

A guide to sockets for the H8 family package types

The H8/300L, H8/300, and H8/500 microcontroller families come in different packages suited for the size and cost constraints of a variety of applications. Table 1 below shows the package type for each H8 device.

PACKAGE NAME	H8 PACKAGE TYPE	H8 DEVICES
DIP	DP-64S	H8/320, H8/329, H8/520, H8/3714
	DC-64S	H8/320, H8/329, H8/520
QFN (LCC)	CG-84	H8/330, H8/338, H8/350, H8/532, H8/534, H8/536
QFJ (PLCC)	CP-68	H8/329, H8/520
	CP-84	H8/330, H8/3332, H8338, H8/350, H8532, H8/534, H8/536
QFP (flat pack)	FP-64A	H8/320, H8/329, H8/520, H8/3714
	FP-80A	H8/330, H8/3332, H8338, H8/3332, H8/350, H8/532-34-36, H8/3724
	FP-80B	H8/3724
	FP-112	H8/510, H8/538, H8/570, H8/3003
	FP-100B	H8/3042, H8/3834
	FP-100A	H8/3834
TQFP (flat pack)	TFP-80A	H8/327, H8/3332, H8/534, H8/536
	TFP-100B	H8/3042
	TFP-120	H8/510

The table below shows a list of sockets that fit each H8 package type, including the name of the socket manufacturer, the socket part number, and the type of socket. Most sockets are designed as either a User Cable, Burn-In, or Production socket. The Production socket is the most inexpensive alternative. The User Cable socket is specified for a limited number of insertions, it has a screw-on lid to accept a plug for the emulator user cable, and can be surface-mounted onto the target system. The Burn-In socket is the most costly alternative, it is specified for a large number of insertions, it has a hinged (clam-shell) type lid, and it typically has through-hole PCB mounting. In addition, Ironwood Electronics also designs sockets for prototyping, test/debug, and conversion purposes. Prototyping sockets allow users to use DIP, PLCC, or QFP type chips with wirewrap boards. Test/debug sockets bring all the signals out to test pins so that the user can monitor various signals on a scope or logic analyzer. Conversion sockets simply convert from a package type to another.

H8 PACKAGE TYPE	SOCKET VENDOR	SOCKET PART NUMBER	SOCKET TYPE
DP-64S	Yamaichi	IC33-64075-GS4	User cable
		IC121-64075-G4	Burn-in
	Milmax	117-93-764-41-005	Production
	Welcon	623-9640316-005	Production
	Ironwood Electronics	SK-SDIP75/64-01	Production
		PA-SDIP64-01	Prototyping
		PA-SDIP64-02	Prototyping
		PC-SDIP/DIP64-01	Conversion
	Emulation Technology	S-SDP-00-064-A	Production
		S-SDP-00-064-AZ	Burn-in
	McKenzie Technology	DIP 70-7564-345B-tin plating	Production
		DIP 70-7564-340B -30-gold plating	Production

H8 PACKAGE TYPE	SOCKET VENDOR	SOCKET PART NUMBER	SOCKET TYPE
DC-64S	Yamaichi	IC8620-6409-G4	Burn-in
	Ironwood Electronics	SK-SDIP75/64-01	Production
		PA-SDIP64-01	Prototyping
		PA-SDIP64-02	Prototyping
		PC-SDIP/DIP64-01	Conversion
	Emulation Technology	S-SDP-00-064-A	Production
		S-SDP-00-064-AZ	Burn-in
	McKenzie Technology	DIP 70-7564-345B-tin plating	Production
DIP 70-7564-340B-30-gold plating		Production	
CG-84	Yamaichi	IC51-0844-1005	Burn-in
	Enplas	LCC-84-1.27-01	Burn-in
	Ironwood Electronics	SK-LCC84-Z-01	Burn-in
		PA-LCC84-Z-01 to 03	Prototyping
		PC-LCC/PGA84-Z-01	Conversion
		SP-PLCC84-LCC-01	Test/debug
	Emulation Technology	S-PCC-00-084-B ¹	Burn-in
CP-68	Yamaichi	IC51-0684-390	Burn-in
	Enplas	PLCC68-1.27-04	Burn-in
	Welcon	636-1681912	Production
	Texas Instruments	CPL068-006B	Production
	AMP	822029-3, 822070-4, 822073-3	Low profile ²
		821574-1 and 3, 822149-1	High pressure ³
	Ironwood Electronics	SK-PLCC68-02	Production
		CA-PLCC68-S-Z-T-01	Test/debug
		PA-PLCC68-01 to 03	Prototyping
		LC-PLCC68-01 to 02	Test/debug
		CL-PLCC68-T-01	Test/debug
		CL-PLCC68-S-01	Test/debug
		SP-PLCC68-PLCC-01	Test/debug
	Emulation Technology	S-PCC-11-068-A	Production
		S-PCC-00-068-B	Burn-in
	McKenzie Technology	PLCC-68P-T-2	Production (thru hole)
		PLCC-68P-T-SMT	Production (surface mount)
	CP-84	Yamaichi	IC51-08844-401
Enplas		PLCC84-1.27-04	Burn-in
Welcon		636-1841912	Production
Texas Instruments		CPL084-009B	Production
3M/Textool		2-0084-01273-000-011-062J	Burn-in
AMP		822151-1, 822152-1, 822180-1	Low profile ²
		821573-1 and 3, 822150-1	High pressure ³
Ironwood Electronics		SK-PLCC84-02	Production
		CA-PLCC84--S-Z-T-01	Test/debug
		PA-PLCC84-01 to 05	Prototyping
		LC-PLCC84-01 to 02	Test/debug
		CL-PLCC84-T-01	Test/debug
		CL-PLCC84-S-01	Test/debug
SP-PLCC84-PLCC-01	Test/debug		

H8 PACKAGE TYPE	SOCKET VENDOR	SOCKET PART NUMBER	SOCKET TYPE
CP-84	Emulation Technology	S-PCC-13-084-A	Production
		S-PCC-00-084-B	Burn-in
	McKenzie Technology	PLCC-84P-T-2	Production (thru hole)
		PLCC-84P-T-SMT	Production
FP-64A	Yamaichi	IC51-0644-692-3	Burn-in
		IC51-0644-824-3	Burn-in
		IC149-064-008-S5	User cable
	Enplas	FPQ-64-0.8-10A	Burn-in
	Ironwood Electronics	SK-QFE-64SB-Z-01	Burn-in
		PA-QFE64SB-C-Z-01	Prototyping
	Emulation Technology	S-QFP-00-064-B	Burn-in
FP-80A	Yamaichi	IC51-0804-956-2	Burn-in
		IC149-080-017-S5	User cable
	Enplas	FPQ-64-0.8-10A	Burn-in
	Texas Instruments	CQF-080-058	Production
	AMP	824073-1	Production
	Ironwood Electronics	SK-QFE80SA-Z-01	Burn-in
		CA-QFE80SA-L-Z-T-01	Test/debug
		PA-QFE80SA-C-Z-01	Prototyping
		PA-QFE80SA-P-Z-01	Prototyping
	Emulation Technology	PA-QFE80SA-P-S-01	Prototyping
		S-QFP-00-080-A	Burn-in
FP-100A	Enplas	FPQ-100-0.65-11V	Burn-in
	Yamaichi	IC51-0884-999-2	Burn-in
	Texas Instruments	CQF100-025	Production
FP-100B	Enplas	FPQ-100-0.5-01	Burn-in
	Yamaichi	IC51-1004-958-2	Burn-in
FP-112	Yamaichi	IC51-1124-1036-2	Burn-in
		IC149-112-018-S5	User cable
	Ironwood Electronics	SK-QFE112SA-Z-01	Burn-in
PA-QFE112SA-A-Z-01		Prototyping	
TFP-120	Enplas	FPQ-120-(128)-0.4-01	Burn-in
	Ironwood Electronics	SK-QFE120SC-Z-01	Burn-in

Notes:

1. This socket also needs the shim part number: Shim-084-0315. The shim converts the PCC (CP-84) to LCC (CG-84).
2. Low profile are PLCC surface mount sockets for high density PC-board stacking.
3. High pressure are tin sockets with solder tails.

The above-mentioned socket vendors can be reached directly at the following addresses and/or phone/fax numbers:

Yamaichi Electronics Co., Ltd.		tel: 03-3778-6170 (Japan) fax: 03-3778-6181
Enplas Corporation		tel: 0482-56-8558 (Japan) fax: 0482-57-0191
Texas Instruments, Inc.		tel: (800)-232-3200 (toll free)
Wells Electronics, Inc. (Welcon)		tel: (219)-287-5941 fax: (219)-287-0356
Ironwood Electronics, Inc.	PO. Box 221151 St. Paul, Mn 55121	tel: (612)-431-7025 fax: (612)-432-8616
AMP Corporation	Harrisburg, Pa 17105	tel: (800)-522-6752
Emulation Technology	2344 Walsh Ave., bldg. F Santa Clara, Ca 95051	tel: (408)-982-0660 fax: (408)-982-0664
McKenzie Technology	910 Page Ave. Fremont, Ca 94538	tel: (510)-651-2700 fax: (510)-651-1020

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