drives (RS03 or RS04). 4 usec/word transfer rate, 8.5 msec average access time. (4.8 usec/word transfer rate, 10.2 msec average access time at 50 Hz.) Included cabinet has space for 2 additional disk drives.	11/34 11/35 or 11/45	CAB + 2SU	1	—	RSX-11M RSX-11D RSTS/E IAS
RWS03-BA RWS03-BD	256K word fixed head disk drive and control unit. Expandable to a total of 8 drives (RS03 or RS04). 4 usec/word transfer time, 8.5 msec average access time. (4.8 usec/word transfer rate, 10.2 msec average access time at 50 Hz.) Included cabinet has space for 2 additional disk drives.	11/70	(11/70) + CAB	1	—	RSX-11D RSTS/E IAS
RWS04-BA RWS04-BD	512K word fixed head disk drive and control unit. Expandable to a total of 8 drives (RS03 or RS04). 2 usec/ word transfer time, 8.5 msec average access time. (2.4 usec/word transfer rate, 10.2 msec average access time at 50 Hz.) Included cabinet has space for 2 additional disk drives.	11/70	(11/70) + CAB	1	—	RSX-11D RSTS/E IAS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
VRK11J-AA VRK11J-AB	2.4 million byte disk cartridge drive and control unit. Expandable to a total of 8 RK05 DECpack disk drives. 11Msec/word transfer rate, 70Msec average access time (60Hz.)	11/CPU	PAN + SU	1	7.5	—
VRK11J-BA VRK11J-BB	(same as above) (50 Hz.)	11/CPU	PAN	1	7.5	—
RK11J-DE RK11J-DJ	1.2 million word disk cartridge drive and control unit. Expandable to a total of 8 RK05 DECpack disk drives. 11 usec/word transfer rate, 70 msec average access time. Included cabinet has space for 3 additional RK05's.	11/CPU	CAB + SU	1	7.5	RT-11 RSX-11S RSX-11M RSX-11D RSTS/E IAS
RP11-CE RP11-CJ	20 million word disk pack drive and control unit. Expandable to a total of 8 RP03 disk pack drives. 7.5 usec/word transfer rate, 42 msec average access time. (Drive requires 230 Vac, 50 or 60 Hz.)	11/CPU	CAB + FS	1	—	RSX-11M RSX-11D RSTS/E IAS
RJP04-AA RJP04-AB	44 million word disk pack drive and control unit. Expandable to a total of 8 RP04 disk pack drives. 2.5 usec/word transfer rate, 28 msec average access time. (Drive requires 230 Vac, 50 or 60 Hz.)	11/34 11/35 11/45	FS + 2SU	1	—	RSX-11D RSTS/E IAS
RJP04-BA RJP04-BB	44 million word disk pack drive and two controllers for dual access. Expandable to a total of 8 RP04 disk pack drives. 2.5 usec/word transfer rate, 28 msec average access time. (Drive requires 230 Vac, 50 or 60 Hz.)	11/34 11/35 11/45	FS + 2SU	2	—	RSX-11D RSTS/E IAS
RJP05-AA RJP05-AB	Single access 88 million byte disk drive and control unit. Expandable to 8 RP05 drives. One disk pack included 1.24Usec/byte transfer rate, 28Msec average access time. Drive requires 230 Vac.	11/CPU	2SU + FS	1	16	RSX-11M RSX-11D MUMPS-11 (Q2) RSTS/E IAS
RJP05-BA RJP05-BB	88 million byte disk drive and control unit. Expandable to 8 RP05 drives. One disk pack included. Dual access (2 Unibus controls) 1.24Msec/byte transfer rate. 28Msec average access time. Drive requires 230 Vac.	two 11/CPU	4SU	1 + 1	16	RSX-11M RSX-11D MUMPS-11 (Q2) RSTS/E IAS
RWP04-AA RWP04-AB	44 million word disk pack drive and control unit. Expandable to a total of 8 RP04 disk pack drives. 2.5 usec/word transfer rate, 28 msec average access time.	11/70	(11/70) + FS	1	—	RSX-11D RSTS/E IAS
RWP04-BA RWP04-BB	44 million word disk pack drive (with dual access) and 2 PDP-11/70 control units. Expandable to a total of 8 RP04 disk pack drives. 2.5 usec/word transfer rate, 28 msec average access time.	11/70	(11/70) + FS	1 per control	—	RSX-11D RSTS/E IAS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
RWP04-CA RWP04-CB	44 million word disk pack drive (with dual access) and 2 control units; 1 for the PDP-11/70 and 1 for the other PDP-11. Expandable to a total of 8 RP04 disk pack drives. 2.5 usec/word transfer time, 28 msec average access time.	11/70	(11/70) + 2SU + FS	1 per control	—	RSX-11D RSTS/E IAS
RWP05-AA RWP05-AB	Single access 88 million byte disk pack drive and control. Expandable to 8 RP drives. One disk pack included. 1.24Msec/byte transfer rate, 28Msec average access time. Drive requires 230 Vac.	11/70	(11/70) + FS	1	16	RSX-11M & RSX-11D MUMPS-11 (Q2) RSTS/E IAS
RWP05-C	Dual access kit plus Unibus control.	RP05 11/CPU	(RP05) 2SU	1	16	—
RWP05-CA RWP05-CB	88 million byte disk pack drive and control unit. Expandable to 8 RP05 drives one disk pack included. Dual access controls (1 11/70 & 1 Unibus) 1.24Msec/byte transfer rate, 28Msec average access time. Drive requires 230 Vac.				16	RSX-11M & RSX-11D MUMPS-11 (Q2) RSTS/E IAS
RWP05-UA	RJP06 to RWP06 upgrade.	RJP06	—	—	—	—
RP05-AA RP05-AB	Single access 88 million byte disk pack drive and one pack. 1.24Msec/ byte transfer rate. 28Msec average access time. Drive requires 230 Vac.	RJP05-A, or RWP05-A	FS	—	—	RSX-11M & RSX-11D MUMPS-11 (Q2) RSTS/E
RP05-BA RP05-BB	Dual access 88 million byte disk pack drive and one pack. 1.24Msec/byte transfer rate. 28Msec average access time. Drive requires 230 Vac.	RJP05-B, or RWP05-B	FS	—	—	—
RP05-C	RP05 Dual access kit.	RP05	(RP05)	—	—	—
RJP06-AA RJP06-AB	Single access 176 million byte disk pack drive and control. Expandable to 8 RP drives. One disk pack included. 1.24Msec/byte transfer rate. 28Msec average access time. Drive requires 230 Vac.	11/CPU	2SU + FS	1	16	RSX-11M & RSX-11D IAS RSTS/E MUMPS
RJP06-BA RJP06-BB	176 million byte disk pack drive and control. Expandable to 8 RP drives. One disk pack included. Dual access (2 UNIBUS controls) 1.24Msec/byte transfer rate. 28Msec average access time. Drive requires 230 Vac.	two 11/70	4SU + FS	1 + 1	16	RSX-11M & RSX-11D IAS RSTS/E MUMPS
RJP06-C	Dual access kit plus UNIBUS control.	RP06 11/CPU	(RP06) 2SU	1	16	—
RP06-AA RP06-BB	Single access 176 million byte disk pack drive and one pack. 1.24nanosec/ byte transfer rate. 28Msec average access time. Drive requires 230 Vac.	RJP06-A, or RWP06-A	FS	—	—	RSX-11M RSX-11D IAS RSTS/E MUMPS
RP06-BA RP06-BB	Dual access 176 million byte disk pack drive and one pack. 1.24nanosec/byte transfer rate. 28Msec average access time. Drive requires 230 Vac.	RJP06-B, or RWP06-B	FS	—	—	RSX-11M RSX-11D IAS RSTS/E MUMPS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
RP06-C	Dual access kit.	RP06	(RP06)	—	—	—
RP06-U	RP05 to RP06 upgrade kit.	RP05-AA	—	—	—	—
RWP06-AA *RWP06-AB*	Single access 176 million byte disk pack drive control. Expandable to 8 RP drives. One disk pack included. 1.24Usec/byte transfer rate. 28Msec average access time. Drive requires 230 Vac.	11/70	(11/70) + FS	1	16	RSX-11M RSX-11D IAS RSTS/E MUMPS
RWP06-BA *RWP06-BB*	176 million byte disk pack drive and control. Expandable to 8 RP drives. One disk pack included. Dual access (2-11/70 controls). 1.24nanosec/byte transfer rate. 2.8Msec average access time. Drive requires 230 Vac.	two 11/70	(two 11/70) + FS	1 + 1	—	RSX-11M & RSX-11D IAS RSTS/E MUMPS
RWP06-CA *RWP06-CB*	176 million byte disk pack drive and control. Expandable to 8 RP drives. One disk pack included. Dual access (1-11/70 & 1 UNIBUS) 1.24Usec/byte transfer rate. 2.8Msec average access time. Drive requires 230 Vac.	11/70 & 11/CPU	(11/70)	1 + 1	—	RSX-11M & RSX-11D IAS RSTS/E MUMPS
RWP06-C	Dual access kit plus 11/70 control.	RP06 11/70	(RP06) (11/70)	1	—	—
RPR02-AM *RPR02-BM*	20 million byte disk pack drive rebuilt from an RP02. Expandable to 8 drives, 35Usec average seek time, 12.5Usec avg. rotational latency. 6.4 microseconds per word transfer rate.	11/CPU	FS	1	—	RSTS/E(CTS/E) RSX-11D & RSX-11M RT11 IAS MUMPS
RPR11-AA *RPR11-AB*	20 million byte disk pack drive rebuilt from an RP02 and a new control unit built by DEC. 35 Msec avg. seek-time, 12.5 Msec avg. rotational latency.	11/CPU	FS + CAB	1	—	RSTS/E(CTS/E) RSX-11D & RSX-11M RT11 IAS MUMPS
RX11-AA *RX11-AD*	Single 256K byte floppy disk drive and control. 18Usec/byte transfer rate, 483 millisecond average access time. Industry compatible preformatted diskette recording medium.	11/CPU	PAN	2	1.5	—
RX11-BA *RX11-BD*	Dual drive version of above.		—	—	—	—

EXPANSION DISK DRIVES

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
RS03-AA *RS03-AD*	256K word fixed head disk drive. 4 or 8 usec/word transfer rate, 8.5 msec average time.	RJS03, RJS04, RWS03, or RWS04	CAB	—	—	RSX-11M RSX-11D RSTS/E IAS
RS04-AA *RS04-AD*	512K word fixed head disk drive. 4 usec/word transfer rate, 8.5 msec average access time.	RJS03, RJS04, RWS03, or RWS04	CAB	—	—	RSX-11M RSX-11D RSTS/E IAS
VRK05-FA *VRK05-FB*	5.0 million byte disk drive with non-removable media (60 Hz).	RK11J-AA RK11J-AB	PAN	—	—	—
RK05F-FC *RK05F-FD*	(same as above) (50 Hz).	RK11J-BA RK11J-BB	PAN	—	—	—

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
RK05J-AA *RK05J-AB*	2.5 million byte disk drive with removable cartridge. 11Msec/word transfer rate. 7Msec average access time (60 Hz).	RK11J-AA RK11J-AB	PAN	—	—	—
RK05J-BA *RK05J-BB*	(same as above) (50 Hz).	RK11J-BA RK11J-BB	—	—	—	—
RK05F-FA *RK05F-FB*	5 million byte disk drive with non-removable media (60 Hz).	RK11J-AA RK11J-AB	PAN	—	—	RT-11 RSX-11A RSX-11M RSX-11D RSTS/E IAS
RK05F-FC *RK05F-FD*	Same as RK05F-FA, FB (50 Hz).					
RP03-AS *RP03-BS*	20 million word moving head disk pack drive. 7.5 usec/word transfer rate, 42 msec average access time.	RP11	FS	—	—	RSX-11M RSX-11D RSTS/E IAS
RP04-AA *RP04-AB*	44 million word moving head disk pack drive. 2.5 usec/word transfer rate, 28 msec average access time.	RJPO4-A, or RWP04-A	FS	—	—	RSX-11D RSTS/E IAS
RP04-BA *RP04-BB*	44 million word moving head disk pack drive with dual access. 2.5 usec/word transfer rate, 28 msec average time.	RJP04-B, RWP04-B, or RWP04-C	FS	—	—	RSX-11D RSTS/E IAS
PR11	High-speed paper tape reader and control unit. 300 characters/sec.	11/CPU	PAN + SPC	1	1.5	CAPS-11 RT-11 DOS/BATCH RSX-11D RSTS/E IAS
H722	Transformer required for 230 Vac, 50 Hz operation of PC11-A or PR11. Mounts on cabinet back.	11/CPU	—	—	—	—

TERMINALS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
LOCAL TERMINALS						
LA36-CE *LA36-CF*	DECwriter II. Hardcopy terminal, 30 cps, 60 Hz, 20mA.	DL11-A or equivalent.	—	—	—	(all)
LA36-CH *LA36-CJ*	DECwriter II. Hardcopy terminal, 30 cps.	DL11-A or equivalent.	—	—	—	(all)
REMOTE TERMINAL ADAPTOR						
LAXX-KG	EIA/CCITT adaptor for LA36 DECwriter.	DL11-B or equiv.	—	—	—	(all)
VT52	DECscope video terminal. 110 to 9600 baud, switch selectable. Separate numeric keypad. 20mA interface.	DL11-A or equiv.	FS	—	—	(all)

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
VT52-AA *VT52-AB*	DECscope video terminal; 75 to 9600 baud (switch selectable); full duplex operation; 24 lines x 80 character displayable ASCII subset; 20mA current loop.	DL11-W, DLVII, FS or equiv.	—	—	—
VT52-AE *VT52-AF*	same as above except EIA interface.					
VT61-AA *VT61-AB*	• DECscope video terminal; 75 to 9600 baud. • (switch selectable); 24 lines x 80 character, • 7 x 8 dot matrix display; 128 character full ASCII; reverse video capability; block mode and character mode transmission; forms mode capability; off-line editing; direct cursor addressing and reading; self-test feature, 20mA.	DL11-W, DLVII, FS or equiv.	—	—	—
VT61-AC *VT61-AD*	same as above except EIA 202 modem control.					
VT61-AE *VT61-AF*	same as above except Standard EIA.					
VT61-AB	VT61 with 20mA, 230V, 50 Hz.	DL11	—	—	—	—
VT61-AC	VT61 with EIA 202 modem control, 115 V, 60 Hz.	DL11	—	—	—	—
VT61-AD	VT61 with EIA 202 modem control, 230V, 50 Hz.	DL11	—	—	—	—
VT61-AE	VT61 with standard EIA, 115V, 60 Hz.	DL11	—	—	—	—
VT61-AF	VT61 with standard EIA, 230V, 50 Hz.	DL11	—	—	—	—

NOTES:
1 — Local terminals are designed for direct connection to a computer through any 20 mA interface of the appropriate baud rate. These interfaces include the following listed in the Communications section of this price list: DH11, DJ11-AA, DJ11-AC, DL11-A, DL11-C, DM11-DA.
2 — Remote terminals connect to computers via telephone lines to EIA/CCITT standard interfaces. The Communications section of this price list contains information on the following EIA/CCITT interfaces: DH11, DJ11-AA, DL11-B, DL11-D, DL11-E, DM11-DB, DM11-DC.
3 — Remote terminal and data set characteristics (baud rate, etc.) must be matched by the data set and interface at the computer site.

COMMUNICATIONS

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
ASYNCHRONOUS INTERFACES (FIXED)						
DL11-A[1,2]	Current Loop (20mA) Serial Line Interface. 8-bit character size; 2 stop bits. (Specify speed from Group 1 or 3).	11/CPU	SPC	1	1.8	(all)
DL11-B[1,2]	EIA/CCITT Serial Line Interface. 25 (7.5m) cable for connection to leased line modem. Does not provide Direct Distance. Dial modem control. 8-bit character size, 2 stop bits. (Specify speed from Group 1 or 3.)	11/CPU	SPC	1	1.8	RSX-11M RSX-11D RSTS/E IAS
DL11-C	Current Loop (20mA) Serial Line Interface with customer specifiable speed, character size, parity and stop bit size.	11/CPU	SPC	1	1.8	—

NOTES:
1 — If speed is not specified, the DL11 will be configured for 300 baud.
2 — When ordered as an add-on to an existing unit, specify the unit type (CPU or expander box) and serial number so the proper power-harness type can be supplied.

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
DL11-D	EIA/CCITT Serial Line Interface with customer specifiable speed, character size, parity, and stop bit size. Includes 25' (7.5m) cable for connection to leased line modem. (Does not provide Direct Distance Dial modem control.)	11/CPU	SPC	1	1.8	—
DL11-E	Direct Distance Dial Modem Control EIA/CCITT Serial Line Interface with customer specifiable speed, character size, parity and stop bit size. Includes 25' (7.5m) cable for connection to modem.	11/CPU	SPC	1	1.8	RSX-11M RSX-11D RSTS/E IAS
DL11-W	Equivalent of DL11-A, B, C, D plus the line frequency clock. Clock and features are DPP switch selectable.	11/04 11/34	SPC	1	—	RT-11 RSX-11S RSX-11D RSX-11M RSTS/E

ASYNCHRONOUS INTERFACES (PROGRAMMABLE)

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
DC11-AA	Dual clock and system unit mounting for two DC11-DA full-duplex interface module sets. Line speed is program selectable: 110, 134.5, 150, 300 baud. (These are typical 103 modem speeds.)	11/CPU	SU	—	0.2	—
DC11-AB	Same as DC11-AA but for 110, 300, 1200, 1800 baud. (Typical 202 modem speeds.)	11/CPU	SU	—	0.2	—
DC11-AC	Same as DC11-AA but for 110, 150, 600, 1200 baud. (Typical European speeds.)	11/CPU	SU	—	0.2	—
DC11-AD	Same as DC11-AA but for 50, 110, 134.5, 150 baud.	11/CPU	SU	—	0.2	—
DC11-AE	Same as DC11-AA but for 75, 110, 134.5, 150 baud.	11/CPU	SU	—	0.2	—
DC11-AG	Same as DC11-AA but for 134.5, 150, 300, 1200 baud.	11/CPU	SU	—	0.2	—
DC11-AH	Same as DC11-AA but for 110, 134.5, 600, 1200 baud.	11/CPU	SU	—	0.2	—
DC11-AX	Same as DC11-AA but for 110, 134.5, 150 baud plus one customer defined baud rate above 600 baud.	11/CPU	SU	—	0.2	—
DC11-DA	Full Duplex Serial Module Set which implements one line. Each DC11-A accommodates two DC11-DA's. Includes EIA/CCITT termination suitable for direct use with 103 or 202 modems. Handles 5, 6, 7, 8-bit characters with 1 or 2 stop bits.	DC11-A	(DC11-A)	1	2.0	—

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
ASYNCHRONOUS MULTIPLEXERS (FIXED)						
DF01-A	Originate-only Acoustic coupler in half- or full duplex. Used to connect terminals to ordinary telephone sets & public switched telephone network. Signaling rate up to 300 baud. Supplied with 7.5 ft. cable for connection to teletypewriter.		—	—	—	—
DJ11-AA	Asynchronous 16-Line Multiplexer for EIA/CCITT terminals or lines. Customer specifiable speed, character size, parity, and stop bits. Includes distribution panel with 16 DB 25P EIA/CCITT connectors. Not compatible with BA11-ES box.	11/CPU	SU + SM PAN	1	4.7	RSX-11M RSX-11D IAS
DJ11-AB	Asynchronous 16-Line Multiplexer for use with external signal conditioning equipment such as DC08 telegraph interfaces. Customer specifiable speed, character size, parity and stop bits. (No distribution panel.) Not compatible with BA11-ES box.	11/CPU	SU	1	4.7	—
DJ11-AC	Asynchronous 16-Line Multiplexer for 20mA level conversion. Distribution panel includes 16 4-screw terminal strips for connection of terminals. Customer specifiable speed, character size, parity and stop bits. Not compatible with BA11-ES box.	11/CPU	SU + SM PAN	1	5.3	RSX-11M RSX-11D IAS
ASYNCHRONOUS MULTIPLEXERS (PROGRAMMABLE)						
DH11-AA *DH11-AC*	Programmable Asynchronous 16-Line Multiplexer and mounting panel. Includes space for up to 4 DM11 line adapters (16 lines). Character length, stop bits, parity and baud rates (up to 9600 baud) are programmable on an individual line basis. Not compatible with BA11-ES box.	11/CPU	2 SU + SM PAN	2	8.4	RSX-11M RSX-11D RSTS/E IAS
DH11-AB	Programmable Asynchronous 16-Line Multiplexer with data cable for connection to DC08 telegraph line interface. Character length, stop bits, parity and baud rate (up to 9600 baud) are programmable on an individual line basis. (No level conversion/distribution panel.) Not compatible with BA11-ES box.	11/CPU	2 SU	2	8.4	—
DH11-AD	Complete Programmable Asynchronous 16-line multiplexer. EIA/CCITT only. Includes Direct Distance Dial modem control. Order BC05 cables. Not compatible with BA11-ES box.	11/CPU	2 SU/ SM PAN	3	10.8	RSX-11M RSX-11D RSTS/E IAS

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
DH11-AE	Complete Programmable Asynchronous 16-line multiplexer. EIA/CCITT. Does not include Direct Distance Dial modem control. Order BC05 cables. Not compatible with BA11-ES box.	11/CPU	2 SU/ SM PAN	2	8.6	RSX-11M RSX-11D RSTS/E IAS
DM11-BB	16-line Modem Control Multiplexer for program operation of control leads for 103, 202, or equivalent data sets.	DH11-AA or DH11-AC	(DH11)	1	2.8	RSX-11M RSX-11D RSTS/E IAS
DM11-DA	Line Adapter for four 20mA terminals. Includes cables.	DH11-AA or DH11-AC	(DH11)	—	—	RSX-11M RSX-11D RSTS/E IAS
DM11-DB	Line Adapter for four EIA lines (data only). Includes four 25' (7.5m) modem cables.	DH11-AA or DH11-AC	(DH11)	—	—	RSX-11M RSX-11D RSTS/E IAS
DM11-DC	Line Adapter for 4 EIA/CCITT lines which, when used with a DM11-BB, provides Direct Distance Dial modem control. Includes four 25' (7.5m) modem cables.	DH11-AA or DH11-AC and DM11-BB	(DH11)	—	—	RSX-11M RSX-11D RSTS/E IAS
DZ11-A	8 or 16-line asynchronous mix, programmable speeds on per-line basis, 50-9600 baud.	11/CPU	SPC (hex) SM PAN	1	2.2	—
DZ11-B	DZ11:8-line EIA expander.	DZ11-A	SPC (hex)	1	2.2	—
DZ11-C	DZ11:8-line 20mA.	11/CPU	SPC (hex) SM PAN	1	3.0	—
DZ11-D	DZ11:8-line 20mA expander.	DZ11-C	SPC (hex)	1	3.0	—
DZ11-E	DZ11:16-lines EIA.	11/CPU	2:SPC (hex) SM PAN	2	4.4	—
DZ11-F	DZ11:16-lines 20mA.	11/CPU	2:SPC (hex) SM PAN	2	6.0	—
DU11-DA	Full/half Duplex Synchronous Interface. Programmable character sizes, transmission speeds up to 9600 baud, space character. Interfaces to Bell 201 and 208 Series modems or equivalent. 25' (7.6m) modem cable provided. Data set control included.	11/CPU	SPC	1	2	RSX-11M RSX-11D RSTS/E IAS
DFC11-A	Clock option for DU11 for use in local PDP-11 to PDP-11 connections without modems.	DU11-DA	(DU11)	—	—	—
DQ11-DA	Full/half Duplex NPR Synchronous Interface with programmable transmission speeds up to 10,000 baud. EIA/CCITT termination suitable for direct use with Bell Series 201 and 208 or equivalent modems. Data set control included. Not compatible with 11/05-K, 11/05-L, or BA11-ES box.	11/CPU	SU	1	5.7	—

ADDITIONAL DISKS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
RK05K-11	Cartridge for RK05, (1.2 million words).	RK05	(RK05)	—	—	—
RP02-P	Disk pack for RP03, (20 million words).	RP03	(RP03)	—	—	—
RP04-P	Disk pack for RP04, (44 million words).	RP04	(RP04)	—	—	—

MAGNETIC TAPE UNITS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
TA11-AA *TA11-AB*	Dual DECassette transport and control unit. 90,000 character storage capacity per reel.	11/CPU	SM PAN + SPC	1	1.5	CAPS-11 RT-11 RSX-11M RSX-11D IAS
TC11-GA *TC11-GB*	Dual DECtape transport and control unit. Expandable to a total of 4 TU56 dual transports, within the included cabinet. 288K character storage per reel.	11/CPU	CAB	1	—	RT-11 RSX-11S RSX-11M RSX-11D RSTS/E IAS
TMB11-EA *TMB11-ED*	9-track magnetic tape transport and control unit. Expandable to a total of 8 TU10 transports. 45 in/sec, 800 bpi (industry compatible).	11/CPU except LSI-11 or 11/03	SU CAB	1	5	RT-11, DOS/ BATCH RSX-11M RSX-11D RSTS/E, IAS
TMB11-FA *TMB11-FD*	7-track magnetic tape transport and control unit. Expandable to a total of 8 TU10 transports. 45 in/sec, 200, 556, or 800 bpi program selectable (industry compatible).	11/CPU except LSI-11 or 11/03	SU CAB	1	5	RF11, DOS/ BATCH RSX-11M RSX-11D RSTS/E, IAS
TMB11-MA *TMB11-MB*	TS03 with 7-inch reels, 12.5, PS, 800 bpi.		PAN SU	1	5	RT-11, DOS/ BATCH RSX-11M RSX-11D RSTS/E, IAS
TS03-SA *TS03-SB*	Nine-track, 800 bpi tape drive, add-on to the TMB11-MA, MB.	TMB11-MA TMB11-MB	CAB	—	—	RT-11 RSX-11S RSX-11M RSX-11D RSTS/E IAS
TJU16-EA *TJU16-ED*	Switch selectable 800 or 1600 bpi 9-track magnetic tape transport and control unit. Expandable to a total of 8 TU16 transports. 45 in/sec.	11/CPU	CAB + 2SU	1	—	RSX-11M RSX-11D RSTS/E IAS
TJU16-EK *TJU16-EN*	800 bpi 9-track magnetic tape transport and control unit. Expandable to a total of 8 TU16 transports. 45 in/sec.	11/CPU	CAB + 2SU	1	—	RSX-11M RSX-11D RSTS/E IAS
TWU16-EA *TWU16-ED*	Program selectable 1600/800 bpi 9-track magnetic tape transport and control unit. Expandable to a total of 8 TU16 transports. 45 in/sec (industry compatible).	11/70	(11/70) + CAB	1	—	RSX-11D RSTS/E IAS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
TWU16-EK *TWU16-EN*	800 bpi 9-track magnetic tape transport and control unit. Expandable to a total of 8 TU16 transports. 45 in/sec (industry compatible).	11/70	(11/70) + CAB	1	—	RSX-11D RSTS/E IAS
TJU45-EA *TJU45-EB*	Program selectable 800 or 1600 bpi, 9-track magnetic tape transport and control unit. Expandable to 8 TU45 transports. Tape speed 75 in/sec (industry compatible).	11/CPU	CAB + 2SU	1	—	RSX-11M RSX-11D RSTS/E IAS
TWU45-EA *TWU45-EB*	Program selectable 800 or 1600 bpi, 9-track magnetic tape transport and control unit. Expandable to 8 TU45 transports. Tape speed 75 in/sec (industry compatible).	11/70	(11/70) + CAB	1	—	RSX-11D RSTS/E IAS

EXPANSION TAPE DRIVES

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
TU56	Dual DECtape transport. 288K character storage per reel.	TC11	PAN	—	—	RT-11 RSX-11A RSX-11M RSX-11D RSTS/E IAS
TU10-EE *TU10-EJ*	9-track tape transport. 45 in/sec, 800 bpi.	TMA11	CAB	—	—	RT-11 RSX-11M RSX-11D RSTS/E IAS
TU10-FE *TU10-FJ*	7-track tape transport. 45 in/sec. 200, 556, or 800 bpi program selectable.	TMA11	CAB	—	—	RT-11 RSX-11M RSX-11D RSTS/E IAS
TU16-EE *TU16-EJ*	Switch selectable 800 or 1600 bpi 9-track magnetic tape transport. 45 in/sec.	TJU16 or TWU16	CAB	—	—	RSX-11M RSX-11D RSTS/E IAS
TU45-EE *TU45-EF*	Program selectable 800 or 1600 bpi, 9-track magnetic tape transport. Tape speed 75 in/sec.	TJU45 or TWU45	CAB	—	—	RSX-11M RSX-11D RSTS/E IAS

LINE PRINTERS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
LA11-PA	180Cps DECprinter I with interface, 132 column.	11/CPU	—	—	—	—
LA11-PB	LA180-PA or LA180-PB BC11S-25, M7258 60 Hz.	—	—	—	—	—
LA11-PC	180 CPS DECprinter I with interface, 132 column.	11/CPU	—	—	—	—
LA11-PD	LA180-PC or LA180-PD BC11S-25, M7258 50 Hz.	—	—	—	—	—
LA180-CA *LA180-CD*	Receive only printer, 180 char/sec. with electronic Head of Form, paper out switch, 6 part forms, 132 columns, paper out override, and a self-test mode. 25 foot cable. Asynchronous 20mA current loop interface.	DL11-A, C or DLV11	FS	—	—	—

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
LA180-EA *LA180-ED*	Receive only printer, 180 char/sec. with electronic Head of Form, paper out switch, 6 part forms, 132 columns, paper out override, upper/lower case, and a self-test mode. 25 foot cable. Asynchronous EIA (RS232) interface (speeds may be limited by local transmission facilities)	DL11-B or DLV11	FS	—	—	—
LA35-CE *LA35-CF*	DECwriter receive only 20mA, 60 Hz.	DL11-A or equivalent	—	—	—	—
LA35-CH *LA35-CJ*	DECwriter receive only 20mA, 50 Hz.	DL11-A or equivalent	—	—	—	—
LP11-VA *LP11-VD*	132 column, 64 character printer and control unit. 300 lines/minute.	11/CPU	FS + SPC	1	1.5	(all)
LP11-WA *LP11-WD*	132 column, 96 character printer and control unit. 230 lines/minute.	11/CPU	FS + SPC	1	1.5	(all)
LP11-RA *LP11-RB*	Heavy duty line printer and control unit, 132 columns, 64 characters, 1200 lines/minute.	11/CPU	FS + SPC	1	1.5	(all)
LP11-SA *LP11-SB*	Heavy duty line printer and control unit. 132 columns, 96 characters, 900 lines/minute.	11/CPU	FS + SPC	1	1.5	(all)
LS11-A *LS11-B*	132 column, 64 character printer and control unit. 60 lines/minute.	11/CPU	TT + SPC	1	1.5	CAPS-11 RT-11 RSX-11M RSX-11D RSTS/E IAS
LV11-BA *LV11-BB*	Electrostatic printer/plotter and control unit. 132 columns, 96 characters, 500 lines/minute. Plotting rate of 120,000 dots/ second.	11/CPU	FS + SPC	1	1.5	CAPS-11 RT-11 DOS/BATCH RSX-11M RSX-11D RSTS/E IAS

CARD READERS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
CD11-A *CD11-B*	1000 card/minute reader and control unit. 80 column punched cards. 1000 card hopper capacity.	11/CPU	TT + SU	1	2.5	RSX-11D RSTS/E IAS
CD11-EA *CD11-EB*	1200 card/minute reader and control unit. 80 column punched cards. 2250 card hopper capacity.	11/CPU	FS + SU	1	2.5	RSX-11D RSTS/E IAS
CM11-FA *CM11-FB*	Mark sense and punched card reader 285 cards/minute. Includes control unit.	11/CPU	TT + SPC	1	1.5	RSX-11D RSTS/E IAS
CR11 *CR11-A*	Punched card reader and control unit. 300 cards/ minute.	11/CPU	TT + SPC	1	1.5	RT-11 RSX-11M RSX-11D RSTS/E IAS

Note: The LV11 is supported as a line printer by the operating systems. For plot module, it is supported by BASIC and FORTRAN under RT-11, or FORTRAN under DOS-BATCH.

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
PAPER TAPE						
PC11-A	High-speed paper tape reader/ punch and control unit. 300 characters/sec reading, 50 char/sec punching.	11/CPU	PAN + SPC	1	1.5	CAPS-11 RT-11 DOS/BATCH RSX-11A RSX-11D RSTS/E IAS
DQ11-EA	Full/half Duplex Synchronous NPR Interface to Bell System 303 or equivalent modems. Transmission speeds up to 1.0 megabaud. Data set control included. Not compatible with 11/05-K, 11/05-L, or BA11-ES box.	11/CPU	SU	1	5.7	—
DQ11-KA	Crystal Clock option. Crystal in Hertz is 16 x baud rate for baud rates equal to or less than 250,000 baud and 2 x baud rate for baud rates greater than 250,000. For use with DQ11-DA or DQ11-EA when modem is *not* used.	DQ11-EA or DQ11-DA	(DQ11)	—	—	—
DQ11-AB	Error Detection option for DQ11-DA or DQ11-EA. Performs hardware CRC or LRC.	DQ11-EA or DQ11-DA	SU (must be adjacent to DQ11)	1	1.2	—
DQ11-BB	Protocol option with provisions for character recognition and hardware sequence control for protocol handling.	DQ11-AB	(DQ11-AB)	—	1.6	—
DUP11-DA	Single line, synchronous interface, up to 9600 bauds, double character buffered receive and transmit full or half duplex, byte or bit oriented protocols, CRC-16 generation and checking, CAC/CCITT generation and checking, interface to Bell 201, 208, 209 modems or equivalents, auto answering capability, modem control.	11/CPU	SPC (hex)	1	3.6	—
DV11-AA	Synchronous Communications Multiplexer. Includes basic logic, micro-processor, and modem control.	11/CPU	2 SU	2	15	—
DV11-BA	Distribution Panel and Line Cards for 8 lines. Maximum of 2 DV11-BAs may be used with a DV11-AA. Order BC05D-25 EIA cable.	DV11-AA	SM PAN	—	—	—
AUTO DIAL INTERFACES						
DN11-AA	System Unit Mounting and control for up to 4 DN11-DA Module sets.	11/CPU	SU	—	—	—
DN11-DA	Module Set Interface to Bell 801 ACU. Includes 25' (7.5m) cable. A DN11-AA accommodates up to four DN11-DAs.	DN11-AA	(DN11-AA)	1	1.0	—
NETWORK LINK						
DMC11-AD	DDCMP Microprocessor Module, full or half duplex, point to point, 8-bit bytes, 16-bit IUPR data transfer, for high-performance interconnection of PDP-11 computers up to 1 mega baud.	11/CPU	SPC (hex)	1	4.0	—
DMC11-DA	Remote line unit module, EIA CRC-16 block check, 19,200 bps.	DMC11-AD	SPC (hex)	1	2.5	—

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
DMC11-MA	Local line unit modules for DMC11-AD, CRC-16 block check, up to 6,000 ft. separation, NRZ 1,000,000 bps.	DMC11-AD	—	—	—	—
DMC11-MD	Local line unit modules for DMC11-AD, CRC-16 block check, up to 18,000 ft. separation, NRZ, 56,000 bps.	DMC11-AD	SPC (hex)	1	2.5	—
BC03N-AO	100 ft. coaxial cable.	DMC11-MA or DMC11-MD	—	—	—	—

LINE SIGNAL CONDITIONERS AND ADAPTORS

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
DF11-F	TTL to 20mA active local Teletype loop. Connector is Amp Mate-N-Lok for connection with customer-supplied 22AWG, 2 twisted pair cable to local or remote (up to 1500′ or 457m). Model 33 or 35 Teletype.	DH11	DF	—	—	—
DF11-G	TTL to Bell System 301/303 Dataset Interface, signal levels, cable connector, and signal pinning compatible with the Bell 301/303 Datasets. Supplied with 25′ (7.5) cable. Signalling rates to 250K baud.	DP11	DF	—	0.2	—
DF11-K	TTL to active or passive 4-wire current mode (20mA) loop. Connector is Amp Mate-N-Lok for connection with customer-supplied cable. Signalling rates up to 2400 baud, at distances up to 1500 feet (457m).	DH11, DL11 with DD11-B	DF	—	—	—
DF11-A	TTL to EIA/CCITT voltage levels. 25′ (7.5m) cable with DB25P 25-pin male data set plug. Signalling rates up to 9600 baud.	DH11, DP11	DF	—	—	—
H312-A	Null Modem allows direct connection of any peripheral having an EIA interface. May be used with a DL11-B, DL11-D, DL11-E, DM11-DB, or DU11-DA with DFC11.	—	—	—	—	—
H313-A	Teletype Dataset Adaptor converts DIGITAL supplied TTY output for use with Bell 103 Dataset or equivalent.	LT33	TT	—	—	—

TELEGRAPH INTERFACES

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
H316-A H316-B	Dual Telegraph Line Interface for two common carrier or private telegraph circuits. Supplied with two 25′ (7.5m) cables. Data rates from 10 to 500 bps.	DL11, DL11-A	—	—	—	—
DC08-CS	Telegraph Line Interface Panel. Accommodates up to 16 DC08-CM Dual-Line Adapters. Consists of wired system unit, rack, and control modules.	DH11-AB, DJ11-AB	CAB	—	—	—
DC08-CM	One Dual Telegraph Terminal and Receive Line Adapter. Implements 2 transmit and receive telegraph line interfaces in the DC08-CS.	DC08-CS	—	—	—	—
793 793-A	Power Supply to provide power to the transmit side of telegraph line.	DC08-CS	—	—	—	—

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
DC08-EB	Telegraph Line Current Adjustment Panel. Provides line current monitoring and adjustment for 32 telegraph receive and transmit lines.	DC08-CS	—	—	—	—
893	Fuse Panel; provides individual line fuses for each of 32 telegraph lines (receive and transmit).	793	—	—	—	—
DC08-D	Distribution Panel; provides individual terminal blocks to facilitate connection of 32 telegraph lines.	DC08-CS	—	—	—	—

COMMUNICATIONS ACCESSORIES

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
M405	Clock Card. Required for non-standard speed. Second M405 for an additional speed.	DH11	—	—	—	—
BC04R-12	4 Spade Lugs to male Amp Mate-N-Lok connector.	DJ11-AC	—	—	—	—
BC05D-25	25' (7.5m) Cable with Cinch DB23S socket and DB25P plug.	DJ11-AA	—	—	—	—
BC05D-10	10' (3m) Cable with Cinch DB25S socket and DB25P plug.	DJ11-AA	—	—	—	—
959-A	Eight 8-pin Male Mate-N-Lok connectors with pins.	—	—	—	—	—
959-B	Eight 8-pin Female Mate-N-Lok connectors with pins.	—	—	—	—	—

ARITHMETIC OPTION

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
KG11-A	Communications Arithmetic Option. Computes Cyclic Redundancy Check (CRC), Longitudinal Redundancy Check (LRC), and Block Check Characters (BCC).	DP11 or DU11	SPC	1	1.5	RSX-11D RSTS/E IAS

ACOUSTIC COUPLERS AND INTEGRAL MODEMS

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
DF11-BA	Originate-Only Integral Modem (103-type) for use with a remote terminal. 25' (7.5) cable and connector provided for connection with Bell System Data Access Arrangement CDT or to private wireline channels. Signaling rate up to 300 baud.	—	DF	—	2.8	—
DF11-BB	Answer-Only Integral Modem (103-type) for use with central computer. 25' (7.5m) cable and connector provided for connection with Bell System Data Access Arrangement CDT or CBS or to private wireline channels. Signaling rate up to 300 baud.	DH11, DC11, DL11 with DD11-B	DF	—	2.8	—

NOTES:
1 — DJ11-A baud rates must be selected in four line groups from the following speeds: 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2400, 4800, 9500. Character size, parity, and stop bits should be specified from the choices listed in point 5 below.
2 — DL11-A and DL11-B require specification of baud rate from group 1 or 3 in the table below.
3 — DL11-C, DL11-D and DL11-E customers must select baud rate, character size, stop bits and parity.
    CHARACTER SIZE 5, 6, 7, 8
    PARITY—None, Odd, Even
    STOPS BITS—1, 1.5, 2
       DL11 BAUD RATES
    Group 1:110
    Group 2: 134.5
    Group 3:50, 75, 150, 300, 600, 1200, 1800, 2400
    Group 4: 200, 300, 600, 1200, 2400, 4800, 7200, 9600

INTERFACE EQUIPMENT

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
GENERAL PURPOSE INTERFACES						
AR11	Analog Real-Time Subsystem; includes 10-bit A/D, 16-channel multiplexer, sample and hold, two 10-bit D/A's, scope control, and crystal clock with programmable frequencies. Normally used with BC11-20 or BC08R cables and H322 distribution panel.	11/CPU	SPC (hex)	2	4	RT-11
DR11-B	Director Memory Access Interface. Moves data directly between user's device and memory (NPR operation). Includes word count, current address, and data registers.	11/CPU	SU	1	3.2	—
DR11-C	General Purpose Digital Interface. Permits bidirectional 16-bit parallel transfers between the user's device and the UNIBUS. Includes all necessary interrupt, address, and control signals and all-required cable connectors.	11/CPU	SPC	1	1.5	—
DR11-K	General Purpose Digital Interface. Permits bidirectional 16-bit parallel transfers between the user's device and the UNIBUS. Each line can generate an interrupt. Includes all necessary interrupt, address, and control signals and all required cable connectors.	11/CPU	SPC (hex)	1	2.5	—
DR11-KT	DR11-K plus two BC08R-8 plus H322.	11/CPU	SPC (hex) SM PAN	1	2.5	—
DR11-L	Two word input UNIBUS interface.	11/CPU	SPC	1	1.5	—
DR11-M	Two word output UNIBUS interface.	11/CPU	SPC	1	1.5	—
H322	Distribution Panel. Distributes signals from two 40-pin Berg connectors to nine 10-screw terminal strips.	AR11 or DR11-K	SM PAN	—	—	—
INTERFACE MODULES						
M105	Address Selector Module, 4 addresses.	—	MOD	—	0.3	—
M783	UNIBUS Transmitter Module, 12 drivers.	—	MOD	—	0.2	—
M784	UNIBUS Receiver Module, 16 receivers.	—	MOD	—	0.2	—
M785	UNIBUS Transceiver Module, 8 drivers and 8 receivers.	—	MOD	—	0.3	—
M786	General Purpose Interface Module 16-bit Flip-Flop Register with bus receivers and transmitters.	—	MOD	—	—	—
M920	UNIBUS Connector Module. Used to interconnect System Units.	—	MOD	—	—	—
M7821	Interrupt Control Module, 2 interrupts.	—	MOD	—	—	—

MOUNTING HARDWARE

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
CABINETS & EXTENSION MOUNTING BOXES						
H960-DH *H960-DJ*	Cabinet with a single sliding drawer extension mounting box. Provides mounting space for 9 System Units. Includes power supply which provides 3 (+5V) Regulators (75 amps) and power for up to 64K words of core memory.	11/CPU	CAB	—	(75)	—
BA11-KE *BA11-KF*	Rack Mountable Extension Mounting Box. Provides mounting space for 5 Systems Units.	11/CPU	PAN	—	—	—
H720-E *H720-F*	Power Supply for BA11-ES. Provides 22 amps at +5V, and 10 amps at −15V.	—	(BA11-ES)	—	(22)	—
H744	+5V regulator, provides 25 amps.	11/35	(11/35)	—	(25)	—
H952-AA	End Panel for standard cabinet.	—	—	—	—	—
H957-FA	End Panel (right side) for short cabinet.	—	—	—	—	—
H957-FB	End Panel (left side) for short cabinet.	—	—	—	—	—
H952-HA	Free-standing table.	—	FS	—	—	—
H960-CA *H960-CB*	Standard PDP-11 Cabinet, 72″ (1.8m) high. Includes fans, power distribution panel, extension feet, and front bezel panels.	11/CPU	CAB	—	—	—
H961-A	Free-standing Cabinet, 72″ (1.8m) high. Includes fans and front bezel panels.	11/CPU	CAB	—	—	—
H967-CA *H967-CB*	Short PDP-11 Cabinet, 50″ (1.3m) high. Includes fans, power distribution panel extension feet, and front bezel panels.	11/CPU	CAB	—	—	—
SYSTEM UNITS						
BB11	Blank Mounting Panel for custom interface design and mounting System Units.	11/CPU	SU	—	—	—
DD11-A	Peripheral Mounting Panel. Includes UNIBUS Connector Module M920. Accommodates up to 4 small peripheral controllers.	11/CPU	SU	—	—	—
DD11-B	Peripheral Mounting Panel. Includes UNIBUS Connector Module M920. Accommodates up to 4 small peripheral controllers of 2 DF11s with DL11s and 2 small peripheral controllers. Not compatible with BA11-ES box.	11/CPU	SU	—	—	—
DD11-C	Four-slot backplane for 11/04 or 11/34.	11/04 11/34	SU	—	—	—
DD11-D	Nine-slot backplane for 11/04 or 11/34.	11/04 11/34	Dual SU	—	—	—
UNIBUS EXTENSION HARDWARE						
DB11-A	UNIBUS Repeater. Allows an additional 18 unit loads and an additional 50 ft (15.2m) of UNIBUS to be added. (Note: The DB11-A provides capacity for an additional 20 unit loads but itself uses 2 unit loads.)	11/CPU	SU	—	2.2	—

Option Number (ital = 230v)	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
DT03-FM DT03-FP	Electronic switch allows the switch-selectable connection of one UNIBUS to either of two additional UNIBUSes. Provides manual operation.	—	PAN	1	—	—
BC11A-02	2 ft UNIBUS cable. (0.6m)	11/CPU	—	—	—	—
BC11A-05	5 ft UNIBUS cable. (1.5m)	11/CPU	—	—	—	—
BC11A-8F	8½ ft UNIBUS cable. (2.6m)	11/CPU	—	—	—	—
BC11A-10	10 ft UNIBUS cable. (3m)	11/CPU	—	—	—	—
BC11A-15	15 ft UNIBUS cable. (4.5m)	11/CPU	—	—	—	—
BC11A-25	25 ft UNIBUS cable. (7.6m)	11/CPU	—	—	—	—

SPARE PARTS & MAINTENANCE KITS

Several spare parts kits are provided for the customer who requires minimum down time or for those performing their own maintenance. Complete circuit boards are available in some kits for simple, plug-in replacement of a faulty board. A full set of circuit boards also aids in troubleshooting and isolating a hardware malfunction. Individual electrical components are available in Spare Parts Kit SP11-KF. This kit is for the customer planning to do his own board repair.

Option Number	Description	Prerequisite	Mtng Code	Bus Load	Amps @ +5V	System Software
KM11-A	Maintenance Module light and switch card for examination of machine states.	11/CPU	CPU	—	—	—
SP11-KE	Spare parts for KD11-B	11/05	—	—	—	—
SP11-KF	Spare parts for KD11-A	11/35	—	—	—	—
SP11-KG	11/05 Components spares	11/05	—	—	—	—
SP11-MC	Spare modules for MM11-K/L/M/S and MF11-L	MM11-K, -L, -M, -S, or MF11-L	—	—	—	—
SP11-PB	Spare Parts for H720-E and H720-F	H720-E or H720-F	—	—	—	—
SP11-PC	Power supply assembly spares	11/35/45 or /50	—	—	—	—
SP11-PE	Spare parts for H740	H740	—	—	—	—
SP11-PS	Power supply spare parts	H720	—	—	—	—
SP11-PT	H740 power supply spare parts 115V	H740	—	—	—	—
SP11-UM	1105-K 4K to 8K upgrade memory kit	11/05-K	—	—	—	—
55-9081-03	Transparent overlay for KM11 to check RK11.	KM11-A	—	—	—	—
55-9081-05	Transparent overlay for KM11 to check TM11.	KM11-A	—	—	—	—
55-9081-12	Transparent overlay for KM11 to check KD11-A.	KM11-A 11/35	—	—	—	—

SOFTWARE PRODUCTS

The PDP-11 software products listed here are furnished under a license for use on a single computer system and can be copied (with the inclusion of DIGITAL's copyright notice) only for use in such system, except as may otherwise be provided in writing by DIGITAL.

The first license for any software product must be ordered at the full standard list price for the software including all applicable services.

The second and following licenses for a particular software product may be ordered with or without the applicable services.

The basic OEM license (no services) includes a copy of the binary system and (in some cases) partial sources required to generate the binary system, and a set of manuals and documentation for the system. A list of the specific components of the binary system and of the documentation may be found in the appropriate Software Product Description.

The option numbers listed here refer to the binary, source, or listing software package for the product. In most cases, where source and listings are available, they are licensed separately and require the execution of a source license agreement in addition to a license to use the binary software package.

For a complete description of any of the PDP-11 software products listed here (including a detailed statement of any included software support and training and optional software maintenance) refer to the DIGITAL Software Product Description for that software product. The Software Product Description is the official description of the software product.

A brief description is given here for each software product, including the software support category, and minimum hardware required to operate.

Information for software products is given under the following headings:

Option Number

An option number, similar to hardware products, is used to identify and order the software product. Note that all software numbers begin with the letter Q.

Distribution Medium and Format

In many instances, the binary package for the software product is available on more than one physical distribution medium. (The license fee in all cases includes the cost of the medium itself). The second letter after the dash in the option number identifies the distribution medium. Each software product is available only on those media specifically listed for that product.

      B—Paper tape
      C—DECtape
      D—Magtape (9-track)
      E—DECpack (RK05 disk cartridge)
      F—Magtape (7-track)
      N—DECassette

Where the listing or source tape is also available, its option number is specified.

Description

A summary description of the software product.

Software Support Category

The software product includes, in the license fee, at minimum, the service specified for the category indicated.

      A—On-site installation, and one year Software Performance Reporting (SPR) Service, remedial service within the first 90 days.
      B—One year Software Performance Reporting (SPR) Service.
      C—All services, if available, at a fee.

For a complete description of the included and optional software support and services for a product, refer to the Software Product Description.

CASSETTE BASED SOFTWARE

CAPS-11

DESCRIPTION: CAPS-11 (Cassette Programming System) is a system using magnetic tape DECassettes as a file structured medium. The system supplies a true operating system environment at prices lower than high-speed paper-tape systems.

SOFTWARE COMPONENTS: Monitor, relocating assembler, linker, editor, debugging tool, and PIP file utility program.

MINIMUM HARDWARE: PDP-11, 8K memory, console terminal, and TA11 dual DECassette system.

PREREQUISITE SOFTWARE: None.

Ordering Information

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of Digital's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by Digital.

Source and/or listing options are only available after the purchase of at least one full-support binary license and after a source license agreement is in effect.

The following key (N,R) represents the distribution media for the product and must be specified at end of "Q" number i.e., QJ180-AN = binaries on Cassette.

   N - Cassette (TU60)   R - Microfiche

STANDARD OPTIONS

QJ180-A—Single-use license, binaries, documentation, Support Services (media: N).

SOURCE/LISTING OPTIONS

QJ180-E—All sources (media: N).
QJ180-F—Listings (media: R).

Additional Services
QJ180-S—Installation Service (media: Z).

Support Category
B, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy
Software Updates, if any, released by Digital during the one (1) year period following installation, will be provided to the customer on the standard distribution media listed in the SPD as the then current warranty update price. After the first year, updates, if any, will be made available according to then prevailing Digital policies.

DISK OPERATING SYSTEMS

RT-11

DESCRIPTION: RT-11 is a high-performance Foreground/Background (F/B) operating system designed for the single user involved in program development and/or Real-Time applications. It is small, fast, easy-to-use, learn, and modify. Two responsive, interactive monitors are provided, a Foreground/Background monitor, and an even smaller single-job monitor.

SOFTWARE COMPONENTS: F/B monitor, single-job monitor, editor, MACRO assembler, linker, librarian, debugging tool, and PIP utility program.

MINIMUM HARDWARE: PDP-11, 8K memory (16K memory for F/B), and console terminal; plus TC11 dual DECtape system; or RK11 DECpack disk system with TA11 dual DECassette system or PC11 high-speed paper tape reader/punch.

PREREQUISITE SOFTWARE: None

Ordering Information

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of DIGITAL's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by DIGITAL.

Standard options with no support services are only available after the purchase of one supported license and after either an OEM Agreement or End-User Waiver of Support Agreement is in effect. When a software license is ordered without support services, the category of support applicable to such software is Category C.

Source and/or listing options are only available after the purchase of at least one supported binary license and after a source license agreement is in effect.

STANDARD OPTIONS

QJ003-A— Single-use license for RT-11, binaries, documentation, support services (media: B, C, D, E, F, N, Y)
QJ926-A— Single-use license for RT-11 and FORTRAN/RT-11, binaries, documentation, support services (media: C, D, E, F, Y)
QJ003-C— Single-use license for RT-11, binaries, documentation, no support services (media: B, C, D, E, F, N, Y)

SOURCE/LISTING OPTIONS

QJ003-E— All sources (media: C, D, E, F, Y)
QJ003-F— Listings (media: R)

UPGRADE OPTIONS

The following option is available as an upgrade kit from DOS/BATCH.

QJ260-A— Single-use license for RT-11 and FORTRAN/RT-11, binaries, documentation, support services (media: B, C, E, N)

UPDATE OPTIONS

Users of RT-11 Version 2B or earlier may purchase the following. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QJ003-H—   RT-11 binaries, documentation, no support services (media: B, C, D, E, F, N, Y)
QJ926-H—   RT-11 and FORTRAN/RT-11 binaries, documentation, no support services (media: C, D, E, F, Y)
QJ003-N—   RT-11 source update (media: C, D, E, F, Y)

Additional Services

QJ003-S—   Consulting Service (media: Z)

Training Credits

1, Consult the latest Educational Services Catalog for available courses.

Support Category

A, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

DOS/BATCH-11

DESCRIPTION: DOS/BATCH-11 is both a keyboard oriented program development system, and a batch oriented job processing system. It includes an ANSI standard FORTRAN IV compiler and object time system, and a Batch Command Language (BCL).

SOFTWARE COMPONENTS: Monitor, editor, MACRO assembler, linker, librarian, debugging tool, PIP file utility program, FORTRAN IV compiler and object time system; File compare, verify and dump programs: Magtape EBCDIC to ASCII conversion, disk initializer, and device-to-device fast copy program.

MINIMUM HARDWARE REQUIRED:

PDP-11E10 System or
16K System Memory
PDP-11 Central Processor
RF11 256K word fixed-head disk system, or RK11 1.2M word removable cartridge DECpack disk (16K memory minimum), or RP11C 20M word disk pack (24K memory minimum and magnetic tape)
BM792-YB or MR11-DB Bootstrap
Console Device
TM11 Magnetic Tape or TC11 DECtape Unit
KW11L or KW11P Clock

Prerequisite Software: None

Ordering Information

STANDARD OPTIONS

QJ250-A—   Single-use license, binaries and documentation for Monitor, System Programs, FORTRAN Compiler and OTS, Support Services (media: C, D, E, F)
QJ250-D—   Single-use license only for DOS/BATCH w/FORTRAN, no Support Services (media: Z)
QJ252-A—   Single-use license, binaries and documentation for Monitor and System Programs, Support Services (media: C, D, E, F).
QJ252-D—   Single-use license only, no Support Services (media: Z).
QJ035-A—   Single-use license, binaries and Support Services (media: C, D, E, F).
QJ035-D—   Single-use license only, no Support Services (media: Z).

SOURCE AND LISTING OPTIONS

Customer must first purchase a DOS/BATCH-11 single-use license (QJ250 or QJ252), then may order:

QJ252-E— Sources for Monitor and System Programs (media: C, D, E, F).
QJ252-F— Listings of Monitor and System Programs (media: R).
QJ253-E— Sources for Device Drivers (media: C, D, E,F).
QJ253-F— Listings of Device Drivers (media: R).

Customer must first purchase a DOS/BATCH-11 single-use license (QJ250 or QJ035), then may order:

QJ031-E— Sources for the FORTRAN Compiler (C, D, E, F).
QJ031-F— Listings of FORTRAN Compiler (media: R).
QJ033-E— Sources for FORTRAN OTS (media: C, D, E, F)
QJ033-F— Listings of FORTRAN OTS (media: R).

UPDATE OPTIONS

Update for customers with either DOS-11, BATCH-11 or DOS/BATCH-11:

Prerequisite Software: DOS or BATCH version 9-20C or 8.08 or 8.02 or 4.

QJ250-H— Single-user license, binaries and documentation for Monitor, System Programs, FORTRAN Compiler and OTS, no Support Services (media: C, D, E, F).

Additional Services

Three extended software maintenance contracts are offered to DOS/BATCH-11 customers.

INFORMATION UPDATE SERVICE

This service provides the subscribers with monthly issues of the "Software Dispatch" and Software Performance Report (SPR) Services for a period of one year starting with the date of subscription.

Support Category

A; Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, update policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year updates, if any, will be made available according to then prevailing DIGITAL policies.

MULTI-USER TIME-SHARED OPERATING SYSTEM

RSTS/E

DESCRIPTION: RSTS/E (Resource Sharing Time-Sharing System/Extended) provides versatile and rapid system access to up to 32 simultaneous users, through the BASIC-PLUS language. BASIC-PLUS is an extended version of Dartmouth BASIC, and combines with the RSTS/E monitor and utility programs to provide full interactive computing services for multiple users.

SOFTWARE COMPONENTS: Monitor, utility routines, and BASIC-PLUS language processor.

MINIMUM HARDWARE REQUIRED: Although not necessarily a recommended configuration, the minimum hardware configuration on which a RSTS/E system can be generated and operated consists of one of each of the following:

* PDP-11/34, PDP-11/35, PDP-11/40 with KE11-E, or PDP-11/45, or PDP-11/70
* 32K words (BASIC-PLUS only) of parity memory with KT11 Memory Management
* KW11 Clock
* ROM Bootstrap for Disk/ Tape
* Console terminal: LA30, LA36, VT05, VT50, LT33 or LT35
* One of the following disk systems:
  1. RK11 Disk cartridge controller (includes RK05 drive) with additional RK05 drive
  2. RJP04 (or RWP04 for 11/70 only) Disk pack controller (includes RP04 drive)
  3. RP11 Disk pack controller (includes RP03 drive)
  4. RPR11 Disk pack controller (includes RPR02 drive)
  5. RF11 Fixed-head disk controller (includes RS11 drive) with additional RS11 drive
  6. RK11 Disk cartridge controller (includes RK05 drive) and RF11 Fixed-head disk controller (includes RS11 drive)
  7. RK11 Disk cartridge controller (includes RK05 drive) and RJS03/RJS04 (or RWS03/RWS04 for 11/70) Fixed-head disk controller (includes RS03/RS04 drive)

- One of the following magnetic tape systems (not required for dual RK11 disk systems):
   1. TJU16 (or TWU16 for 11/70) Magnetic tape controller (includes TU16 transport)
   2. TM11/TMA11 Magnetic tape controller (includes 7- or 9-track TU10 transport or TS03 transport)
   3. TC11 DECtape controller (includes TU56 dual transport)

Ordering Information

STANDARD OPTIONS

QR430-A— Single-use license, binaries, documentation, support services (media: C, D, E, F, P)
QR430-C— Single-use license, binaries, documentation, no support services (media: C, D, E, F, P)
QR430-D— Single-use license only (media: Z)

SOURCE/LISTING OPTIONS

QR430-F— Listings (media: R)
QR432-F— Monitor and SYSGEN Listings (media: R)
QR433-F— BASIC-PLUS, all run-time systems listings (media: R)

UPGRADE OPTIONS

The following option is available as an upgrade kit from RSTS-11 and requires previous purchase of one license with support services.

QR400-H— Single-use license, binaries, documentation, support services (media: C, D, E, F)

UPDATE OPTIONS

Users of RSTS/E whose license does not include free updates under warranty, whose warranty has expired, or whose Standard Program Update Service has expired, may purchase the following. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QR430-H— Binaries, documentation (media: D, E, F, P)

MISCELLANEOUS OPTIONS

QR430-G— BASIC-PLUS and User's manuals (media: Z)

Support Category

A, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, updates will be supplied at no charge. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

MULTI-FUNCTION TIME-SHARED, REAL-TIME, & BATCH OPERATING SYSTEM

IAS

DESCRIPTION: IAS (Interactive Application System) is a multi-function, multi-language operating system capable of supporting timesharing, real-time and batch programming concurrently. It supports up to 16 interactive terminals and versions of BASIC, FORTRAN, COBOL, and MACRO assembler.

SOFTWARE COMPONENTS: Executive, MACRO assembler, editor, task builder (linker and overlay builder), debugging tool, file utilities, and text output utility (RUNOFF).

MINIMUM HARDWARE REQUIRED: One operator terminal (from Terminals section) One user terminal (from Terminals section) 64K words of memory (128K bytes) One processor system:

- PDP-11/70
- PDP-11/45 with KT11-C memory management option, one bootstrap

One of the following mass storage packages:

- RK11 disk cartridge controller (includes one RK05 drive) with two additional RK05 drives
- RPR11 disk pack controller (includes one RPR02 drive) with one of the following:
   1. TMA11 magnetic tape controller (includes one 9-track TU10 drive)
   2. TJU16/TWU16 magnetic tape controller (includes one TU16 drive)
- RP11 disk pack controller (includes one RP03 drive) with one of the following:
   1. TMA11 magnetic tape controller (includes one 9-track TU10 drive)
   2. TJU16/TWU16 magnetic tape controller (includes one TU16 drive)

- RJP04/RWP04 disk pack controller (includes one RP04 drive) with one of the following:
  1. TMA11 magnetic tape controller (includes one 9-track TU10 drive)
  2. TJU16/TWU16 magnetic tape controller (includes one TU16 drive)

A 96K word, PDP-11/70 system configured with an RP04 disk is recommended for support of a 10 to 12 terminal user environment, executing both batch and interactive users.

The 64K word, PDP-11/45 system is the minimum for support of a two terminal system running either interactive or batch tasks. This system provides only a 20K to 24K word user area depending on which device handlers are memory resident.

STANDARD OPTIONS

QR300-A— Single-use license, binaries, documentation and modules, support services (media: D, E)
QR300-C— Single-use license, binaries, documentation, no support services (media: D, E)

SOURCE/LISTING OPTIONS

QR300-M— All Program Sources plus listings on Microfiche (media: D, E)
QR301-M— Monitor Sources plus listings on Microfiche (media: D, E)
QR302-M— Utility Sources plus listings on Microfiche (media: D, E)

UPGRADE OPTIONS

The following options are available as an upgrade kit from RSX-11D. The no-support option is available only after the purchase/conversion of at least one full-support license.

QR303-A— Single-use license, binaries, key source modules, documentation, support services (media: D, E)
QR303-C— Single-use license, binaries, key source modules, documentation, no support services (media: D, E)

UPDATE OPTIONS

Users of IAS, Version 1 whose warranty has expired, or whose Standard Update Service has expired, may purchase the following. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QR300-H— Binaries, documentation (media: D)

Users of IAS whose license does not include free updates under warranty, and whose warranty has not expired, may purchase the following. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QR300-W— Binaries, documentation (media: D)

MISCELLANEOUS OPTIONS

QR300-G— Pre-delivery kit (media: Z)

Additional Services

None.

Support Category

A, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

REAL-TIME MULTI-PROGRAMMING SYSTEMS

RSX-11D

DESCRIPTION: RSX-11D is a real-time disk based multi-programming system for the PDP-11/35, PDP-11/45 and PDP-11/70, utilizing hardware memory management and protection. Installed tasks run concurrently, at one of 250 software priority levels, are event driven, and dynamically scheduled. A background BATCH capability and FORTRAN compiler and object-time system are included.

SOFTWARE COMPONENTS: Executive, MACRO assembler, line editor, task builder (linker and overlay builder), debugging tool, PIP file utility program; file exchange program. FORTRAN compiler and object-time system.

MINIMUM HARDWARE REQUIRED:

- One console Terminal (from Terminals section)
- 48K words of memory

- One of the following Processor systems:

  PDP-11/35, KE11-E, KT11-D, one bootstrap, one clock
  PDP-11/40, KE11-E, KT11-D, one bootstrap, one clock
  PDP-1/45, KT11-C, one bootstrap, one clock
  PD-11/70

- One system disk

  RK11 (one RK05 drive)
  RPR11 (one RP02 drive)
  RP11 (one RP03 drive)
  RJP04/RWP04 (one RP04 drive)

- One of the following:

  An additional RK05 drive
  TMA11/TM11 (one 9-track TU10 drive)
  TMA11/TM11 (one 7-track TU10 drive)
  TJU16/TWU16 (one TU16 drive)

Optional Software Supported

Other software available under separate license agreement are:

COBOL, a PDP-11 ANSI 74 Compiler
FORTRAN IV-PLUS, a high performance FORTRAN Compiler
RSX-11D/2780 Emulator Package

Ordering Information

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of Digital's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by Digital.

Binary Options with no support services are only available after the purchase of at least one full-support license and after either an "OEM Agreement" or End-User "Waiver of Support Agreement" is in effect. When a software license is ordered without services, the category of support applicable to such software is Category C.

Source and/or listing options are only available after the purchase of at least one full-support binary license and after a source license agreement is in effect.

The following key (D, E, F, P, R, Z) represents the distribution media available for the product and must be specified at the end of the "Q" number, i.e., QJ580-AD = binaries on 9-track Magtape.

    D - 9-track Magnetic Tape Kit (TU10 & TU16)
    E - DECpack Kit
    F - 7-track Magnetic Tape Kit
    P - 9-track Magtape (TU16)
    R - Microfiche
    Z - No Hardware Dependency

STANDARD OPTIONS

QJ580-A—   Single-use license, binaries, selected source modules, support services, documentation (media: D, E, F)

QJ580-C—   Single-use license, binaries, selected source modules, no support services, documentation (media: D, E, F)

SOURCE/LISTING OPTIONS

Microfiche listings of updates are provided automatically, at no extra charge, to those customers who have purchased microfiche and are within the first year following installation or are subscribers to the Standard Binary Program Update Service.

QJ580-E—   All Program Sources (media: D, E, F)*
QJ583-E—   Utility Program Sources (media: D, E, F)*
QJ584-E—   FORTRAN IV Compiler Sources (media: D, E,F)*
QJ585-E—   Exec., Drivers, File System, FORTRAN OTS Sources (media: D, E, F)*
QJ580-F—   All Program Listings (media: R)
QJ583-F—   Utility Program Listings (media: R)
QJ584-F—   FORTRAN IV Compiler Listings (media: R)
QJ585-F—   Exec., Drivers, File System, FORTRAN IV OTS Listings (media: R)

* Includes listings on microfiche.

UPGRADE OPTIONS

The following options are available as an upgrade kit from RSX-11M to RSX-11D. The no-support option is available only after purchase/conversion of at least one full-support license.

QP580-A— Single-use license, binaries, key source modules, support services, documentation (media: D, E, F)
QP580-C— Single-use license, binaries, key source modules, no support services, documentation (media: D, E, F)

UPDATE OPTIONS

Users of RSX-11D, Version 4 whose Standard Binary Program Update Services have expired, may purchase the following:

QJ580-H— Update of binaries, key source modules, documentation, no support services (media: D, E, F)
QJ580-N— Update of all Program Sources (media: D, E,F)*
QJ580-N— Update of all Program Listings (media: R)

MISCELLANEOUS OPTIONS

QJ580-G— Predelivery kit (media: Z)

Additional Services

After the first year, two extended software maintenance contracts are offered:

INFORMATION SERVICE

This contract service provides the subscriber with monthly issues of the "RSX-11D Dispatch" (System newsletter) and the Software Performance Reporting (SPR) Service for a period of one year, starting with the date of subscription to the contract.

QJ580-2— Information Service (media: Z).

STANDARD BINARY PROGRAM UPDATE SERVICE

This one year contract includes the information service as well as providing the subscriber with software updates, at no additional charge, as they become available during the subscription period.

QJ580-3— Standard Binary Program Update Service (media: D, E, F, P).

Support Category

A, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing Digital policies.

RSX-11M

DESCRIPTION: RSX-11M is a real-time disk-based operating system that provides event-driven multi-programming operation. Up to ten concurrent tasks may be run in 16K of memory, with any number in larger configurations. RSX-11M is a program and file compatible subset of RSX-11D. An ANSI standard FORTRAN IV compiler and run-time system is included.

SOFTWARE COMPONENTS: Executive, MACRO assembler, task builder (linker and overlay builder), editor, on-line debugger, librarian, PIP file utility program; file verification, dump, and exchange programs; FORTRAN IV compiler and run-time system.

MINIMUM HARDWARE REQUIRED

- Any PDP-11 processor (Except LSI-11, and PDP-11/03)
- One Console Terminal (from Terminals section)
- One Clock—Line frequency or Programmable
- One Bootstrap—System device and distribution medium device

And (for RK05 DECpack distribution medium)

- 16K words of memory
- RK11 (one RK05 drive)
- One of the following:

    One additional RK05 drive
    TC11   (one DECtape drive)
    TA11   (dual cassette tape drive)

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* Includes listings on microfiche.

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RX11	(one RX01 floppy disk drive)
TMA11/TM11 *	(one 9-track TU10 tape drive)
TMA11 *	(one 9-track TS03 tape drive)
TJU16/TWU16 *	(one 9-track TU16 tape drive)

Or (for Magnetic Tape distribution medium)

- 24K words of memory
- One Disk

RK11	(one RK05)
RPR11	(one RPR02 drive)
RP11	(one RP03 drive)
RJP04/RWP04	(one RP04 drive)

- One Magnetic tape drive

TMA11/TM11	(one 9-track TU10 drive)
TMA11	(one 9-track TS03 drive)
TJU16/TWU16	(one TU16 drive)

Ordering Information

STANDARD OPTIONS

QJ620-G—	RSX-11M Pre-delivery Documentation Kit (media: Z).
QJ620-A—	Single-use license, binaries, key source module, support services, and documentation (media: C, D, E, N, Y).
QJ625-A—	Single-use license, binaries, key source modules, support services and documentation. This option is for RPR02, RP03, or RP04 disk-based systems (media: D).
QJ620-C—	Single-use license, binaries, key source modules, no support services, and documentation (media: C, D, E, N, Y).
QJ625-C—	Single-use license, binaries, key source modules, no support services, and documentation. This option is for RPR02, RP03, or RP04 disk-based systems (media: D).

UPDATE OPTIONS

The following options are offered as Version 1 to Version 2 updates.

QJ620-H—	9-Track Magnetic Tape Update Kit (media: D).
QJ620-H—	RK05 DECpack Update Kit (media: E).
QJ621-N—	Utility Source Updates (media: E).
QJ622-N—	FORTRAN Compiler and Runtime System Source Updates (media: E).

SOURCE AND LISTING OPTIONS

QJ621-E—	Utility Sources (media: D, E).
QJ622-E—	FORTRAN IV Compiler and Runtime System Sources (media: D, E).
QJ620-F—	Executive and I/O Drivers Listings (media: R).
QJ621-F—	Utility Listings (media: R).
QJ622-F—	FORTRAN IV Compiler and Runtime System Listings (media: R).
QJ623-F—	All Listings (media: R).

Additional Services

After the first year, two extended software maintenance contracts are offered:

Information Service

This contract service provides the subscriber with monthly issues of the "RSX-11M Software Dispatch" (system newsletter) and the Software Performance Reporting (SPR) service for a period of one year, starting with the date of subscription to the contract.

Training Credits

Three training credits are included with the supported Binary license.

Support Category

A; Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

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* Note: Although the Magnetic tape drives will function in a 16K system, the recommended minimum is 24K words of memory. The REQUIRED minimum for Magnetic tape as the distribution medium is 24K.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing Digital Policies. Updates do not include installation or any other software service.

Microfiche listings of updates are provided automatically, at no extra charge, to those customers who have purchased microfiche and are within the first year following installation or who are subscribers to the Standard Binary Program Update Service.

RSX-11S

DESCRIPTION: RSX-11S is a memory based real-time operating system designed to operate in a PDP-11 processor with a minimum of 8K words of real memory. The system is not dependent upon any mass storage media for execution. RSX-11S is based on the RSX-11M Version 2 disk based operating system and is fully subset compatible with it. The I/O driver interface is identical. Device drivers written to execute under RSX-11S without change. The opposite is also true. Further, any application program that executes under RSX-11S will execute under RSX-11M Version 2 or RSX-11D Version 6 without change following a relink of the object program.

As a memory based system, RSX-11S does not support a file system, non-resident tasks, checkpointing (rollin/rollout) or program development. It provides a run time environment for execution of tasks on a memory based processor with a modest complement of peripherals.

Program development and system generation for RSX-11S requires a host RSX-11M Version 2 system. Tasks written in MACRO-11, FORTRAN IV or FORTRAN IV-PLUS must be assembled or compiled and subsequently linked on the host system and transported to the target RSX-11S system for execution. If tasks are written in FORTRAN, a minimum of 16K words of memory is required for the RSX-11S target system. Transportability of tasks between the RSX-11M host and the RSX-11S target is provided via the File Exchange Utility (FLX) on the host system and the On-Line Task Loader (OTL) on the target system.

RSX-11S requires, as a prerequisite, an RSX-11M Version 2 operating system for host support and system generation. The software components contained in the RSX-11S distribution kit includes the following:

Storage Components

Monitor Console Routine—RSX-11M Subset
On-line Task Loader
System Image Preservation Program
File Control Services (FCS) for record devices (does not include directory support)

MINIMUM HARDWARE REQUIRED

Any PDP-11 Processor with 8K words of Memory including the LSI-11 and PDP-11/03
KW11-L or KW11-P Clock
Hardware Bootstrap Loader

One of the following load devices:

TA11	Cassette Tape
PR11	Paper Tape Reader
PC11	Paper Tape Reader/Punch
TC11	DECtape
TM11/TMA11	Magtape (TU10 and TS03 drives)
TJU16/TWU16	Magtape
RX11	Floppy Disk

STANDARD OPTIONS

QJ640-A— Single-use license, binaries, sources, documentation, support services (media: C, D, E, N, Y).
QJ640-C— Single-use license, binaries, sources, documentation, *no* support services (media: C, D, E, N. Y).

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL Policies.

COMMUNICATIONS AND NETWORK OPTIONS

DECNET/IAS

DESCRIPTION: DECNET/IAS extends the capabilities of the IAS operating system by enabling IAS systems to be interconnected with other DECNET systems. DECNET/IAS can be used as a component of distributed networks, resource sharing networks, and communications networks.

MINIMUM HARDWARE REQUIRED:

Any valid IAS system configuration with:

* 8K words additional dedicated memory
* one or more of the following communications devices:

> DL11-C asynchronous interface, 20mA current loop
> DL11-E asynchronous interface with modem control
> DV11 synchronous multiplexor
> DU11 low-speed synchronous interface
> DP11 low-speed synchronous interface
> DQ11-DA, NPR synchronous interface
> DA11-B UNIBUS link, local cable
> DA11-AL UNIBUS link, long cable

* no more than a system total of 124K words of memory if any of the following communication devices are included:

> DV11
> DQ11-DA
> DA11-B
> DA11-AL

PREREQUISITE SOFTWARE: IAS operating system, Version 1.1 or later.

Support Category

B—Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

Ordering Information

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of DIGITAL's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by DIGITAL.

Standard options with no support services are only available after the purchase of one supported license and after either an OEM Agreement or End-User Waiver of Support Agreement is in effect. When a software license is ordered without support services, the category of support applicable to such software is Category C.

If a network includes any DECNET software package with Category C support, then the support classification for all DECNET software in that network reverts to Category C.

Source and/or listing options are only available after the purchase of at least one supported binary license and after a source license agreement is in effect.

The following key (D, E, F, R, Z) represents the distribution media for the product and must be specified at the end of the "Q" number, i.e., QR680-AD = binaries on 9-track magnetic tape.

D = 9-track Magnetic Tape (TU10)
E = RK Disk (DECpack)
F = 7-track Magnetic Tape
R = Microfiche
Z = No hardware dependency

STANDARD OPTIONS

QR680-A— Single-use license, binaries, some source modules, documentation, support services (media: D, E, F)
QR680-C— Single-use license, binaries, some source modules, documentation, no support services (media: D, E, F)

SOURCE/LISTING OPTIONS

QR680-E— All sources (media: D, E, F)
QR680-F— Listings (media: R)

MISCELLANEOUS OPTIONS

QR680-G— Pre-delivery kit (media: Z)

Additional Services

QR680-S— Installation Services (media: Z)

DECNET-11D

DESCRIPTION: DECNET-11D extends the capabilities of the RSX-11D operating system by enabling RSX-11D systems to be interconnected with other DECNET systems. DECNET-11D can be used as a component of distributed networks, resource sharing networks, and communications networks.

MINIMUM HARDWARE REQUIRED

Any valid RSX-11D system configuration with:

* 8K words additional dedicated memory
* no more than a system total of 124K words of memory
* one or more of the following communications devices:

    DL11-C asynchronous interface, 20mA current loop
    DL11-E asynchronous interface with modem control
    DV11 synchronous multiplexor
    DU11 low-speed synchronous interface
    DP11 low-speed synchronous interface
    DQ11-DA, NPR synchronous interface
    DA11-B UNIBUS link, local cable
    DA11-AL UNIBUS link, long cable

PREREQUISITE SOFTWARE: RSX-11D operating system. Version 6B or later.

Support Category

B, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

Ordering Information

If a network includes any DECNET software package with Category C support, then the support classification for all DECNET software in that network reverts to Category C.

Source and/or listing options are only available after the purchase of at least one supported binary license and after a source license agreement is in effect.

The following key (D, E, F, R, Z) represents the distribution media for the product and must be specified at the end of the "Q" number, i.e., QP680-AD = binaries on 9-track magnetic tape.

D = 9-track Magnetic Tape (TU10)
E = RK Disk (DECpack)
F = 7-track Magnetic Tape
R = Microfiche
Z = No hardware dependency

STANDARD OPTIONS

QP680-A— Single-use license, binaries, some source modules, documentation, support services (media: D, E, F)
QP680-C— Single-use license, binaries, some source modules, documentation, no support services (media: D, E, F)

SOURCE/LISTING OPTIONS

QP680-E— All sources (media: D, E, F)
QP680-F— Listings (media: R)

MISCELLANEOUS OPTIONS

QP680-G— Pre-delivery kit (media: Z)

Additional Services

QP680-S— Installation Services (media: Z)
QP680-3— Standard Binary Program Update Service (media: D, E, F)

DECNET-11M

DESCRIPTION: DECNET-11M extends the capabilities of the RSX-11M operating system by enabling RSX-11M systems to be interconnected with other DECNET systems. DECNET-11M can be used as a component of distributed networks.

MINIMUM HARDWARE REQUIRED

Any valid RSX-11M system configuration with:

• 5K words additional dedicated memory
• one or more of the following communications devices:

    DL11-C asynchronous interface. 20mA current loop
    DL11-E asynchronous interface with modem control
    DU11 low-speed synchronous interface
    DP11 low-speed synchronous interface
    DQ11-DA NPR synchronous interface
    DA11-B UNIBUS link, local cable
    DA11-AL UNIBUS link, long cable

PREREQUISITE SOFTWARE: RSX-11M operating system. Version 2

Source and/or listing options are only available after the purchase of at least one supported binary license and after a source license agreement is in effect.

The following key (D, E, F, R, Z) represents the distribution media for the product and must be specified at the end of the "Q" number, i.e., QJ680-AD = binaries on 9-track magnetic tape.

D = 9-track Magnetic Tape
E = RK Disk (DECpack)
F = 7-track Magnetic Tape
R = Microfiche
Z = No hardware dependency

STANDARD OPTIONS

QJ680-A—   Single-use license, binaries, documentation, support services (media: D, E, F)
QJ680-C—   Single-use license, binaries, documentation, no support services (media: D, E, F)

SOURCE/LISTING OPTIONS

QJ680-E—   All sources (media: D, E, F)
QJ680-F—   Listings (media: R)

UPDATE OPTIONS

Users of DECNET-11M, Version 1, whose warranty has expired, or whose Standard Program Update Service has expired, may order under license the following software update at the then current charge for such update. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QJ680-H—   Binaries, documentation (media: D, E, F)

Users of DECNET-11M, Version 1, whose license does not include free updates under warranty, and whose warranty has not expired, may order under license the following software update for the then current media charge. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QJ680-W—   Binaries, documentation (media: D, E, F)

MISCELLANEOUS OPTIONS

QJ680-G—   Pre-delivery kit (media: Z)

Additional Services

QJ680-S—   Installation Services (media: Z)

Support Category

B, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

DECNET-11S

DESCRIPTION: DECNET-11S extends the capabilities of the RSX-11S operating system by enabling RSX-11S systems to be intreconnected with other DECNET systems. DECNET-11S can be used as a component of distributed networks, resource sharing networks, and communications networks.

MINIMUM HARDWARE REQUIRED

Any valid RSX-11S system configuration with:

* 8K words additional dedicated memory
* PDP-11/04 - 11/70 CPU
* one or more of the following communications devices:

    DL11-C asynchronous interface, 20mA current loop
    DL11-E asynchronous interface with modem control
    DU11 low-speed synchronous interface
    DP11 low-speed synchronous interface
    DQ11-DA NPR synchronous interface
    DA11-B UNIBUS link, local cable
    DA11-AL UNIBUS link, long cable

PREREQUISITE SOFTWARE: RSX-11S operating system, Version 1.

Source and/or listing options are only available after the purchase of at least one supported binary license and after a source license agreement is in effect.

The following key (D, E, F, R, Z) represents the distribution media for the product and must be specified at the end of the "Q" number, i.e., QJ690-AD = binaries on 9-track magnetic tape.

D = 9-track Magnetic Tape
E = RK Disk (DECpack)
F = 7-track Magnetic Tape
R = Microfiche
Z = No hardware dependency

STANDARD OPTIONS

QJ690-A—   Single-use license, binaries, documentation, support services (media: D, E, F)
QJ690-C—   Single-use, license, binaries, documentation, no support services (media: D, E, F)

SOURCE/LISTING OPTIONS

QJ690-F—   Listings (media: R)

UPDATE OPTIONS

Users of DECNET-11S, Version 1, whose warranty has expired, or whose Standard Program Update Service has expired, may order under license the following software update at the then current charge for such update. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QJ690-H—   Binaries, documentation (media: D, E, F)

Users of DECNET-11s, Version 1, whose license does not include free updates under warranty, and whose warranty has not expired, may order under license the following software update for the then current media charge. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QJ690-W—   Binaries, documentation (media: D, E, F)

MISCELLANEOUS OPTIONS

QJ690-G—   Pre-delivery kit (media: Z)

Additional Services

QJ960-S—   Installation Services (media: Z)

Support Category

B, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

RSX-11D/2780

DESCRIPTION: The RSX-11D/2780 runs as a privileged task under a suitably equipped RSX-11D system (Version 6A or later), providing emulation of an IBM 2780 remote batch terminal. It will support transmission and reception from/to card reader and line printer, and/or mass storage devices, such as disk and magnetic tape.

MINIMUM HARDWARE REQUIRED: Any valid RSX-11D system with at least 56K words of memory DP11 or DU11 Synchronous Line Interface KG11-A Communications Arithmetic Element.

PREREQUISITE SOFTWARE: RSX-11D Version 6A or later is required. (Not included in the RSX-11D/2780 license.)

Ordering Information

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of DIGITAL's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by DIGITAL.

The following key represents the distribution media available for the product and must be specified at end of "Q" number, i.e., QPD70-AC = binaries on DECtape.

C—DECtape	F—7-track Magtape
D—9-track Magtape (TU10)	R—Microfiche
E—RK Disk (DECpack)	Z—No hardware dependency

STANDARD OPTIONS

QPD70-A— Single-use license; binaries; documentation, support services (RSX-11D not included) (media: C, D, E, F).
QPD70-D— Single-use license; documentation, *no* support services (media: Z)

SOURCE/LISTING OPTIONS

QPD70-E— RSX-11D/2780 Sources* (media: C, D, E, F).
QPD70-F— RSX-11D/2780 Listings* on Michofiche (media: R).

UPDATE OPTIONS

QPD70-H— Binaries, documentation, *no* support services (media: C, D, E, F).

Support Category

A; Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, update policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

RSX-11M/2780

DESCRIPTION: The RSX-11M/2780 runs as a privileged task under a suitably equipped RSX-11M system (Version 1 or later), providing emulation of an IBM 2780 remote batch terminal. It will support transmission and reception from/to card reader and line printer, and/or mass storage devices, such as disk and magnetic tape.

MINIMUM HARDWARE REQUIRED: Any valid RSX-11M system with at least 16K words of memory
DP11 or DU11 Synchronous Line Interface
KG11 CRC/LRC Arithmetic Unit

PREREQUISITE SOFTWARE: RSX-11M Version 1 or later is required. (Not included in the license.)

Ordering Information

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of DIGITAL's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by DIGITAL.

The following key represents the distribution media available for the product and must be specified at end of "Q" number, i.e., QJD68-AC = binaries on DECtape.

C—DECtape	N—Cassette (TU60)
D—9-track magtape (TU10)	R—Microfiche
E—RK disk (DECpack)	Z—No hardware dependency
F—7-track magtape	

STANDARD OPTIONS

QJD68-A— Single-use license; binaries, documentation, support services (RSX-11M not included) (media: C, D, E, F, N).
QJD68-D— Single-use license; documentation, *no* support services (media: Z).

SOURCE/LISTING OPTIONS

QJD68-E— RSX-11M/2780 Sources* (media: C, D, E, F, N).
QJD68-F— RSX-11M/2780 Listings* on Microfiche (media: R).

Support Category

A; Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, update policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

RT-11/2780

DESCRIPTION: RT-11/2780 (COS-350/2780) provides emulation of an IBM 2780 remote batch terminal. It runs under the RT-11 Foreground/Background monitor on a suitably equipped RT-11 (version 2B or later) or COS-350 system.

MINIMUM HARDWARE REQUIRED: Any valid RT-11 Foreground/Background system configuration (except LSI-11 based systems) with:

• at least 16K words of memory for 2780 operation in the background
• at least 24K words of memory for 2780 operation in the foreground
• KW11-L Line Frequency Clock
• a disk device
• KG11-A Communications Arithmetic Element
• DP11, DU11, or DUP11 Synchronous Line Interface (NOTE: The line interface must have a higher priority than the RX11 floppy disk, should one be present on the system)

OR, Any one of the following DEC Datasystem configurations:

• DS352 RX11 Floppy-based system
• DS354 RK11 DECpack-based system
• DS356 RPR11 Disk pack-based system

with:

• at least 32K bytes of memory for 2780 operation in the background
• at least 48K bytes of memory for 2780 operation in the foreground

A DU11 Synchronous Line interface and KG11 Communications Arithmetic Element are included in the COS-350/2780 package. (NOTE: The line interface must have a higher priority than the RX11 floppy disk on the DS352 and DS356 systems.)

PREREQUISITE SOFTWARE: RT-11 operating system, Version 2B or later
OR, COS-350 System Software, Version 1 or later

Ordering Information

Source and/or listing options are only available after the purchase of at least one supported binary license and after a source license agreement is in effect.

The following key (C, D, E, N, R, Y, Z) represents the distribution media for the product and must be specified at the end of the "Q" or "DS" number, i.e., QJD63-AD = binaries on 9-track magnetic tape.

C = DECtape
D = 9-track Magnetic Tape
E = RK Disk (DECpack)
F = 7-track Magnetic Tape
R = Microfiche
Y = Floppy Disk
Z = No hardware dependency

STANDARD OPTIONS

QJD63-A— Single-use license, binaries, documentation, support services (RT-11 not included) (media: C, D, E, F, Y)
QJD63-D— Single-use license only, no support services (media: Z)

RESTRICTED STANDARD OPTIONS

DS3CC-A— Single-use license, binaries, documentation, communications subsystem, support services (media: E, Y) for COS-350 systems only
DS3CC-D— Single-use license only, with communications subsystems, no support services (media: Z) for COS-350 systems olny

SOURCE/LISTING OPTIONS

QJD63-E— All sources (RT-11 not included) (media: C, D, E, F, Y)
QJD63 F Listings (RT-11 not included) (media: R)

Support Category

A, for initial installation, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD. Subsequent licenses can be purchased with Category C support. Sources have Category C support.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to the then prevailing DIGITAL policies.

RSTS/E-2780

DESCRIPTION: The RSTS/E-2780 Emulator runs as a user job under a suitably equipped RSTS/E or CTS-500/E system, providing emulation of an IBM 2780 Remote Batch Terminal. It will support transmission and reception from/to card reader and line printer, and/or mass storage devices, such as disk and magnetic tape.

MINIMUM HARDWARE REQUIRED:

* Any valid RSTS/E (CTS-500/E) configuration with sufficient memory for the expected number of users, plus 8K words of memory to accommodate the Emulator.
* DP11, DU11, or DUP11 Synchronous Line Interface (DUP11 supported by modifying five locations in DU-11 version of 2780 software during installation)
* KG11-A Communications Arithmetic Element

PREREQUISITE SOFTWARE:

One of the following operating systems:

* RSTS/E Operating System, Version 6A
* CTS-500/E Operating System, Version 2

Ordering Information

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of DIGITAL's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by DIGITAL.

Standard options with no support services are only available after the purchase of one supported license and after either an OEM Agreement or End-User Waiver of Support Agreement is in effect. When a software license is ordered without support services, the category of support applicable to such software is Category C.

Source and/or listing options are only available after the purchase of at least one supported license and after a source license agreement is in effect.

The following key (C, D, E, F, R, Y, Z) represents the distribution media for the product and must be specified at the end of the "Q" number, i.e., QPD10-AD = binaries on 9-track magnetic tape.

C = DECtape
D = 9-track Magnetic Tape
E = RK Disk (DECpack)
F = 7-track Magnetic Tape
R = Microfiche
Y = Flexible Diskette
Z = No hardware dependency

STANDARD OPTIONS

QPD10-A— Single-use license, binaries, documentation, support services (media: C, D, E, F)
QDP10-D— Single-use license, binaries, documentation, no support services (media: Z)

Support Category

A, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

DATA SERVICES OPTIONS

RMS-11K

DESCRIPTION: RMS-11K provides keyed access record management services for RSTS/E, RSX-11M and IAS operating systems. As an extension to the basic RMS-11 sequential and relative file organizations, RMS-11K enables multi-key access via indexes. RMS-11K run time services are available via COBOL V3, MACRO-11, and BASIC-PLUS-2. Utilities are provided for define, copy, convert, back-up, restore, and display (file definition) functions.

SOFTWARE COMPONENTS: RMS-11K run time services, and utilities as defined above.

MINIMUM HARDWARE: Any valid PDP-11 configuration with memory management which supports the base operating system (RSTS/E, RSX-11M, or IAS) and optional language processors, plus 4K words (overlaid) or 12K words (not overlaid) for RMS-11K.

PREREQUISITE SOFTWARE: RSTS/E V6B, or RSX-11M V3.0, or IAS V2.0 or later version.

OPTIONAL SOFTWARE: COBOL V3.0, BASIC-PLUS-2, MACRO-11.

Ordering Information

STANDARD OPTIONS

FOR RSTS/E SYSTEMS:
QP900-A— Single-use license, binaries, documentation, support services (media: C, D, E, F, P)
QP900-C— Single-use license, binaries, documentation, no support services (media: C, D, E, F, P)

FOR RSX-11M SYSTEMS:
QP901-A— Single-use license, binaries, documentation, support services (media: C, D, E, N, Y)
QP901-C— Single-use license, binaries, documentation, no support services (media: C, D, E, N, Y)

FOR IAS SYSTEMS:
QP902-A— Single-use license, binaries, documentation, support services (media: D, E)
QP902-C— Single-use license, binaries, documentation, no support services (media: D, E)

Support Category

A, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

DBMS-11

DESCRIPTION: DBMS-11 is a generalized data base management system for the high end PDP-11 systems. DBMS-11 is a CODASYL implementation, providing comprehensive data base functionality for PDP-11 COBOL programs and other languages which support a CALL facility, such as FORTRAN IV/IAS, FORTRAN-IV-PLUS, BASIC-PLUS-2, and MACRO-11. DBMS-11 provides separate language facilities for the description of data and the access or manipulation of data. This separation of data description provides for the integration of all data and data descriptions and relations into a data base which is common to all application programs sharing the data.

SOFTWARE COMPONENTS: Data Description Language (DDL, both SCHEMA and SUB-SCHEMA), COBOL Data Manipulation Language processor (DML), Data Base Utilities, and run-time systems.

MINIMUM HARDWARE: PDP-11/70 with 128K words, TWU16 magnetic tape controller and transport, RP04, 5 or 6 disk, and a line printer.

PREREQUISITE SOFTWARE: IAS V1.1 or later version.

Ordering Information

STANDARD OPTIONS

QP375-A— Single-use license, binaries, documentation, support services (media: D).
QP375-C— Single-use license, binaries, documentation, no support services (media: D).

Support Category

A, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

LANGUAGES OPTIONS

APL-11/RSTS/E

DESCRIPTION: APL-11 is a mathematically structured programming language featuring many operators whose actions generalize to arrays of arbitrary order. Some of the APL-11 features include Chaining, Immediate Mode Editing, dynamically variable user workspace, symbol table size, and APL-10 compatibility.

SOFTWARE COMPONENTS: APL-11 Interpreter.

MINIMUM HARDWARE: A valid RSTS/E configuration, with additional memory of at least 22K words.

PREREQUISITE SOFTWARE: RSTS/E (QR430).

QJ906-AC	DECtape
QJ906-AD	Magtape (9-tr)
QJ906-AE	RK Disk (DECpack)
QJ906-AF	Magtape (7-tr)
QJ906-AP	Magtape (9-tr) "MASSBUS only"
QJ906-AY	Floppy Disk

APL-11/RT-11

DESCRIPTION: APL-11 is a mathematically structured programming language featuring many operators whose actions generalize to arrays of arbitrary order. Some of the APL-11 features include Chaining, Immediate Mode Editing, dynamically variable user workspace, symbol table size, and APL-10 compatibility.

SOFTWARE COMPONENTS: APL-11 Interpreter

MINIMUM HARDWARE: A valid RT-11 configuration, with additional memory of at least 22K words.

PREREQUISITE SOFTWARE: RT-11 (Q5003).

QJ907-AC	DECtape
QJ907-AD	Magtape (9-tr)
QJ907-AE	RK Disk (DECpack)
QJ907-AF	Magtape (7-tr)
QJ907-AP	Magtape (9-tr) "MASSBUS only"
QJ907-AY	Floppy Disk

BASIC-11 Version 2.0/IAS

DESCRIPTION: BASIC-11 Version 2.0 is a DEC standard BASIC implemented as an incremental interactive Interpreter and compatible with PDP-11 Basic Language Processors for BASIC/PTS, BASIC/CAPS, and BASIC/RT-11. Features include strings, chaining, overlay support, virtual memory (direct access files, and a "CALL" statement for assembly language routine interfacing.

SOFTWARE COMPONENTS: BASIC-11 Version 2.0 Language Processor.

MINIMUM HARDWARE: A valid IAS configuration.

PREREQUISITE SOFTWARE: IAS (QP210).

QP240-AD	Magtape (9-tr)	
QP240-AE	DECpack	
QP240-AF	Magtape (7-tr)	Additional Systems License
QP240-CD	Magtape (6-tr)	without Services.
QP240-CE	DECpack	
QP240-CF	Magtape (7-tr)	

BASIC-11 Version 2.0/RSX-11M

DESCRIPTION: BASIC-11 Version 2.0 is a DEC standard BASIC implemented as an incremental interactive Interpreter and compatible with PDP-11 BASIC Language Processors for BASIC/PTS, BASIC/CAPS, and BASIC/RT-11. Features include strings, chaining, overlay support, virtual memory (direct access files, and a "CALL" statement for assembly language routine interfacing.

SOFTWARE COMPONENTS: BASIC-11 Version 2.0 Language Processor.

MINIMUM HARDWARE: A valid RSX-11M configuration.

PREREQUISITE SOFTWARE: RSX-11M (QJ620).

QP240-AD	Magtape (9-tr)	
QP240-AE	DECpack	
QP240-AF	Magtape (7-tr)	Additional Systems License
QP240-CD	Magtape (6-tr)	without Services.
QP240-CE	DECpack	
QP240-CF	Magtape (7-tr)	

BASIC/CAPS

DESCRIPTION: BASIC/CAPS is a single user Dartmouth standard BASIC language processor utilized from DECassettes. It is an extension of BASIC-PTS including all BASIC/PTS features with chaining capability and standard DECassette file support.

SOFTWARE COMPONENTS: BASIC/CAPS language processor.

MINIMUM HARDWARE: PDP-11, 8K memory, console terminal, and TA11 dual DECassette system.

PREREQUISITE SOFTWARE: CAPS-11 (QJ180).

Ordering Information

QJ910-AN— Single-user license*; binaries on Cassette, manual
QJ910-EN— Sources on Cassette; (requires license*)
QJ910-FZ— Listing; (requires license*)

Support Category

B, one year Software Performance Reporting (SPR) Service.

Update Policy

Any future updates will be available at the prevailing handling and service charges.

BASIC/RT-11

DESCRIPTION: BASIC/RT-11 is a single-user Dartmouth standard BASIC language processor implemented as an incremental compiler and is an extension of BASIC/PTS and BASIC/CAPS. It includes all of the extended features of BASIC/PTS and BASIC/CAPS, as well as a direct access file capability.

SOFTWARE COMPONENTS: BASIC/RT-11 language processor.

MINIMUM HARDWARE: Any RT-11 system with 8K of memory (16K of memory for strings support).

PREREQUISITE SOFTWARE: RT-11 (QJ003).

Ordering Information

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of DIGITAL's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by DIGITAL.

Standard options with no support services are only available after the purchase of one supported license and after either an OEM Agreement or End-User Waiver of Support Agreement is in effect. When a software license is ordered without support services, the category of support applicable to such software is Category C.

Source and/or listing options are only available after the purchase of at least one supported binary license and after a source license agreement is in effect.

The following key (B, C, D, E, F, N, R, Y) represents the distribution media for the product and must be specified at the end of the "Q" number, i.e., QJ920-AD = binaries on 9-track magnetic tape.

B = Paper Tape
C = DECtape
D = 9-track Magnetic Tape
E = RK Disk (DECpack)
F = 7-track Magnetic Tape
N = Cassette
R = Microfiche
Y = Floppy Disk

STANDARD OPTIONS

QJ920-A— Single-use license, binaries, documentation, support services (media: B, C, D, E, F, N, Y)
QJ920-C— Single-use license, binaries, documentation, no support services (media: B, C, D, E, F, N, Y)

SOURCE/LISTING OPTIONS

QJ920-E— All sources (media: C. E. Y)
QJ920-F— Listings (media: R)

UPDATE OPTIONS

Users of BASIC/RT-11 whose license does not include free updates under warranty, whose warranty has expired, or whose Standard Binary Program Update Service has expired, may purchase the following. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QJ920-H— Binaries, documentation (media: B, C, D, E, F, N, Y)
QJ920-N— Source update (media: C, E, Y)

Support Category

B, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

BASIC/PTS

DESCRIPTION: BASIC/PTS is a single user Dartmouth standard BASIC language processor, implemented as an incremental compiler to provide exceptional execution speed while retaining the interactive nature of BASIC. Features include optional string capability and a "CALL" statement for easy interface of assembly language routines.

SOFTWARE COMPONENTS: BASIC/PTS language processor.

MINIMUM HARDWARE: PDP-11, 8K memory teletypewriter with paper tape I/O.

PREREQUISITE SOFTWARE: None.

Ordering Information

QJ900-AB— Single-user license*; binaries on paper tape, manual

Customers must first purchase a BASIC/PTS binary package, then may order:

QJ900-EB— Sources on paper tape (requires license*)
QJ900-FZ— Listings on paper (requires license*)

SUPPORT CATEGORY

B—One year Software Performance Reporting (SPR) Service.

UPDATE POLICY

Any future updates will be available at the prevailing handling and service charges.

BASIC-11 Version 2.0/RSX-11D

DESCRIPTION: BASIC-11 Version 2.0 is a DEC standard BASIC implemented as an incremental interactive interpreter and compatible with PDP-11 BASIC language processors for BASIC/PTS, BASIC/CAPS, and BASIC/RT-11. Features include strings, chaining, overlay support, virtual memory (direct access) files, and a "CALL" statement for assembly language routine interfacing.

SOFTWARE COMPONENTS: BASIC-11 Version 2.0 language processor.

MINIMUM HARDWARE: A valid RSX-11D configuration.

PREREQUISITE SOFTWARE: RSX-11D (QJ580).

QP240-AD	Magtape (9-tr)	
QP240-AE	DECpack	
QP240-AF	Magtape (7-tr)	Additional System License
QP240-CD	Magtape (6-tr)	without Services
QP240-CE	DECpack	
QP240-CF	Magtape (7-tr)	

BASIC-PLUS-2/RSTS/E

DESCRIPTION: BASIC-Plus-2 is a superset of the RSTS/E BASIC-Plus, BASIC-11/IAS-RSX, BASIC/RT-11 and Dartmouth BASIC languages. Extended features over RSTS/E BASIC-Plus include, common, ISAM (Indexed Sequential Access Method), Record I/O, interactive debugging, block mode terminal support, and a "CALL" statement.

SOFTWARE COMPONENTS: BASIC-Plus-2 language processor.

MINIMUM HARDWARE: A valid RSTS/E configuration.

PREREQUISITE SOFTWARE: RSTS/E (QR430).

QJ916-AD	Magtape (9-tr)	
QJ916-AE	DECpack	
QJ916-AF	Magtape (7-tr)	Additional System License
QJ916-CD	Magtape (9-tr)	without Services
QJ916-CE	DECpack	
QJ916-CF	Magtape (7-tr)	

BASIC-PLUS-2/IAS

DESCRIPTION: BASIC-Plus-2 is a superset of the RSTS/E BASIC-Plus, BASIC-11/IAS-RSX, BASIC/RT-11 and Dartmouth BASIC languages. Extended features over RSTS/E BASIC-Plus include, common, ISAM (Indexed Sequential Access Method), record I/O, interactive debugging, block mode terminal support, and a "CALL" statement.

SOFTWARE COMPONENTS: BASIC-Plus-2 language processor.

MINIMUM HARDWARE: A valid IAS configuration.

PREREQUISITE SOFTWARE: IAS (QP210).

QJ916-AD	Magtape (9-tr)	
QJ916-AE	DECpack	
QJ916-AF	Magtape (7-tr)	Additional System License
QJ916-CD	Magtape (9-tr)	without Services
QJ916-CE	DECpack	
QJ916-CF	Magtape (7-tr)	

BASIC-PLUS-2/RSX-11M

DESCRIPTION: BASIC-Plus-2 is a superset of the RSTS/E BASIC-Plus, BASIC-11/IAS-RSX, BASIC/RT-11 and Dartmouth BASIC languages. Extended features over RSTS/E BASIC-Plus include, common, ISAM (Indexed Sequential Access Method), record I/O, interactive debugging, block mode terminal support, and a "CALL" statement.

SOFTWARE COMPONENTS: BASIC-Plus-2 language processor.

MINIMUM HARDWARE: A valid RSX-11M configuration.

PREREQUISITE SOFTWARE: RSX-11M (QJ620).

QJ916-AD	Magtape (9-tr)	
QJ916-AE	DECpack	
QJ916-AF	Magtape (7-tr)	Additional System License
QJ916-CD	Magtape (9-tr)	without Services
QJ916-CE	DECpack	
QJ916-CF	Magtape (7-tr)	

COBOL-11/RSTS/E

DESCRIPTION: COBOL-11 is an ANSI-74 language processor, and is a well defined language for commercial applications. Compilation and execution of COBOL programs on the PDP-11 are characterized by a high rate of throughput and efficient memory utilization. The COBOL compiler accepts source input from cards, consoles, disks and library files.

SOFTWARE COMPONENTS: COBOL-11 Compiler, COBRG (Cobol Report Generator), Sort-11.

MINIMUM HARDWARE: A valid RSTS/E configuration.

PREREQUISITE SOFTWARE: RSTS/E (QR430).

QP010-AC	DECtape	
QP010-AD	Magtape (9-tr)	
QP010-AF	Magtape (7-tr)	
QP010-AE	DECpack	
QP010-CC	DECtape	Additional System License
QP010-CD	Magtape (9-tr)	without Support
QP010-CE	DECpack	
QP010-CF	Magtape (7-tr)	

COBOL-11/IAS

DESCRIPTION: COBOL-11 is an ANSI-74 language processor, and is a well defined language for commercial applications. Compilation and execution of COBOL programs on the PDP-11 are characterized by a high rate of throughput and efficient memory utilization. The COBOL compiler accepts source input from cards, consoles, disks and library files.

SOFTWARE COMPONENTS: COBOL-11 Compiler, COBRG (Cobol Report Generator), Sort-11.

MINIMUM HARDWARE: A valid IAS configuration.

PREREQUISITE SOFTWARE: IAS (QP210).

QP010-AC	DECtape	
QP010-AD	Magtape (9-tr)	
QP010-AF	Magtape (7-tr)	
QP010-AE	DECpack	
QP010-CC	DECtape	Additional System License
QP010-CD	Magtape (9-tr)	without Support
QP010-CE	DECpack	
QP010-CF	Magtape (7-tr)	

COBOL-11/RSX-11D

DESCRIPTION: COBOL-11 is an ANSI-74 language processor, and is a well defined language for commercial applications. Compilation and execution of COBOL programs on the PDP-11 are characterized by a high rate of throughput and efficient memory utilization. The COBOL compiler accepts source input from cards, consoles, disks and library files.

SOFTWARE COMPONENTS: COBOL-11 Compiler, COBRG (Cobol Report Generator), Sort-11.

MINIMUM HARDWARE: A valid RSX-11D configuration.

PREREQUISITE SOFTWARE: RSX-11D (QJ580).

QP010-AC	DECtape	
QP010-AD	Magtape (9-tr)	
QP010-AF	Magtape (7-tr)	
QP010-AE	DECpack	
QP010-CC	DECtape	Additional System License
QP010-CD	Magtape (9-tr)	without Support
QP010-CE	DECpack	
QP010-CF	Magtape (7-tr)	

FOCAL/PTS

DESCRIPTION: FOCAL/PTS is an easy-to-learn, interactive computer language ideal for scientists and students who need simplicity as well as power. It allows calculations to be performed immediately in response to a user command; or the stringing of commands to form a program. Double precision arithmetic is supported.

SOFTWARE COMPONENTS: FOCAL/PTS language processor.

MINIMUM HARDWARE: PDP-11, 4K memory, teletypewriter with paper tape I/O.

PREREQUISITE SOFTWARE: None.

Ordering Information

QJ006-AB— Single use license; binaries on paper tape and manual
QJ006-EC— Source on RT-11 format DECtape (requires license)
QJ006-FZ— Listings on paper (requires license)

SUPPORT CATEGORY

B, one year Software Performance Reporting (SPR) Service.

UPDATE POLICY

Any future updates will be available at the prevailing handling and service charges.

FORTRAN/RT-11

DESCRIPTION: FORTRAN/RT-11 is an extended superset of the ANSI standard FORTRAN IV language. Its features include: fast compile time, optimized output for fast execution, very efficient code generation, direct access I/O, and plotting support (LVII). The compiler and run time system can be effectively utilized in a minimum of only 8K of memory.

SOFTWARE COMPONENTS: FORTRAN/RT-11 Compiler and Run-Time System.

MINIMUM HARDWARE: Any RT-11 system with 16K of memory for strings support.

PREREQUISITE SOFTWARE: RT-11 (QJ003).

Source and/or listing options are only available after the purchase of at least one supported license and after a source license agreement is in effect.

STANDARD OPTIONS

QJ980-A— Single-use license, binaries, documentation, support services (media: C, D, E, Y).

SOURCE/LISTING OPTIONS

QJ980-E— All sources (media: C, D, E, Y).
QJ980-F— Listings (media: R).

UPDATE OPTIONS

Users of FORTRAN/RT-11 whose warranty has expired, or whose Standard Program Update Service has expired, may purchase the following. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QJ980-H— Binaries, documentation (media: C, D, E, Y).
QJ980-N— Source update (media: C, D, E, Y).

Users of FORTRAN/RT-11 whose license does not include free updates under warranty, and whose warranty has not expired, may purchase the following. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QJ980-W— Binaries, documentation (media: C, D, E, Y).

Support Category

B, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

Update Policy

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

FORTRAN IV/RT-11 EXTENSIONS

DESCRIPTION: The FORTRAN/RT-11 extensions consist of: Graphic subroutines for the VT-11 AN VS60, VT55. A separately available package supports the LVII plotter.

SOFTWARE COMPONENTS: FORTRAN/RT-11 extensions.

MINIMUM HARDWARE: Any valid RT-11 configuration with at least 16K words of memory.

OPTIONAL SUPPORTED HARDWARE: VT11A, VS60, VT55, LPS-11, AR11, DR11-K.

PREREQUISITE SOFTWARE: RT-11 (QJ003).

QJ980-AC	DECtape
QJ980-AD	Magtape (9-tr)
QJ980-AE	DECpack
QJ980-AR	Microfiche
QJ980-AY	Floppy Disk

ALL SOURCES

QJ980-EC	DECtape
QJ980-ED	Magtape (9-tr)
QJ980-EE	DECpack
QJ980-EY	Floppy Disk

LISTINGS

QJ980-FR	Microfiche

FORTRAN IV-PLUS/RSX-11D

DESCRIPTION: FORTRAN IV-Plus is a superset of FORTRAN IV. FORTRAN IV-Plus conforms to ANSI-66 specifications with extensions. FORTRAN IV-Plus provides additional features over FORTRAN-IV, i.e., entry, include, parameter, open, close, and program statements. Integer 4 (32-Bit) data type removal of invariant do loops etc.

SOFTWARE COMPONENTS: FORTRAN IV Plus Compiler.

MINIMUM HARDWARE: Any valid RSX-11D configuration.

PREREQUISITE SOFTWARE: RSX-11D (QJ580).

QP100-AD	Magtape (9-tr) TU10
QP100-AE	DECpack

SOURCES (OTS)

QP101-ED	Magtape (9-tr) TU10
QP101-EE	DECpack

LISTINGS (OTS)

QP101-FR	Microfiche

FORTRAN IV-PLUS/IAS

DESCRIPTION: FORTRAN IV-Plus is a superset of FORTRAN IV. FORTRAN IV-Plus conforms to ANSI-66 specifications with extensions. FORTRAN IV-Plus provides additional features over FORTRAN IV, i.e., entry, include, parameter, open, close, and program statements. Integer 4 (32-Bit) data type removal of invariant do loops etc.

SOFTWARE COMPONENTS: FORTRAN IV-Plus Compiler.

MINIMUM HARDWARE: Any valid IAS configuration.

PREREQUISITE SOFTWARE: IAS (QP210).

QP100-AE   Magtape (9-tr) TU10
QP100-AD   DECpack

SOURCES (OTS)

QP101-ED   Magtape (9-tr) TU10
QP101-EE   DECpack

LISTINGS (OTS)

QP101-FR   Microfiche

FORTRAN IV-PLUS/RSX-11M

DESCRIPTION: FORTRAN IV-Plus is a superset of FORTRAN IV. FORTRAN IV-Plus conforms to ANSI-66 specifications with extensions. FORTRAN IV-Plus provides additional features over FORTRAN IV, i.e., entry, include, parameter, open, close, and program statements. Integer 4 (32-Bit) data type removal of invariant do loops etc.

SOFTWARE COMPONENTS: FORTRAN IV-Plus Compiler.

MINIMUM HARDWARE: Any valid RSX-11M configuration.

PREREQUISITE SOFTWARE: RSX-11M (QJ620).

QP100-AD   Magtape (9-tr) TU10
QP100-EA   DECpack

SOURCES (OTS)

QP101-ED   Magtape (9-tr) TU10
QP101-EE   DECpack

LISTINGS (OTS)

QP101-FR   Microfiche

FORTRAN IV/IAS

DESCRIPTION: FORTRAN IV/IAS is an extended implementation of ANSI-66 FORTRAN. The following extensions are implemented in the language:

* Encode and decode statements
* Print, type and accept I/O statements
* Optimized arithmetic and logical "if" statements
* Common subexpression elimination
* Overlay support for programs and data

SOFTWARE COMPONENTS: FORTRAN IV Compiler.

MINIMUM HARDWARE: Any valid IAS configuration.

PREREQUISITE SOFTWARE: IAS (QP210).

QP230-AC   DECtape
QP230-AD   Magtape (9-tr)
QP230-AE   DECpack
QP230-AF   Magtape (7-tr)
QP230-CC   DECtape   Additional System License
QP230-CD   Magtape (9-tr)   without Support
QP230-CE   DECpack
QP230-CF   Magtape (7-tr)

FORTRAN IV/RSX-11M

DESCRIPTION: FORTRAN IV/RSX-11M is an extended implementation of ANSI-66 FORTRAN. The following extensions are implemented in the language:

* Encode and decode statements
* Print, type and accept I/O statements
* Optimized arithmetic and logical "if" statements
* Common subexpression elimination
* Overlay support for programs and data

SOFTWARE COMPONENTS: FORTRAN IV Compiler.

MINIMUM HARDWARE: Any valid RSX-11M configuration.

PREREQUISITE SOFTWARE: RSX-11M (QJ620).

QP230-AC	DECtape	
QP230-AD	Magtape (9-tr)	
QP230-AE	DECpack	
QP230-AF	Magtape (7-tr)	
QP230-CC	DECtape	Additional System License
QP230-CD	Magtape (9-tr)	without Support
QP230-CE	DECpack	
QP230-CF	Magtape (7-tr)	

FORTRAN IV/RSX-11D

DESCRIPTION: FORTRAN IV/RSX-11D is an extended implementation of ANSI-66 FORTRAN. The following extensions are implemented in the language:

* Encode and decode statements
* Print, type and accept I/O statements
* Optimized arithmetic and logical "if" statements
* Common subexpression elimination
* Overlay support for programs and data

SOFTWARE COMPONENTS: FORTRAN IV Compiler.

MINIMUM HARDWARE: Any valid RSX-11D configuration.

PREREQUISITE SOFTWARE: RSX-11D (QJ580).

QP230-AC	DECtape	
QP230-AD	Magtape (9-tr)	
QP230-AE	DECpack	
QP230-AF	Magtape (7-tr)	
QP230-CC	DECtape	Additional System License
QP230-CD	Magtape (9-tr)	without Support
QP230-CE	DECpack	
QP230-CF	Magtape (7-tr)	

FORTRAN IV/RSTS/E

DESCRIPTION: FORTRAN IV/RSTS/E is an extended implementation of ANSI-66 FORTRAN. The following extensions are implemented in the language:

* Encode and decode statements
* Print, type and accept I/O statements
* Optimized arithmetic and logical "if" statements
* Common subexpression elimination
* Overlay support for programs and data

SOFTWARE COMPONENTS: FORTRAN IV Compiler.

MINIMUM HARDWARE: Any valid RSTS/E configuration.

PREREQUISITE SOFTWARE: RSTS/E (QR430).

QR435-AC	DECtape
QR435-AD	Magtape (9-tr)
QR435-AE	DECpack
QR435-AF	Magtape (7-tr)

RPG II/RSTS/E

DESCRIPTION: RGP II is a high level commercial programming language which allows an applications programmer to perform various functions beyond report generation. RPG II is a parameter driven language, versus COBOL and BASIC which are procedural. RPG II is used primarily as a Batch Processing Language. Features include "Conversion-Aid," Utilities, Data Files, Programs, and Inter-active Processing.

SOFTWARE COMPONENTS: RGP II Compiler.

MINIMUM HARDWARE: A valid RSTS/E configuration.

PREREQUISITE SOFTWARE: RSTS/E (QR430).

QP550-AC	DECtape
QP550-AD	Magtape (9-tr)
QP550-AE	DECpack
QP550-AF	Magtape (7-tr)
QP550-AY	Floppy Disk
QP550-AZ	No hardware dependency