

Microprocessor and Bus Interfaces and Software Accessories for HP Logic Analyzers

Technical Specifications

The Widest Range of Logic Analysis Support for Microprocessors, Standard Buses, and System Interfaces

January 1, 1997

Preprocessors and inverse assemblers make it easy to analyze microprocessor and bus activity by making the physical connection to the target and disassembling bus states into microprocessor assembly language. HP and HP Channel Partners provide hundreds of preprocessors and adapters for HP logic analyzers, offering broad support for microprocessors, industry standard buses, and system interfaces. HP introduces new preprocessors as new processors become available.

Device Manufacturer and Name	Device Package Type	Logic Analyzer Support [8],[12]						RSE NOW [7]	Min # Pods [12]	Bus Clk MHz	HW Style [1]	HP Product or 3rd Party [10],[*]	USA List Price[5]
Actel FPGA													
ACT1010,1020	PGA	1	2	1	2	61	71	N/A	5	50	U-B	Corelis	\$950
ACT1280	PGA	1	2	1	2	61	71	N/A	5	50	U-B	Corelis	\$1,250
Altera EPLD													
EPM5128-P	PGA	1	1	1	1	62	72	1421	4	35	U-B	Corelis	\$950
EPM5192-P	PGA	1	2	1	2	61	71	1421	5	35	U-B	Corelis	\$950
AMD													
29000/50	PGA	1		1	2	61	71	1311	5	50	PT-B	Corelis	\$2,950
29030	PGA	1		1	2	61	71	1424	5	50	PT-B	Corelis	\$2,950
29040	PGA	1		1	2	61	71	N/A	5	50	PT-B	Corelis	\$3,450
29200	PQFP	1		1	2	61	71	1428	5	50	PT-B	Corelis	\$2,950
29202	PQFP	1		1	2	61	71	N/A	5	25	PT-B	Corelis	\$2,950
29205	PQFP	1		1	2	61	71	1483	5	16	PT-B	Corelis	\$2,950
29240,243,245	PQFP	1		1	2	61	71	1483	5	25	PT-B	Corelis	\$2,950
186EM/ES	PQFP	1		1	1	62	72	N/A	4	40	PT-B	Corelis	\$3,250
	TQFP	1		1	1	62	72	N/A	4	40	PT-B	Corelis	\$4,750
188EM/ES	PQFP	1		1	1	62	72	N/A	4	40	PT-B	Corelis	\$3,250
	TQFP	1		1	1	62	72	N/A	4	40	PT-B	Corelis	\$4,750
Analog Devices													
ADSP 2100/2101	[2]	1						N/A	3		N/A	Factory	Free
ADSP 2111	PQFP	1		1		62	72	N/A	3	All	PT-B	ET	\$1,485
Aptix													
AX1024D FPIC	PGA	1		1		62	72	N/A	4	All	U-B	Aptix	
AT&T													
92010 (Hobbit)	PQFP	2		1	2	61	71	1486	6	All	PT-E	Corelis	\$4,250

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		510	541	550	55X	6X	7X						
Cypress													
7CY601 (SPARC)	PGA	1	2	1		61	71	1403	5	35	P-C	ALD	\$1,495
Cyrix													
486SLC	PQFP	1		1		62	72	N/A	4	33	PT-B	ET	\$1,625
Dallas													
80C320	DIP					64	72	N/A	2	8	PT-B	ET	\$285
	PLCC					64	72	N/A	2	8	PT-B	ET	\$340
	PQFP					64	72	N/A	2	8	PT-B	ET	\$885
Fujitsu													
MB86901 (SPARC)	PGA	1	2	1	2	61	71	1404	5	25	P-B	ALD	\$1,495
MB86930	PQFP			1	2	61	71	N/A	6	40	PT	ALD	\$2,995
MB86932	PQFP			1	2	61	71	N/A	6	40	PT	ALD	\$2,995
MB86933H	PQFP			1	2	61	71	N/A	6	25	PT	ALD	\$2,995
MB86934	PQFP			1	2	61	71	N/A	6	60	PT	ALD	\$2,995
MB86935	PQFP			1	2	61	71	N/A	6	50	PT	ALD	\$2,995
MB86936	PQFP			1	2	61	71	N/A	6	50	PT	ALD	\$2,995
GTE													
65816	[2]	1						N/A	3	All	N/A	Factory	Free
IBM													
PowerPC 601	PQFP	2		2	2	60	70	1450	8	60	U-B	Corelis	\$3,250
PowerPC 601/603/403[2]				2	2	60	70	1352	8	66	N/A	E2449B	\$1,020
PowerPC 603/603e	PQFP			2	2	60	70	1387	8	66	PT-B	*E2455B	\$5,800
PowerPC 403GA/GC	PQFP			1	2	61	71	1398	5	50	PT-C	E2468A	\$3,060
		(160-pin PPC 403GA/GC requires E2468A & E5335A PQFP adapter)								LBPS	E5335A	\$2,450	
PowerPC 604	PGA			2	2	60	70	1354	8	66	PT-B	*E2465A	\$6,630
IDT													
R3041	PLCC	1		1	2	61	71	1484	5	50	PT-B	Corelis	\$2,950
79R3051/52	PLCC	1		1	2	61	71	1427	5	50	PT-B	Corelis	\$2,950
79R3081/82	PLCC	1		1	2	61	71	1427	5	50	PT-B	Corelis	\$2,950
R36100	PQFP	2		1	2	61	71	N/A	6	33	PT-B	Corelis	\$3,250
R4000/4400PC	PGA	2		2	2	60	70	N/A	8	50	PT-B	Corelis	\$3,250
R4600/4700	PGA	2		1	2	61	71	N/A	6	All	PT-B	Corelis	\$3,250
	MQUAD												
R4640	PQFP	1		1	1	62	72	N/A	4	All	PT-B	Corelis	\$3,250
R4650	MQUAD	2		1	2	61	71	N/A	6	All	PT-B	Corelis	\$3,250
R5000	PGA	2		1	2	61	71	N/A	6	All	PT-B	Corelis	\$3,450
Intel													
8080	[2]	1						N/A	2	All	N/A	Factory	Free
8085	DIP	1		1	1	63	72	N/A	2	12	P-B	ET	\$600
8086/8088	DIP	1		1	1	62	72	N/A	3	10	P-B	ET	\$600
MCS-51 [3]	DIP			1	1	62	72	1395	3	16	PT-B	*E2415B	\$1,020
	PLCC	(44-pin PLCC requires E2415B and ET adapter)										ET	\$385

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		510	541	550	55X	6X	7X						
8031/51	DIP	1	1			63	72	N/A	2	16	PT-B	ET	\$265
8031/51	PLCC	1	1			63	72	N/A	2	16	PT-B	ET	\$340
8031/51	PQFP	1	1			63	72	N/A	2	16	PT-B	ET	\$885
8X51GB	PLCC	1		1	1	63	72	N/A	2	16	PT-B	ET	\$950
MCS-96 [4]	PLCC	1	1	1	1	62	72	1396	3	25	PT-B	E2416B	\$1,940
80C196KA/KB [4]	PLCC	1	1	1	1	62	72	1396	3	25	PT-B	E2416B	\$1,940
80C186-88EA/XL	PGA	1	1	1	1	62	72	1381	3	20	PT-D	*E2434A	\$1,095
	PLCC QFP	(68-pin PLCC directly supported by E2434A) (80-pin soldered QFP requires E2434A and #1CC)									AA	#1CC	\$780
80186/88	PGA	1		1	1	62	72	N/A	3	20	PT-B	ET	\$800
	PLCC	1		1	1	62	72	N/A	3	20	PT-B	ET	\$900
	LCC	1		1	1	62	72	N/A	3	20	PT-B	ET	\$950
80186XL	QFP	1		1	1	62	72	N/A	3	20	PT-B	ET	\$1,800
80C186/188EB	PLCC	1	1	1	1	62	72	1381	3	20	PT-D	*E2434B	\$1,190
	QFP	(80-pin soldered QFP requires E2434B and #1CC)									AA	#1CC	\$780
80C186EB	PLCC	1		1	1	62	72	N/A	3	20	PT-B	ET	\$1,300
80C186/188EC	QFP	1	1	1	1	62	72	1381	3	20	PT-D	*E2434C	\$1,040
		(100-pin sqr. soldered QFP requires E2434C and E3432A)										E3424A	\$1,260
		(100-pin rect. soldered QFP requires E2434C and E3424A)										E3432A	\$1,260
		(100-pin sqr. socketed QFP requires E2434C and ET adapter)										ET	
80286	PGA	1	1	1	1	62	72	1327	3	25	PT-C	*E2409C	\$2,040
	LCC	(68-pin socketed LCC requires E2409C and #1CA)										#1CA	\$714
	PLCC	(68-pin socketed PLCC requires E2409C and #1CB)										#1CB	\$296
80386CX	PQFP	1		1	2	61	71	N/A	5	25	P-B	ET	\$1,350
80386DX	PGA	1	1	1	2	61	71	1323	5	33	PB-C	*E2444A	\$2,290
80386EX	PQFP			1	1	62	72	1382	4	25	PB-F	*E2454A	\$3,120
	TQFP	(144-pin soldered TQFP requires E2454A, E5336A, E3442A, & E5338A)										E5338A	\$2,040
												E3442A	\$565
											EPS	E5336A	\$689
80386SX	PQFP	1		1		62	72	1443	4	25	PT-B	ET	\$1,350
80486SX,DX2,OD	PGA		2	1	2	61	71	1329	5	50	PB-C	*E2411C	\$2,705
208 pin 486DX4,SLE	PQFP	(Soldered 208-pin PQFP requires E2411C and E5344A)									LBPS	E5344A	\$2,500
196 pin 486SX	PQFP	(Soldered 196-pin PQFP requires E2411C and ET Adapter)										ET	
176 pin 486SXSf	PQFP	(Soldered 176-pin PQFP requires E2411C and E5353A)									EPS	E5353A	\$3,315
Pentium CPU 567\66	PGA		3	2				1445	10	66	U-B	ET	\$1,000
Pentium CPU 567\66	PGA		3	2	2	60	70	1380	8	66	PB-C	*E2443B	\$5,200
Pentium CPU815\100	SPGA		3	2	2	60	70	1383	8	66	PB-C	*E2457A	\$5,200
Pentium Run Control Probe for Pentium CPU815\100 (See technical data sheet for details)												E3491A	\$7,650
Pentium Pro	SPGA			2	3			1324	10	66	E	*E2466B	\$8,160
80860XR	PGA	1	2	1	2	61	71	N/A	5	50	U-B	Corelis	\$1,950
80960CA	PGA	1	2	1	2	61	71	1326	5	40	U-B	Corelis	\$1,950
80960CA/CF	PGA	1	2	1	2	61	71	1328	5	40	P-C	E2432A	\$3,120
80960H-Series	PGA			1	2	61	71	1334	6	40	PB-C	*E2473A	\$3,365

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		510	541	550	55X	6X	7X						
80960J-Series	PGA PQFP	1	2	1	2	61	71	1333	5	33	PT-C LPA	*E2464A E5337A	\$2,450 \$2,615
80960KA,KB,MC	PGA	1	1	1	1	62	72	1325	4	25	U-B	Corelis	\$1,950
80960KA,KB,MC	PGA	1	2	1	1	61	71	1325	5	25	P-C	Corelis	\$3,250
80960RP	BGA			1	2	61	71	1336	5	33	PB-C	*E2484A	\$5,000
80960SA,SB	PLCC	1		1		62	72	N/A	4	All	PT-B	ET	\$475
INMOS													
T212,222,225	[2]	1						N/A	4	33	P-B	NEAN	\$1,500
T400,414,425	PGA	1		1		62	72	N/A	4	33	P-B	NEAN	\$1,500
T800,801,805	PGA	1		1		62	72	N/A	4	33	P-B	NEAN	\$1,500
LSI Logic													
LR33000/33050	PGA	1		1	2	61	71	1422	5	50	P-C	Corelis	\$2,950
LR33020	PGA	2		2	2	60	70	1480	7	50	PT-B	Corelis	\$2,950
LR333X0	PQFP	1		1	2	61	71	1452	5	50	PT-B	Corelis	\$2,950
L64801 (SPARC)	PGA	1	2	1		61	71	1404	5	25	P-B	ALD	\$1,495
MIPS — See IDT, LSI Logic, NEC, Performance, Siemens, or Toshiba													
Motorola													
146805E2	[2]	1		1	1	63	72	N/A	2	All	N/A	Factory	Free
56000/01	[2]	1		1	1	62	72	N/A	3	All	N/A	Factory	Free
56116/156/166	[2]	1						1429	5	50	N/A	Corelis	\$1,950
56L811	TQFP	1		1	1	62	72	N/A	4	All	PT-B	Corelis	\$3,250
6800,6802	DIP	1		1	1	63	72	N/A	2	2	P-B	ET	\$600
6803	[2]	1						N/A	2	All	N/A	Factory	Free
6809	DIP	1		1	1	63	72	N/A	2	2	P-B	ET	\$600
68000/10	DIP	1		1	1	62	72	N/A	3	12.5	PT-B	ET	\$420
68000/10	SDIP	1		1	1	62	72	N/A	3	12.5	PT-B	ET	\$420
68000/10	PLCC	1		1	1	62	72	N/A	3	12.5	PT-B	ET	\$535
68000/HC000	PGA	1		1	1	62	72	1384	3	16.7	PT-D	E2447AA	\$938
68EC000	PLCC	1		1	1	62	72	1384	3	16.7	PT-D	E2447AB	\$938
68EC000	PLCC	1		1	1	62	72	N/A	3	8	PT-B	ET	\$485
68008	DIP	1		1		62	72	N/A	3	12.5	PT-B	ET	\$643
68020	PGA PQFP	1	2	1	2	61	71	1343	5	33	PT-C LPA	*E2426A #1CC	\$1,460 \$1,350
68020	PQFP	1		1	2	61	71	N/A	5	33	PT-B	ET	\$1,150
68EC020	PGA PQFP	1	2	1	2	61	71	1343	5	33	PT-C AA	*E2426B #1CC	\$2,340 \$882
68030	PGA PQFP	1	2	1	2	61	71	1344	5	50	P-C LPA	*E2406A #1CC	\$2,080 \$1,350
68030-Socketed	PQFP	1		1		61	71	N/A	5	33	PT-B	ET	\$1,150
68EC030 [6]	PGA	1	2	1	2	61	71	1344	5	50	P-C	*E2406A	\$2,080

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		510	541	550	55X	6X	7X					
68060/68040	PGA			1	2	61	71	1342	6	50	PT-C	\$3,060
	PQFP	(184-pin soldered 68040 PQFP requires E2459A & E5345A)									LBPS	\$2,755
68HC001	PGA	1		1		62	72	N/A	3	12.5	PT-B	\$385
68HC001	PLCC	1		1		62	72	N/A	3	12.5	PT-B	\$485
68HC11 [11]	DIP	1		1	1	62	72	1341	3	8.4	PT-B	\$940
68HC11 [11]	PLCC	1		1	1	62	72	1341	3	8.4	PT-B	\$2,155
68HC11F1	PLCC	1		1	1	62	72	N/A	3	8.4	PT-B	\$540
68HC11K4	PQFP			1	1	62	72	N/A	3	8	PT-B	\$950
68HC12A4	PQFP			1	1	62	72	N/A	3	16	PT-B	\$1,500
68302	PGA	1		1	1	62	72	N/A	3	25	PT-B	\$1,950
68302-Soldered	PQFP	1		1	1	62	72	N/A	3	25	PT-B	\$2,950
68302	PGA	1		1		62	72	N/A	3	20	PT-B	\$360
68302-Socketed	PQFP			1		62	72	N/A	3	20	PT-B	\$1,250
68LC302	PGA	1		1	1	62	72	N/A	3	25		\$2,950
68LC302	TQFP	1		1	1	62	72	N/A	3	25		\$2,950
68306	PQFP			1	1	62	72	1385	3	16	PT-D	\$1,020
		(68306 requires E2456A and E3417A, supports 132-pin soldered PQFP)									LPA	\$1,365
68331/332 Soldered	PQFP		1	1	1	62	72	1348	4	20	PT-D	\$1,430
		(132-pin soldered PQFP requires E2413C and E3417A)									LPA	\$1,365
		(144-pin soldered TQFP requires E2413C and E5359A)									EPS	\$3,225
68332-Socketed	PQFP	1		1		62	72	N/A	4	20	PT-B	\$1,150
68F333	PQFP			1	1	62	72	1351	4	20	PT-D	\$1,835
		(68F333 requires E2439B & E5335A, supports soldered 160-pin PQFP)									LBPS	\$2,450
68339	QFP	1		1	1	62	72	N/A	4	20	PT-B	\$1,150
68340	PGA	1	1	1	1	62	72	N/A	3	25	PT-B	\$2,950
68340	PQFP	1	1	1	1	62	72	N/A	3	25	PT-B	\$3,950
68340-Socketed	PQFP	1		1		62	72	N/A	4	20	PT-B	\$950
68341	PQFP	1		1	1	62	72	N/A	3	All	PT-B	\$3,250
68349	PQFP	1		1	1	62	72	N/A	3	All	PT-B	\$3,250
68360/68EN360	PGA			1	2	61	71	1386	6	33	PT-C	\$3,120
	PQFP	(240-pin soldered PQFP requires E2448A and E5317A)									LBPS	\$2,450
68HC16Y1	PQFP			1	1	62	72	1353	4	20	PT-C	\$1,915
		(68HC16Y1 requires E2470A & E5335A, for soldered 160-pin PQFP)									LBPS	\$2,450
68HC16Z1-Soldered	PQFP	1	1	1	1	62	72	1347	3	16	PT-D	\$2,500
		(Socketed PQFP requires E2419A and ET adapter)									ET	
88100	PGA	1		1	2	61	71	1426	5	35	PT-B	\$2,450
88200	PGA	1		1	2	61	71	N/A	5	35	PT-B	\$2,450
88110	PGA			2	2	60	70	1485	7	50	PT-B	\$3,500
MPC 860/821	BGA			1	2	61	71	1355	6	50	PT-B	\$4,285
MPC 860/821	[2]			1	2	61	71	1355	6	50	N/A	\$1,000
PowerPC 601	PQFP	2		2	2	60	70	1450	8	60	U-B	\$3,250
PowerPC 601/603/403[2]				2	2	60	70	1352	8	66	N/A	\$1,020

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		510	541	550	55X	6X	7X						
PowerPC 603/603e	PQFP			2	2	60	70	1387	8	66	PT-B	*E2455B	\$5,800
PowerPC 604	PGA			2	2	60	70	1354	8	66	PT-B	*E2465A	\$6,630
National													
NS32016	[2]	1						N/A	3	All	N/A	Factory	Free
HPC16003/4/64	[2]	1	1	1		62	72	N/A	3	All	N/A	Factory	Free
NEC													
7810/11	[2]	1						N/A	3	All	N/A	Factory	Free
V25	PLCC	1	1			63	72	N/A	2	16	PT-B	ET	\$835
R4000/4400PC	PGA	2	2	2		60	70	N/A	8	50	PT-B	Corelis	\$3,250
Vr4200	PQFP	2	1	2		61	71	N/A	6	50	PT-B	Corelis	\$3,250
Vr4300	PQFP	1	1	1		62	72	N/A	4	All	PT-B	Corelis	\$3,250
R5000	PGA	2	1	2		61	71	N/A	6	All	PT-B	Corelis	\$3,450
PACE													
P1750	PGA	1						1462	3	40	P-B	Tasco	\$2,900
Performance													
R4000/4400PC	PGA	2	2	2		60	70	N/A	8	50	PT-B	Corelis	\$3,250
Rockwell													
6502	[2]	1	1	1		63	72	N/A	2	All	N/A	Factory	Free
Siemens													
R4000/4400PC	PGA	2	2	2		60	70	N/A	8	50	PT-B	Corelis	\$3,250
80515	PLCC	1	1			63	72	N/A	2	16	PT-B	ET	\$435
80C166	PQFP	1	1			62	72	N/A	3	40	PT-B	ET	\$1,050
80C167	PQFP	1	1			62	72	N/A	3		PT-B	ET	\$1,150
80C451	PLCC	1	1			63	72	N/A	2	16	PT-B	ET	\$470
Texas Instruments													
320C10/14	[2]	1	1	1		63	72	N/A	2	All	N/A	Factory	Free
320C20/C25	PGA	1	1	1	1	62	72	N/A	3	50	PT-B	Corelis	\$2,950
320C30	PGA	1	1	1	1	62	72	N/A	4	40	P-C	Corelis	\$3,250
320C31	PQFP	1	1	1	1	62	72	N/A	4	40	P-C,LPA	Corelis	\$3,950
320C31-Socketed	PQFP	(Socketed 320C31 requires Corelis preprocessor & ET adapter)AA										ET	\$595
320C32	PQFP	1	2	1	2	61	71	N/A	5	All	PT-B	Corelis	\$3,950
320C32	TQFP	1	2	1	2	61	71	N/A	5	All	PT-B	Corelis	\$4,250
320C40	PGA	1	2	1	2	61	71	1488	5	All	PT-B	Corelis	\$3,250
320C50/51/53	PQFP	1	1	1	1	62	72	1372	3	28.5	PT-D	Corelis	\$3,250
320C52	PQFP	1	1	1	1	62	72	N/A	4	All	PT-B	Corelis	\$3,250
320C541/3/6	TQFP	1	1	1	1	62	72	N/A	4	All	PT-B	Corelis	\$4,750
320C80	PGA	2	3	2	2	60	70	N/A	8	All	U-B	Corelis	\$3,250
34010	[2]	1	1	1		62	72	N/A	2	All	N/A	Factory	Free
370C16	[2]	2	1	2		61	71	N/A	6	All	N/A	Corelis	\$1,950
370C50	[2]	1	1	1		63	72	N/A	2	20	N/A	Factory	Free

Device Manufacturer and Name	Device Package Type	Logic Analyzer Support [8],[12]						RSE NOW [7]	Min # Pods [12]	Bus Clk MHz	HW Style [1]	HP Product or 3rd Party [10],[*]	USA List Price[5]
		510	541	550	55X	6X	7X						
Toshiba													
R3900	PQFP	2		1	2	61	71	N/A	6	All	PT-B	Corelis	\$3,250
R4000/4400PC	PGA	2		2	2	60	70	N/A	8	50	PT-B	Corelis	\$3,250
Xilinx LCA													
XC3020/3030	PLCC	1		1	2	61	71	1423	5	75	U-B	Corelis	\$950
XC3X42/64/90/95	PGA	1		1	2	61	71	1423	5	75	U-B	Corelis	\$1,150
	PLCC	1		1	2	61	71	1423	5	75	U-B	Corelis	\$950
XC4005/4006	PGA	1		1	2	61	71	1423	5	75	U-B	Corelis	\$1,150
XC4008/4010	PGA	1		1	2	61	71	1423	5	75	U-B	Corelis	\$1,250
Zilog													
Z8	DIP	1						N/A			E-B	Zilog	\$1,000
Z80	DIP	1		1	1	63	72	N/A	2	16	PT-B	ET	\$285
Z80	PLCC	1		1	1	63	72	N/A	2	16	PT-B	ET	\$340
Z180	PLCC	1		1	1	62	72	N/A	3	16	PT-B	ET	\$360
Z8001/8002	[2]	1						N/A	3	All	N/A	Factory	N/C
Z89C00	All			1	2	61	71	N/A	5	All		Zilog	
Z893XXDSP	All			1	2	61	71	N/A	5	All		Zilog	
Standard Buses													
APIC	N/A			1	1			1335	2	33	E	E2467A	\$2,000
EISA	N/A	2	2	1		61	71	1401	5		PT	ALD	\$1,495
IBM ISA (AT)	N/A	1	2	1	2	61	71	1482	5	All	PT-E	Corelis	\$1,295
ISA	N/A	1	2	1	2	61	71	1475	5	16	PT-E	FuturePlus	\$1,500
IBM ISA (AT)	N/A	1		1		61	71	1461	5		PT-E	Tasco	\$1,950
IEEE 488 (HPIB)	N/A	1	1	1	1	63	72	N/A	1		PT	ALD	\$495
IBM MCA	N/A	2	2	2		60	70	1402	7		PT	ALD	\$1,495
JTAG 1149.1	N/A	1	1	1	1	63	72	1425	1	All	PT-E	Corelis	\$1,450
JTAG 1149.5	N/A	1	1	1	1	62	72	1487	4	All	PT-E	Corelis	\$2,950
PCI-64	N/A	1	1	1	1	62	72	1473	4		PT-E	FuturePlus	\$2,000
PCI/EXT-32	N/A	1	1	1	1	62	72	1476	4		PT-E	FuturePlus	\$2,000
PCI/EXT-64	N/A	2		1	2	61	71	N/A	6		PT-E	FuturePlus	\$3,400
PCI Mezzanine	N/A	1		1	1	62	72	1477	4		PT-E	FuturePlus	\$2,500
PCI Cardbus	N/A	1		1	1	62	72	N/A	4		PT-E	FuturePlus	\$2,000
PCI-32/Extender	N/A	1		1	1	62	72	1451	4	66	PT-E	Corelis	\$1,790
PCI-32/Latch	N/A	2	2	1	2	61	71	N/A	6	66	PT-E	Corelis	\$2,450
PCI-64/Extender	N/A	2	2	1	2	61	71	1451	6	66	PT-E	Corelis	\$1,895
PCI Logic Scope PPI	N/A	1	1	1	1	62	72	1480	4,6		PT-E	FuturePlus	\$2,900
PCI Scope PPI	N/A							1480			A	FuturePlus	\$1,700
PCMCIA	N/A	1		1		62	72	N/A	4		U-E	Mobile	\$375

Device Manufacturer and Name	Device Package Type	Logic Analyzer Support [8],[12]						RSE NOW [7]	Min # Pods [12]	Bus Clk MHz	HW Style [1]	HP Product or 3rd Party [10],[*]	USA List Price[5]
		510	541	550	55X	6X	7X						
RS232, RS449, IEEE 1284	N/A	1	1	1	1	63	72	N/A	2		PT	ALD	\$1,995
SBus	N/A	1	2	1		61	71	1405	5		PT	ALD	\$995
SCSI 1,2,3 [9]	N/A	1	1	1	1	63	72	1363	2		PT-E	E2423A	\$1,770
Univ Serial Bus -USB	N/A	1		1	1	63	72	1472	2		E	FuturePlus	\$2,200
VME 64/VXI	N/A	(Reference Data Sheet)						1478	5,7,9		PT-E	FuturePlus	\$2,000
72 pin SIMM Probe	N/A	1	1	1	1	62	72	1479	4		U-B	FuturePlus	\$450
User Defined													
User Defined Intfc.	N/A	1	1	1	1	62	72	1307	1		P-D	E2445A	\$1,030
Special Adapters										RSE NOW		HP Product or 3rd Party	USA List Price
68020	PGA to 68EC020 PGA Adapter											E3400A	\$305
68020	PGA to 68EC020 PQFP/CQFP Adapter											E3401A	\$890
68020	PGA to PGA Flexible Extender											E3403A	\$865
68020	PGA to PQFP/CQFP Adapter											E3404A	\$1,365
68030	PGA to PGA Flexible Extender											E3405A	\$865
68030/EC030	PGA to PQFP/CQFP Adapter											E3406A	\$1,365
68331/332	PGA to PQFP/CQFP Adapter											E3407A	\$1,365
68302	PGA to PQFP/CQFP Adapter											E3408A	\$1,365
68340	PGA to PQFP/CQFP Adapter											E3409A	\$890
68340	PGA to PGA Flexible Extender											E3410A	\$865
80960SA/SB	PGA to PQFP/CQFP Adapter											E3411A	\$890
80186EA	PGA to PQFP/CQFP Adapter											E3412A	\$790
80186XL	PGA to PQFP/CQFP Adapter											E3413A	\$790
80186EB	PGA to PQFP/CQFP Adapter											E3414A	\$790
Generic	PGA to 132 pin PQFP/CQFP Adapter											E3417A	\$1,365
68302	PGA to PGA Flexible Extender											E3418A	\$1,210
80960SA/SB	PLCC to PLCC Flexible Extender											E3419A	\$1,210
68000	PGA to PGA Flexible Extender											E3420A	\$1,210
80C186	PLCC to PLCC Flexible Extender											E3422A	\$1,210
80186XL	PGA to PGA Flexible Extender											E3427A	\$1,890
68040	PGA to PGA Flexible Extender (for emulator only)											E3429A	\$1,575
68360	PGA to PGA Flexible Extender											E3430A	\$1,575
Generic	240-pin PQFP/CQFP Adapter (See figure1, pg 10)									1399		E5315A	\$2,040
Generic	Flexible adapter for 160,184,208 & 240-pin PQFP/CQFP Adapter									1399		E5316A	\$357
Generic	208-pin PQFP/CQFP Adapter (See figure 1, pg 10)									1399		E5318A	\$1,990
Generic	160-pin PQFP/CQFP Adapter (See figure 1, pg 10)									1399		E5319A	\$1,940
Generic	Rigid Adapter for 160,184,208 and 240-pin PQFP/CQFP Adapter									1399		E5330A	\$153
Generic	304-pin PQFP/CQFP Adapter (See figure 1, pg 10)									1399		E5331A	\$2,960
Generic	Flexible adapter for 304-pin PQFP/CQFP Adapter									1399		E5333A	\$663
Generic	144-pin, 0.5mm Pitch TQFP adapter (See figure 5, pg 11)									1397		E5336A	\$689

Special Adapters		RSE NOW	HP Product or 3rd Party	USA List Price	
Generic	1/4 Flexible Adapter for 144-pin TQFP Adapter	1397	E5340A	\$306	
Generic	Flexible Adapter cable	1388	E5342A	\$153	
Generic	184-pin PQFP/CQFP Adapter (See figure 1, pg 10)	1399	E5343A	\$1,990	
Generic	High Density Terminated Probing Adapter(See figure 6, pg 11)		E5346A	\$403	
Generic	176-pin, 0.5mm pitch TQFP adapter (See figure 5, pg 11)		E5348A	\$1,175	
Generic	1/4 Flexible Adapter for 176-pin & 160-pin TQFP Adapters		E5349A	\$383	
68020	PGA 90 degree CW and CCW rotators		ET, JME	Varies	
68EC020	PGA 90 degree CW and CCW rotators		ET, JME	Varies	
68030	PGA 90 degree CW and CCW rotators		ET, JME	Varies	
68EC030	PGA 90 degree CW and CCW rotators		ET, JME	Varies	
68040	PGA 90 degree CW rotator		ET, JME	Varies	
68302	PGA 90 degree CW and CCW rotators		ET, JME	Varies	
80286	PGA 90 degree CW and CCW rotators		ET, JME	Varies	
80486	PGA 90 degree CW and CCW rotators		ET, JME	Varies	
29000	PGA 90 degree CW and CCW rotators		ET, JME	Varies	
	11 X 11 X 6 Generic PGA CW and CCW rotators		ET, JME	Varies	
	17 X 17 X 3 Generic PGA CW and CCW rotators		ET, JME	Varies	
	13 X 13 X 7 Generic PGA CW and CCW rotators		ET, JME	Varies	
	15 X 15 X 8 Generic PGA CW and CCW rotators		ET, JME	Varies	
	17 X 17 X 9 Generic PGA CW and CCW rotators		ET, JME	Varies	
	18 X 18 X 9 Generic PGA CW and CCW rotators		ET, JME	Varies	
For additional technical information, refer to the following publications:					
Device/Bus	Product	Pub Number	Device/Bus	Product	Pub Number
Accessories	All	5963-3376E	PowerPC IAs	E2449B	5963-7269E
Special Adapters	All	5091-8886E	Intel 80386EX	E2454A	5962-9323E
Intel 80C286	E2409C	5963-3914E	Power PC 603	E2455A	5963-3919E
Intel 80486DX/SX	E2411C	5962-6223E	Mot 68306	E2456A	5963-1237E
Mot 68331/332	E2413C	5963-5075E	Pentium 815	E2457A	5962-9730E
Intel 8051	E2415B	5964-0104E	Mot 68040/68060	E2459A	5963-7107E
Intel 80C196	E2416B	5964-0105E	Intel 80960J-Series	E2464A	5963-5326E
SCSI Bus	E2423A	5091-5054E	PowerPC 604	E2465A	5965-1527E
68020/EC020	E2426A/B	5091-5362E	Pentium Pro	E2466B	5964-2343E
Intel 80960CA	E2432A	5091-5665E	Intel APIC Bus	E2467A	5965-3000E
Intel 80C186/188	E2434A/B/C	5091-6477E	IBM Power PC 403GA	E2468A	5963-9797E
Motorola 68F333	E2439B	5963-5325E	Mot 68HC16Y1	E2470A	5964-3849E
Pentium 567	E2443B	5962-9847E	Intel 80960H-Series	E2473A	5965-0857E
Intel 80386DX	E2444A	5091-6375E	Mot MPC 860/821	E2476A	5965-5053E
User definable Intf	E2445A	5091-7547E	Mot MPC 860/821 IA	E2477A	5965-5053E
Mot 68000/68EC000	E2447AA/AB	5962-7974E	Intel i960RP	E2484A	5965-2999E
Mot 68360	E2448A	5962-8038E			

For additional technical information, refer to the following publications:

Description	Product	Pub Number	Description	Product	Pub Number
Logic Analysis System	16500C/16505A	5965-3187E	Bench Top LA	1660/70-Series	5964-3665E
Technical Data	16500C	5965-3184E	Technical Data	1660C-Series	5964-3664E
Configuration Guide	16500C/16505A	5965-3185E	Technical Data	1670D-Series	5964-3666E
Prototype Analyzer	16505A	5963-1857E	MultiProbe	16535A	5964-0239E
4 GSa/s LA	16517/18A	5091-8096EUS	Technical Data	16535A	5964-0237E
Technical Data	16517/18A	5091-7216E	Configuration Guide	16535A	5964-0236E
Pattern Generator	16522A	5964-2250E	TQFP/CQFP/PQFPAdapters	E53XXA	5963-9497E
2 GSa/s Oscilloscope	16533/34A	5964-0238E	LAN Capability	16500H/L	5963-6710E
110 MHz LA	1655XA	5962-7245E	Pentium Run Control	E3491A	5963-6855E

Notes:

[1] Hardware Style (Refer to the pictures below for typical form factor representations. Refer to product specific literature for more detailed information.)

P Preprocessor interface with disassembler. Used for state analysis as signals are buffered.

PB Preprocessor interface with disassembler. Used for state analysis; contains buffers with very low channel to channel skew, so timing analysis is also supported.

PT Preprocessor interface with disassembler. Also provides unbuffered signals for timing analysis.

U Universal interface. Signals not buffered. No disassembler. Used for timing analysis.

A Analog (Oscilloscope).

B Interface board with connectors for termination adapters. (Refer to product literature to determine specific termination adapter, E5346A or 01650-63203)

C Low profile probe. (Squid - See figure 3)

D Probe with state connectors terminated. Timing connectors (usually 6) require 01650-63203 termination adapters (See figure 7). (Clamshell - See figure 4)

E Special bus interface hardware.

F Low profile probe. (Starfish)

N/A Not applicable. No hardware is provided.

EPS Elastomeric Probing Solution. (See figure5)

LBPS Locator Base Probing Solution. (See figure 1)

LPA Low Profile adapter. This adapter clamps onto a soldered-on QFP part. (See figure 2)

AA Adapter Assembly. This adapter replaces the QFP microprocessor and has the same footprint.

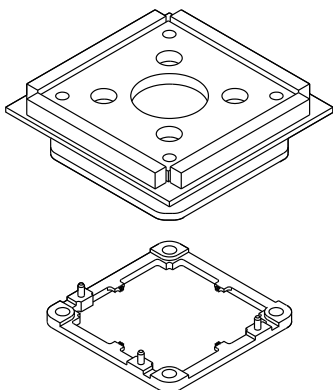


figure 1 - LBPS Hardware Style - Locator Base Probing Solution (Adapter)

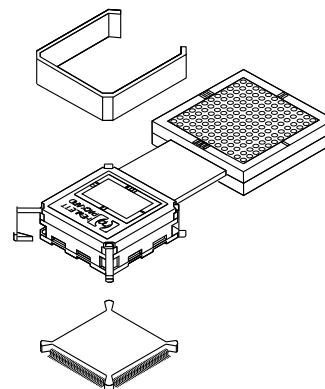


figure 2 - LPA Hardware Style - Low Profile Adapter

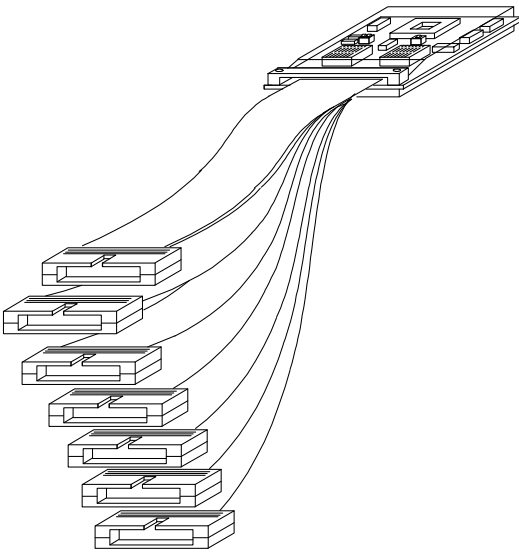


figure 3 - Hardware Style C (Squid) - Low Profile Probe

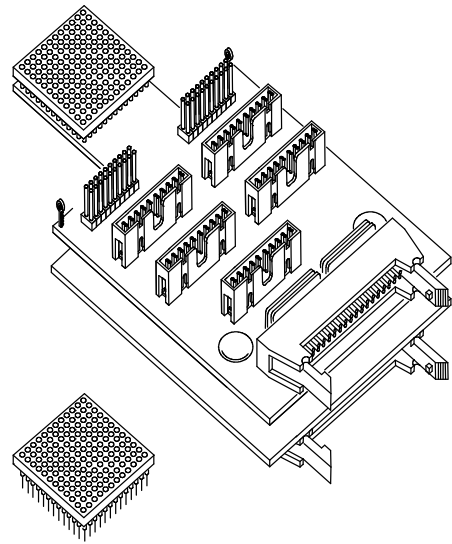


figure 4 - Hardware Style D (Clamshell) - Probe with state connectors terminated. Timing connectors (usually 6) require termination adapters.

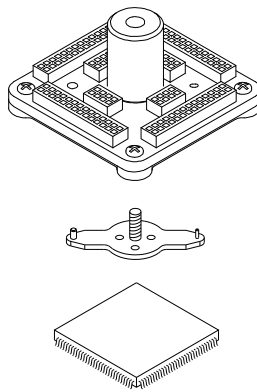


figure 5 - EPS Hardware Style - Elastomeric Probing Solution (Adapter)

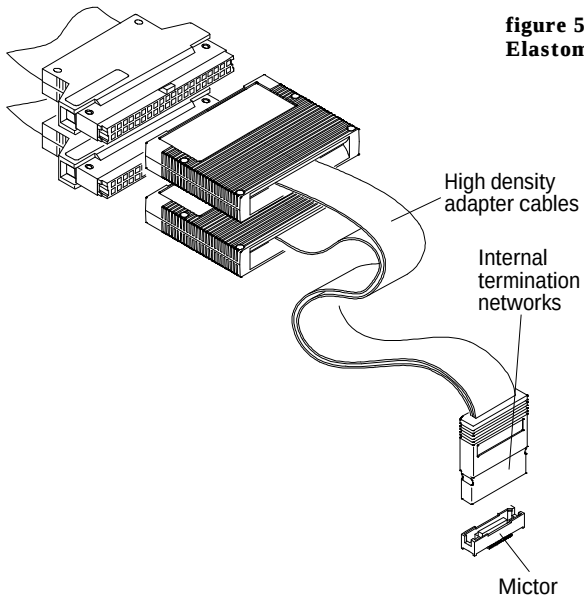


figure 6 - High Density Termination Adapter (E5346A)

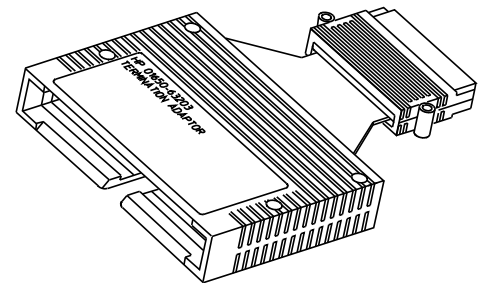


figure 7 - 01650-63203 Termination Adapter

Notes Continued:

- [2] Inverse assembly only. No interface hardware is provided.
- [3] Includes 8031/33, 8051/8052, and CMOS versions. Supports all microcontrollers which conform to the architecture, instruction set, and packaging of the Intel 8051, which is in a 40-pin DIP. Contact ET for support on 44-pin PLCC packages. In addition, the Intel 80251 microcontroller is also supported.
- [4] Includes 8096/7-90, -AH, -BH versions, and 80C196 KA, KB, KC, KD.
- [5] Factory Free designates a free inverse assembler and probing instructions are available. Please contact your HP sales representative.
- [6] An adapter from a 68030 to a 68EC030 is required. You can make one by clipping the unused pins D5, F4, F10, and K5 on a 68030 PGA socket. Or, you may order McKenzie Technology part number PGA124M004B1-1309R.
- [7] RSE NOW is an automated fax server which will fax information to any location in the world. Call 719 590-3300 and when requested, enter the document number listed. This document is #1310.
- [8] Minimum Logic Analyzer required; an analyzer with more pods may be substituted.
 510: HP 1650, 1652, 16510 (5 pods), 1654 (4 pods; check to insure "Min # Pods" column is four or less)
 541: HP 16540A/D (1 pod) and indicated number of 16541A/D's (3 pods) required
 550: indicated number of HP 16550A's (6 pods) required
 55X: indicated number of HP 16554A's, 16555A/D's, or 16556A/D's (4 pods) required
 6X – HP 1660A/AS (8 pods), HP 1661A/AS (6 pods), HP 1662A/AS (4 pods), HP 1663A/AS (2 pods), HP 1664A (2 pods),
 – HP 1660C/CS (8pods), HP1661C/CS (6pods), HP 1662C/CS (4pods), HP 1663C/CS (2 pods)
 7X – HP 1670A/D (8 pods), HP 1671A/D (6 pods), HP1672A/D (4 pods)
 Note: If a preprocessor is not supported by the analyzer you desire, contact the factory.
- [9] The following SCSI adapter cables are available from HP; additional versions are available from HP Direct Marketing Division (800 637-7740):
 E2423A Option 001 – 50 pin High Density to 50 pin Low Density 1 meter cable
 E2423A Option 002 – 50 pin High Density to 50 pin High Density 1 meter cable
 E2423A Option 003 – 68 pin High Density to 68 pin High Density 1 meter cable
- [10] For the following 3rd Parties (Channel Partners), these products are also available from HP. See the Pub. No. 5963-6854EUS for the HP product number and HP list price: Advanced Logical Design, Corelis, Emulation Technology, FuturePlus Systems.
- [11] A0, A1, A8, E1, E9, A2, E2 versions supported. For support of other versions, contact the factory for information.
- [12] The minimum number of pods refers to the minimum number of pods needed to support state analysis with inverse assembly. Additional pods may be needed to see all signals simultaneously. Refer to the data sheet for more detailed information.
- [*] If the preprocessor product number has a preceeding asterisk (*), the product contains the enhanced inverse assembler for the HP 1660-series, HP 1670-series, or HP 16550A, HP 16554A, HP 16555A/D, and HP 16556A/D when installed in the HP 16500B/C.

Inverse Assembler Development

The HP Inverse Assembler Development package allows the user to develop a custom inverse assembler that will operate in all HP 1660-series, 1670-series, and 16500-series logic analyzers. The product requires an IBM-style PC with a minimum of 256K of memory and MS-DOS 2.1 or higher operating system, and a 3.5 inch floppy drive.

Media Supplied: 3.5-inch disk

Order Information:

Inverse Assembler Development Package 10391B \$1,090

Software Analyzer

The HP Software Analyzer combines the versatility of a general purpose logic analyzer with an interface that is tailored for software engineers. Now, you can debug your code at the source level while retaining the benefits of broad processor support and easy setup. The HP Software Analyzer provides a link between your trace listing and high level source code language. Once a trace is complete, it is displayed in the source window as high-level source code. Concurrently, the trace is displayed in the microprocessor trace execution window in microprocessor mnemonics. Symbol names from your source code, such as function and variable names, can be used to specify trigger conditions, or can be viewed in trace listings. Supported OMF file formats include: HP/MRI IEEE-695, Intel OMF86, Intel OMF286, and Intel OMF386 (which supports 80486 and Pentium language systems), OMF96, TI Coff, Cygnus a.out, and ELF/Dwarf. If your language system does not output one of the listed formats, a generic ASCII file format is supported.

Further Information: 5964-9333E (B4620A),5962-7114E(B3740A)

Order Information:

HP 16505A Software Analyzer B4620A \$2,040

HP B3740A Software Analyzer includes platform specific media, documentation, and single user license.

IBM (3.5-inch) options AJ4 + UDY \$2,040

HP series 700 options AAY + UBY \$2,040

Sun options AAV + UBK \$2,040

System Performance Analysis

The HP B4600A System Performance Analysis (SPA) tool set for the HP 16505A prototype analyzer generates statistical representations of data captured by the measurement modules. SPA can help you (1) find the routines that are called most often in your system, (2) identify inefficient peripheral use, and (3) find processes that use too much CPU time.

Further Information: 5964-9333E

Order Information:

HP 16505A System Performance Analysis HP B4600A \$2,040

TestPoint

The Capital Equipment Corporation TestPoint software is a tool for designing and developing test, measurement, and data acquisition applications for Windows. TestPoint lets you build a complete application to control an HP Logic Analyzer without drawing, connecting or wiring icons or writing lines of code. You simply place graphs, displays, and the other interactive parts of your test on a display panel — order isn't important. Then list the things the test should do by placing objects in an Action List. TestPoint then builds the code to run the test and a description of the test for you. TestPoint provides an intuitive editing environment that makes it easy to build applications so that you can concentrate on solving the problem rather than learning the tool.

Media Supplied: 3.5 inch disk

Further Information and Ordering: Capital (see Channel Partners listing)

WaveGrabber

The TSSI WaveGrabber software delivers an integrated analysis environment for both logic analyzer and logic simulation data. Through its versatile data link, WaveGrabber allows you to combine the power of your logic simulator with the HP 16500C, HP 1660-series, and HP 1670A/D-series logic analysis systems. This unique and sophisticated pairing gives you the power to (a) acquire data from existing circuitry (ASICs, boards, or systems) for logic simulation; (b) compare simulated with actual behavior; (c) use simulation stimulus data as patterns for logic analyzer pattern generation; (d) facilitate failure analysis by comparing failed circuit and good circuit behavior; and (e) analyze data for compliance with device specifications and tester compatibility.

Further Information and Ordering: TSSI Division of Summit Design, Inc. (see Channel Partners listing)

WAVE-Link 16500

The Diagonal Systems WAVE-Link software is a highly interactive digital stimulus editor and result analyzer successfully used by design engineers as a graphical front-end tool to logic simulators such as VHDL and Verilog. The integration of WAVE-Link with the HP 16500 Logic Analysis System opens new perspectives for the design engineer wanting to send stimulus to the HP 16520A/16521A pattern generator or capture circuit response from the actual hardware with any of the logic analyzer modules such as the HP 16550A. WAVE-Link is a stand-alone tool but integrated in the popular EDA frameworks. From a VHDL circuit description or EDA schematic database, the signal list is automatically extracted to guarantee signal naming consistency. The code generators compile the designer's stimuli from the WAVE-Link database in the language of the HP 16500B or chosen simulator or ATE with just a few mouse clicks. Furthermore, the simulation results are imported in WAVE-Link analysis tools without requiring any modification.

Further Information and Ordering: Diagonal Systems (see Channel Partners listing)



Channel Partners

The following companies provide products, listed above, which complement HP logic analyzers. Hewlett-Packard works closely with these companies to insure quality products, but the Channel Partner is ultimately responsible for functionality, post-sales support, and warranty. For companies listed below with a “Resell Code”, their products are also available from Hewlett-Packard and are listed elsewhere in this document. The Channel Partner remains responsible for functionality, post-sales support, and warranty under this arrangement.

ALD	Advanced Logical Design (Resell Code ALO) – Premier Channel Partner 12280 Saratoga Sunnyvale Rd., Suite 201 Saratoga, CA. 95070 Ph: 408-446-1004 Fax: 408-446-1079 http://www.ald.com
APTIX	Aptix Corporation 2880 North First Street San Jose, CA. 95134 Ph: 408-428-6200 Fax: 408-944-0646 http://www.apnix.com
CAPITAL	Capital Equipment Corp. 76 Blanchard Road Burlington, MA 01803 Ph: 617-273-1818 Fax: 617-273-9057
CORELIS	Corelis, Inc. (Resell Code CRL) – Premier Channel Partner 12607 Hidden Creek Way Cerritos, CA 90703 Ph: 310-926-6727 Fax: 310-404-6196 Distributors: Japan, Germany, Sweden http://www.corelis.com
DIAGONAL	DS Diagonal Systems AG USA – Ph: 415-903-2255 Europe – Tumigerstrasse 71 CH-8606 Greifensee, Switzerland Ph: 41 1 905-6060 Fax: 41 1 905-6069 http://www.diagonal.com
ET	Emulation Technology, Inc. (Resell Code ETN) – Premier Channel Partner 2344 Walsh Av. Bldg F Santa Clara, CA 95051 Ph: 408-982-0660 Fax: 408-982-0664 Distributors: Most major countries of Europe and Asia. http://www.emulation.com
FuturePlus	FuturePlus Systems Corporation (Resell Code FSI) – Premier Channel Partner 3550 N. Academy Blvd. Suite 214 Colorado Springs, CO 80917-5088 Phone: 719-380-7321 Fax: 719-380-7362 http://www.futureplus.com

JME	J M Engineering 2430 Waynoka Drive Colorado Springs, CO 80915 Phone: 719 591-1119 Fax: 719 637-1777
McK	McKenzie Technology 910 Page Avenue Fremont, CA 94538 Ph: 510 651-2700 Fax: 510 651-1020 Distributors: Germany, Japan, Korea, Singapore
MOBILE	Mobile Media Research 1977 O'Toole Avenue San Jose, CA 95131 Ph: 408 428 0310 Fax: 408 428-0379
NEAN	Nean, Ltd. 77 The Deans Port Ishead, Bristol, England BS20 8BQ Ph: 44 275 818 360 Fax: 44 272 818 360
POMONA	Pomona Electronics, Inc. 1500 E. Ninth St Pomona, CA 91769 Ph: 909 469-2900 Fax: 909 629-3317
TASCO	Tasco Electronics, Inc. 80 Express Street Plainview, NY 11803 Ph: 516 938-6464 Fax: 516 938-6262 Distributors: Europe, Canada, Japan, Taiwan, China, Singapore, Indonesia
TSSI	TSSI Division Summit Design, Inc. 9305 S.W. Gemini Drive Beaverton, OR 97008 Ph: 503 643-9281 Fax: 503 646-4954 http://www.summit-design.com email: info@sd.com
ZILOG	Zilog, Inc. 210 East Hacienda Av. Campbell, CA 95008 Ph: 408-370-8000 Fax: 408 370-8056 Distributors: most major countries in Europe and Asia. http://www.zilog.com

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Test and Measurement Organization
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Bldg. 51L-SC
Santa Clara, CA 95052-8059
1 800 452 4844

Canada:
Hewlett-Packard Canada Ltd.
5150 Spectrum Way
Mississauga, Ontario
L4W 5G1
(905) 206 4725

Europe:
Hewlett-Packard
European Marketing Centre
P.O. Box 999
1180 AZ Amstelveen
The Netherlands

Japan:
Yokogawa-Hewlett-Packard Ltd.
Measurement Assistance Center
9-1, Takakura-Cho, Hachioji-Shi,
Tokyo 192, Japan
(81) 426 48 3860

Latin America:
Hewlett-Packard
Latin American Region Headquarters
5200 Blue Lagoon Drive
9th Floor
Miami, Florida 33126
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(305) 267 4245/4220

Australia/New Zealand:
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31-41 Joseph Street
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131 347 ext. 2902

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Hewlett-Packard Asia Pacific Ltd
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1 Matheson Street, Causeway Bay,
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(852) 2599 7070

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