PA-H8/532-84(Z) Data Sheet
84 pin PLCC socket/28 pin DIP 0.6" plug

Supported Device/Footprints

These adapters allow EPROM programming of Hitachi 84 pin H8/53x devices in their PLCC or LCC packages on 28 pin DIP programmers.

|	Device		Footprint	
Mfgr	Device	Package	Device	Plug
Hitachi	H8/532, H8/534	PLCC or LCC	27C256	28 pin DIP

These adapters are direct replacements for Hitachi programming adapters. See the following cross reference.

LSC adapter	Test skt	Device package	Hitachi adapter
PA-H8/532-84	Auto-Eject	PLCC and CLCC	HS538ESC01H PLCC only
PA-H8/532-84Z	Lidded-ZIF	PLCC and CLCC. LCC with shim installed in socket	HS538ESG01H LCC only

Adapter Dimensions
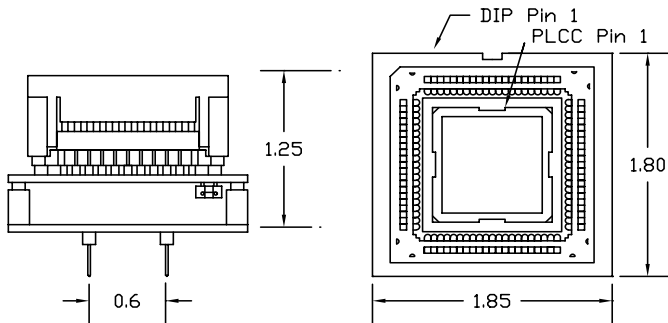
PA-H8/532-84
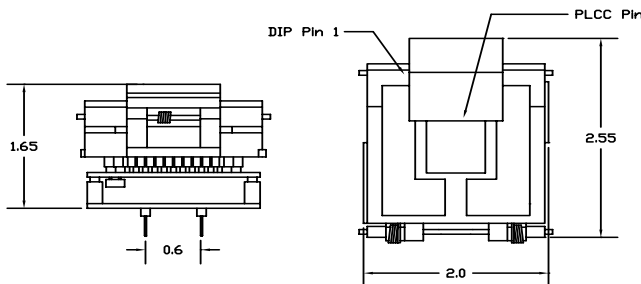
PA-H8/532-84Z

Adapter Parts & Part Numbers

The following chart shows the various socket and board part numbers that make up these adapters.

Adapter	Socket	Top Board	Bottom Board
PA-H8/532-84	84-103	H8/53X-84	H8/53X-28
PA-H8/532-84Z	84-401	H8/53X-84Z	H8/53X-28

Adapter Construction

The adapter is made up of 3 sub-assemblies. They assemble via connectors making the adapter modular. This way the sub-assemblies can be replaced when they wear out.

When disassembling the adapter take care not to bend the pins. When reassembling the adapter note the pin 1 indicators to align the parts correctly.

Test Socket
PLCC Auto-Eject test socket:
  Yamaichi Part #: IC120-0844-103   LSC Part #: 84-103
ZIF Lidded socket:
  Yamaichi Part #: IC51-0844-401   LSC Part #: 84-401

H8/53X-84(Z)
Accepts the test socket and connects to the 32 pin header footprint. Provides circuitry for security programming.

H8/53X-28
Connects the top board to the programmer and the 27C256 footprint.

Shims for the ZIF Socket

The ZIF socket will accept the LCC package as well as the PLCC and CLCC packages. Since the LCC package is thinner than the PLCC a shim must be installed in the ZIF socket to provide proper contact pressure.

LCC thickness varies. For any particular LCC package design, the shim thickness will need to be determined. The ZIF socket was designed to accommodate the PLCC package which is 0.170" +- 0.005" thick.

If you need assistance with shims, please call us. We will be happy to help you out.

EPROM Security

The Hitachi H8 family provides EPROM security. By programming one security location four EPROM bytes are protected. After programming, the protected bytes read 00h and cannot be programmed.

To program security locations, install the security jumper and program the device; the data value is ignored. The security jumper is marked SW1 on the top board. Remove the jumper to allow EPROM programming.

SW1 jumper setting

Pins	Mode	Function
1-2	ON	Program Lock Bits
None	OFF	Program/Read EPROM

To secure the whole device it is simplest to install the jumper and program the whole device to 00.

To secure one block of EPROM (4 bytes) program any byte of the block with the security jumper installed. The block addresses begin at 0, and are arranged at 0-3, 4-7, 8-B, C-F and so on through all the memory.

The security locations are EPROM. On erasable devices they are erased when the EPROM is erased. On One-Time Programmable devices they cannot be erased.

EPROM Address Mapping

The H8's EPROM is at the same address for MCU mode (normal execution) and EPROM programming. The valid EPROM addresses for each device are as follows.

Device	EPROM size	EPROM addresses	MCU addresses
H8/532	32K bytes	0000-7FFF	0000-7FFF
H8/534	32K bytes	0000-7FFF	0000-7FFF

Adapter Wiring

The following chart shows the connections from the PLCC device to the adapter's DIP plug.

SOCKET	PLUG	SOCKET	PLUG
1	-	43	25
2	14	44	22
3	-	45	21
4	-	46	23
5	-	47	2
6	-	48	26
7	3	49	27
8	2	50	20
9	31	51	28
10	-	52	SW1
11	-	53	-
12	-	54	-
13	-	55	28
14	-	56	-
15	-	57	-
16	28	58	-
17	14	59	-
18	14	60	-
19	14	61	-
20	14	62	-
21	1	63	-
22	24	64	14
23	-	65	14
24	14	66	-
25	11	67	-
26	12	68	-
27	13	69	-
28	15	70	-
29	15	71	-
30	17	72	-
31	18	73	-
32	19	74	28
33	10	75	-
34	9	76	-
35	8	77	-
36	7	78	-
37	6	79	-
38	5	80	-
39	4	81	-
40	3	82	-
41	14	83	14
42	14	84	-

VCC (28) to GND (14) .1uf bypass
SW1 security jumper