

HP 3000 Computer Systems



Series 37 & Series 37XE

Configuration and Ordering Worksheet

Overview

This worksheet is provided to help you quickly and accurately configure Series 37 and Series 37XE systems. Included are processor options and add-on products; supported devices and cabling information; data communications products; and configuration rules to ensure that final configurations can be supported and will meet the customers needs.

Configuration Steps

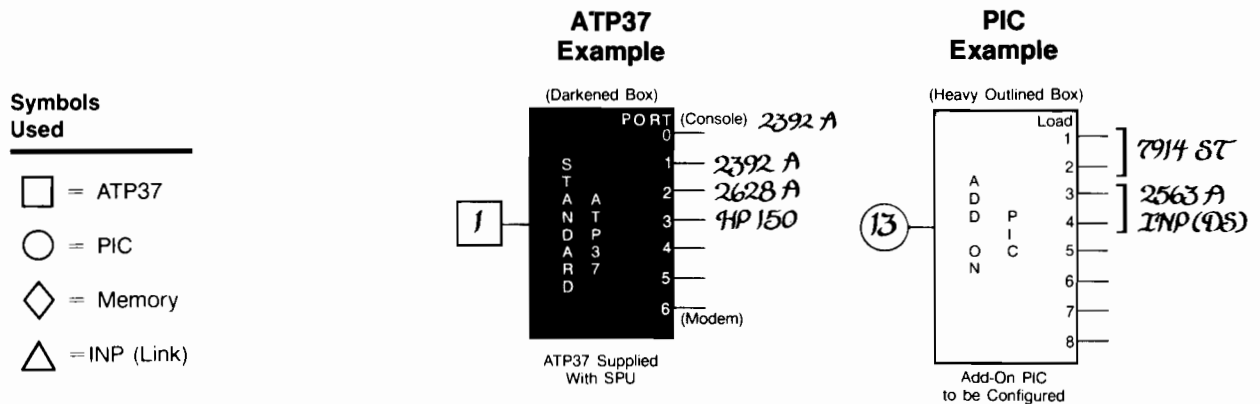
A step-by-step approach has been combined with configuration diagrams so that desired combinations of products can be verified to be supportable. Add-on products can be matched to required card slots so that appropriate SPU expansion can be selected based on the customer's needs.

Separate configuration diagrams have been provided for the Series 37 and Series 37XE. In addition, card cage layouts are also shown for 2 Mbyte SPU configurations, even though the 2 Mbyte card is an option in each case. This will simplify the configuration process for maximum memory configurations and where maximum SPU expandability is required.

By following the steps indicated, it is simple to plan a new system or to add to an existing one.

Add-on Products

Standard cards supplied with the SPU are designated by darkened boxes, while add-on products are shown as heavily outlined boxes (see figure below). To begin a configuration, start with the cards which come standard with the SPU before configuring add-on products.



Add-on products to the SPU include Memory, Advanced Terminal Processors (ATP37), Peripheral Interface Channels (PIC) and Intelligent Network Processors (INP), each of which require separate card slots for configuration.

NOTE: Only one card can be configured per card slot.

When choosing add-on products, denoted by circles, squares, diamonds or triangles, be certain to write the number of the card slot which the card will occupy in the SPU. Then fill in the symbol matching the add-on product to show that the card slot is no longer available. The symbols designate which add-on products can be configured in a card slot, but are also subject to rules on card placement.

Using this approach, add-on products and the card slots they occupy will be evident at a glance.

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

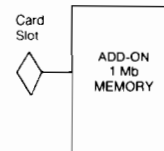
Configuration Steps

STEP 1: MAIN MEMORY REQUIREMENTS

(Standard memory is 512 Kb on Series 37 and 1 Mb on Series 37XE.)

Maximum memory = 2 Mb

Indicate memory required for customer's application.



- ___ 1a. 512 Kb
- ___ 1b. 1 Mb
- ___ 1c. 2 Mb
- ___ 1d. 2 × 1 Mb Config. (requires card slot 3 in SPU)

STEP 2: PERIPHERAL INTERFACE CHANNEL REQUIREMENTS

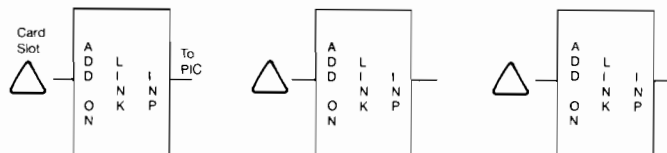
(One PIC is shipped standard with each SPU.)

Maximum PIC's = 3; 2 high speed and 1 low speed. (The third PIC supports only INP's.)

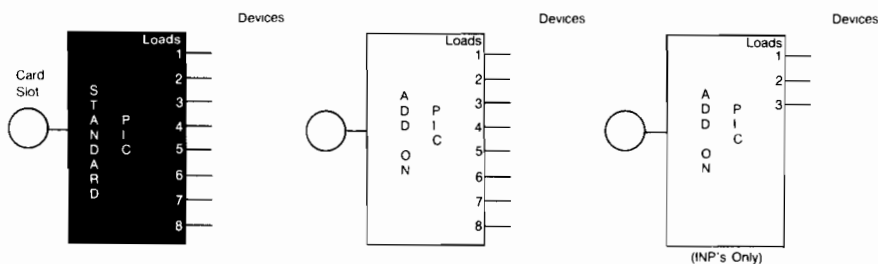
Note: To configure PIC's, you must consider peripheral speed, number of devices, device loads, cable lengths and system performance.

- ___ 2a. Using the HP-IB DEVICE Table on page 4, determine the number of disc drives, tapes drives, line and page printers to be configured.
- ___ 2b. Using the DATACOMM PRODUCTS Table on page 6, determine how many INP's must be configured. (Max. INP's Series 37 = 1; Series 37XE = 3)

Note: Each LINK product includes an INP unless deleted with Opt. 190.



- ___ 2c. Determine the total HP-IB connections by summing lines 2a and 2b. (Max = 6 per PIC.)
- ___ 2d. Determine the number of electrical device loads that the devices from step 2c. represent using the HP-IB DEVICES Table. (Max = 8 device loads and 6 devices per PIC.)
- ___ 2e. Determine how many PIC's are required by configuring HP-IB devices and their device loads using the following diagrams.



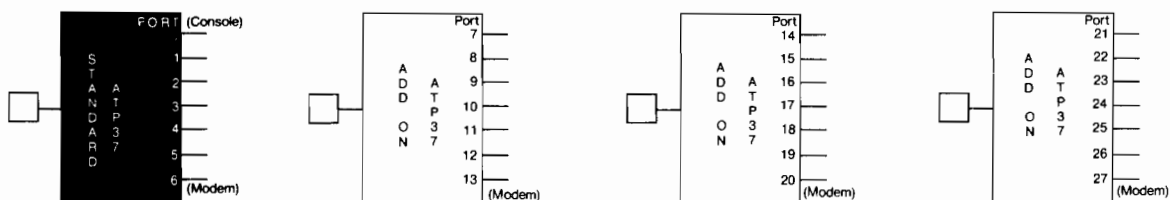
STEP 3: ADVANCED TERMINAL PROCESSOR (ATP37) REQUIREMENTS

(One ATP37 is shipped standard with each SPU.)

Ports per ATP37 = 7; Six 3-pin direct and one 25-pin modem connect.

- ___ 3a. Using the SERIAL DEVICES Table on page 4, determine how many ATP ports will be required.
- ___ 3b. Determine how many ATP37s are required by configuring Serial devices using the diagrams below.

Note: Slave configured devices do not occupy ATP ports.



STEP 4: ADDITIONAL CARD SLOT REQUIREMENTS

- 4a. Sum all add-on cards to determine how many additional card slots are required for the configuration.
- _____ Add-on INP cards (from line 2b)
- _____ Add-on PIC cards (subtract 1 from Line 2e)
- _____ Add-on ATP37 cards (subtract 1 from Line 3b)
- _____ Total number of additional card slots required. (Max = 6 available card slots.)

STEP 5: SELECTING THE RIGHT SYSTEM PROCESSOR UNIT

- _____ 5a. Using the table below, match the amount of memory to be configured with the number of additional card slots needed (from Step 4a), to determine which SPU must be ordered to support the desired configuration.

Memory Configuration	Additional Card Slots Required						
	0	1	2	3	4	5	6
Single 512 Kb Card	37	37	XE				
Single 1 Mb Card	37	37					
Single 2 Mb Card	37	37	XE				
Two 1 Mb Cards	37	XE					

STEP 6: VERIFYING THE CONFIGURATION

Using the appropriate SPU CONFIGURATION DIAGRAM below, configure add-on memory, PIC, INP and ATP37 cards in the available card slots according to the specified rules.

Note: Not all maximums can be achieved simultaneously and tradeoffs may be required in reaching a final configuration. If insufficient card slots are available to meet a customer's requirements, then a larger HP 3000 should be considered.

STEP 7: SPECIFYING THE MEDIA PRODUCT (For U.S. Only)

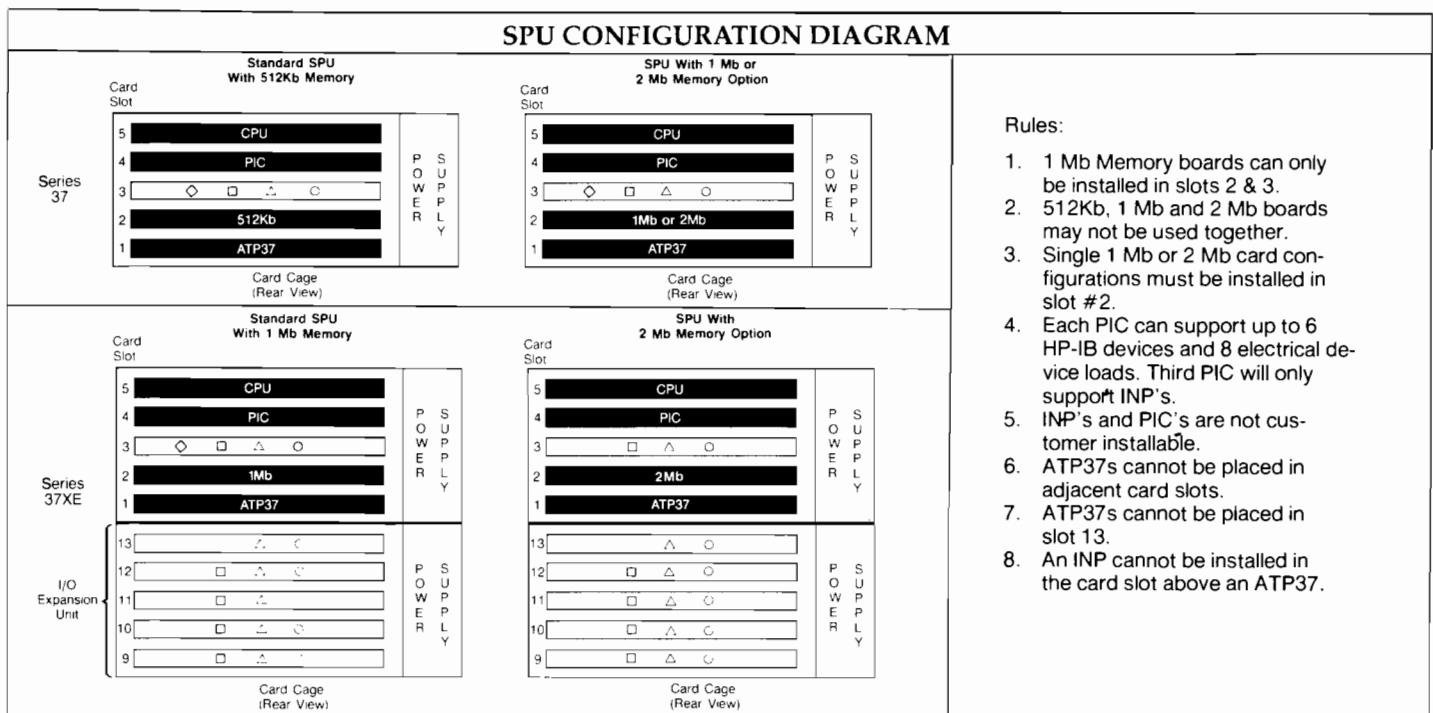
Order the correct 32449Z/32450Z option based upon the configured backup device. The media product MUST be specified to complete the order.

STEP 8: SPECIFYING HARDWARE & SOFTWARE SUPPORT PRODUCTS

Using the FOS SUPPORT PRODUCTS Table at the bottom of page 6, select the desired level of support for system software. Also, remember to order appropriate hardware, workstation and application software support products.

STEP 9: GENERATING A QUOTATION WORKSHEET

- _____ 9a. Consolidate SPU options and add-on products from Steps 1-3 onto the SYSTEM PROCESSOR UNIT OPTIONS & ADD-ONS Table on page 5.
- _____ 9b. Generate your Quotation Worksheet using the information in the SYSTEM PROCESSOR UNIT OPTIONS & ADD-ONS Table, the HP-IB DEVICES Table and the SERIAL DEVICES Table.



HP-IB DEVICES

Quantity To Be Ordered	Devices	Description	Supported Maximums		Device Speed	Device Load Std (Var.)	HP-IB Cables
			S/37	S/37XE			
	MASS STORAGE						
_____	7945A	55 Mb Disc Drive	4	4	High	1	1 m. incl.
_____	7914P*	132 Mb Disc Drive	4	4	High	1	1 m. incl.
_____	7914ST**	132 Mb Disc & Mag Tape	2	2	High	2 (2-4)	2 m. incl.
_____	7914CT	132 Mb Disc & Cartridge Tape	2	2	High	2 (2-4)	2 m. incl.
_____	7933H	404 Mb Fixed Media Disc	4	4	High	1	1 m. incl.
_____	7935H	404 Mb Removable Media Disc	4	4	High	1	1 m. incl.
	Maximum Disc Drives Supported		8	8			
	BACKUP DEVICES						
_____	9144A	1/4 in. Cartridge Tape	2	2	High	1	Order Sep.
_____	7974A**	1600 bpi Mag Tape Drive	2	2	High	1 (1-3)	2 m. incl.
_____	7978A	6250 bpi Mag Tape Drive	2	2	High	1 (1-3)	2 m. incl.
_____	9895A†	8½" Diskette Drive	1	1	High	1	Order Opt. 333
	Maximum Tape Drives Supported		2	2			
	SYSTEM LINE PRINTERS						
_____	2563A	300 lpm Dot Matrix	2	2	High	1 (1-7)	Order
_____	2565A	600 lpm Dot Matrix	2	2	High	1 (1-7)	Opt. 337
_____	2566A	900 lpm Dot Matrix	2	2	High	1 (1-7)	(4 m. cable)
	Maximum Line Printers Supported		2	2			
	SYSTEM PAGE PRINTERS						
_____	2680A	45 ppm Laser System	2	2	High	4 (1-8)	8 m. incl.
_____	2688A	12 ppm Laser Desktop	2	2	High	4 (1-8)	8 m. incl.
	Maximum Page Printers Supported		2	2			
	DATA COMMUNICATION LINKS						
_____	N/A	Intelligent Network Processor	1	3	Low	1	Included

* The Integrated Cartridge Tape is not supported on the 7914P or 7914ST.

** The 7914ST with option 114 has a device load of 3 (variable from 3-5).

The 7914ST should be included in the maximum for tape drives.

Two (2 meter) HP-IB cables are supplied with the 7914ST.

†Used only for media transfer.

SERIAL (RS-232-C) DEVICES

Quantity To Be Ordered	Devices Description		Supported Maximums		Connection			Cables Required		
					ATP37					
			S/37	S/37XE	Direct	Modem	Slave	Direct + Adaptor	Modem	Slave
	TERMINALS									
_____	2392A	Office Display	14	28	_____	_____	N/A	Opt. 304	40242M	
_____	2623A	B&W Graphics Display	14	28	_____	_____	N/A	13222X	13222N	
_____	2624B	Data Entry Display	14	28	_____	_____	N/A	13242X	13242N	
_____	2625A	Dual System Display	14	28	_____	_____	N/A	13242X	13242N	
_____	2628A	Word Proc./Graphics	14	28	_____	_____	N/A	13242X	13242N	
	PERSONAL COMPUTERS									
_____	HP 150	The Touchscreen PC	14	28	_____	_____	N/A	13242G		
	CHARACTER & PAGE PRINTERS									
_____	2601A	40 cps Daisywheel	3	3	_____	N/A	_____	13242N + 30152A	13242N	13242G
_____	2602A	20 cps Daisywheel	3	3	_____	N/A	_____	13242N + 30152A	13242N	13242G
_____	2932A	200 cps Dot Matrix	3	3	_____	_____	_____	13242X	13242N	13242G
_____	2934A	100/200 cps Dual Mode	3	3	_____	_____	_____	13242X	13242N	13242G
_____	2686A	8 ppm LaserJet	3	3	_____	N/A	N/A	92218D		
_____	2687A***	12 ppm Text Laser	1	1	_____	N/A	N/A	92218D		
	Maximum Serial Printers Supported		3	3						
	GRAPHICS PLOTTERS									
_____	7470A	2 pen plotter			_____	N/A	_____	30152A + 17355A		13242G
_____	7475A	6 pen plotter			_____	N/A	_____	30152A + 17355A		13242G

N/A = Not Applicable.

*** When the 2687A is configured, no other serial printer may be configured.

Series 37 & Series 37XE

System Processor Unit Options & Add-Ons

Quantity To Be Ordered	Product Number	Options	Description
SERIES 37 PACKAGE (Note: All items must be ordered to qualify for M09B adjustments. Order SPU options described below for the Series 37 System Processor Unit. Options and add-on products do not qualify for M09B discounts.)			
_____	32449A	022	HP 3000 Series 37 System Processor Unit DUS S/W on Cart. Tape Media
_____	32449Z	022	Series 37 Media Product for MPE V/E Cartridge Tape Media
_____	7945A		55 Mb Disc Drive
_____	9144A		67 Mb Cartridge Tape Drive
_____	2392A	304	System Console RS-232-C Terminal Cable (40242X)
SERIES 37 SYSTEM PROCESSOR UNIT			
_____	32449A	001	HP 3000 Series 37 System Processor Unit Add-on ATP37
_____		015	200-240 VAC System Operation
_____		022	DUS S/W on Cart. Tape Media
_____		051	DUS S/W on 1600 bpi Media
_____		508	Expands memory to 1024 Kb
_____		509	Expands memory to 2048 Kb
_____	32449Z		Series 37 Media Product for MPE V/E
_____		022	Cartridge Tape Media
_____		051	1600 bpi Tape Media
SERIES 37XE SYSTEM PROCESSOR UNIT			
_____	32450B	015	HP 3000 Series 37XE System Processor Unit 200-240 VAC System Operation
_____		022	DUS S/W on Cart. Tape Media
_____		051	DUS S/W on 1600 bpi Media
_____		509	Expands memory to 2048 Kb
_____	32450Z		Series 37XE Media Option for MPE V/E
_____		022	Cartridge Tape Media
_____		051	1600 bpi Tape Media
_____	32450BH		Series 37-to-Series 37XE Upgrade
_____		015	200-240 VAC System Operation
_____		190	Deletes 1 Mb memory
ADD-ON PRODUCTS			
_____	30459A		Peripheral Interface Channel (PIC)
_____	30460A		Advanced Terminal Processor (ATP37)
_____	30461A		512 Kb Memory Card
_____	30456A		1 Mb Memory Card
_____	30462A		2 Mb Memory Card
_____	30461AN		Return Credit for 512 Kb Memory Card
_____	30456AN		Return Credit for 1 Mb Memory Card (Max. of 2 credits apply to purchase of memory or system upgrade.)
_____	92211R	Order from	Additional Rack Mount Cabinet (including rails and filler panels)
_____	92199A	CSO	Power Tap (4 outlets), 125 VAC 60 Hz, 15A.



NOTES:

1. HP Installation — HP Site Prep & Installation are available on the 32449A Package. Contact your local CEO for ordering details.
2. Add-on Cabinets — The standard system cabinet will hold 4 components. If additional HP-IB devices are to be mounted in add-on cabinets (92211A), then site preparation may be required. Contact your local CEO for detailed requirements.
3. Tele-Support Modem — a 1200 baud modem will be supplied with the system at no extra charge when a one year AMS or RCS contract is purchased with the system.
4. Modem Ports — ATP37 modem ports can be used to direct connect serial devices. Proper cables are required. One modem port must be made available to HP during support efforts.
5. 28 Port Configuration — Anytime four (4) ATP37 cards are to be configured in a Series 37XE, the standard PIC located in slot 4 must be relocated to slot 12. This will require the system disc DRT be reconfigured. Make sure your SE verifies the configuration.
6. Backup Devices — the 9144A can be used to backup on-line storage capacities up to 220 Mb for 1 or 2 Mb Memory Configurations; 132 Mb for 512 Kb memory. On-line storage greater than 220 Mb requires purchase of a 1600 or 6250 bpi tape drive.

Data Communication Products

Quantity To Be Ordered	Product Number	Options	Description
HP-to-HP COMMUNICATIONS			
_____	32185A/M/R	310	DS SERVICES For Series 37 and Series 37XE
_____	30270A	See LINK Options	LINK: Point-to-Point Hardwire Connection
_____	30271A	Below	LINK: Point-to-Point Modem Connection
_____	32187A		LINK: X.25 Network Connection
HP-to-IBM CONNECTIONS			
_____	30248A/M/R	310	RJE SERVICE For Series 37 and Series 37XE
_____	30249A/M/R	310	MRJE SERVICE For Series 37 and Series 37XE
_____	30250A/M/R	310	IMF SERVICE For Series 37 and Series 37XE
_____	30251A	See LINK Options Below	BSC LINK

LINK OPTIONS

Quantity To Be Ordered	Point-to-Point		X.25 (32187A)	BSC (30251A)	Order Option	Description
	Hardwire (30270A)	Modem (30271A)				
_____		X	X	X	110	For Sync. Modem Connection
_____		X		X	115	For X.21 Connection
_____		X	X	X	120	For High Speed (up to 56 kbps) connection a V.35 Digital Phone Network
_____		X	X	X	125	For Sync. Modem w/Auto Call
_____	X				135	For High Speed Connection (up to 56 kbps) to HP 3000
_____	X				140	For Medium Speed Connection to an HP 3000 SSLC
_____	X				145	For High Speed Connection to an HP 1000
_____	X	X	X	X	190	Deletes interface hardware for non-concurrent communications over shared LINK

32449A/32450A FOS SUPPORT PRODUCTS

Quantity To Be Ordered	Support Category	AMS (T)	RCS (H)	SMS (S)	ASC (V)	EMS (W)	MUS (Q)	FOS Support Products
CENTRAL SITE COVERAGE								
_____	FOS on Cartridge Tape	+T22	+H22	+S22				AMS = Account Management Support RCS = Response Center Support SMS = Software Materials Subscription ASC = Additional System Coverage EMS = Extended Materials Subscription MUS = Manual Update
_____	FOS on 1600 bpi Tape	+T51	+H51	+S51				
ADDITIONAL SITE COVERAGE					+V00	+W00		
_____	With HP Supplied Cartridge Tape				+V22	+W22		
_____	With HP Supplied 1600 bpi Tape				+V51	+W51		
_____	MANUAL UPDATES						+Q00	