

Product Name: ZX106-QSH090-ST Samtec Breakout Adapter HSMC

Product Description: 90pins per row x 2 rows -- > 180 pins Samtec breakout adapter designed for test and measurement applications; servers or networking system – Onboard Samtec QSH-090 Samtec connector, mating with QTH-090 connector series.

- 1- Onboard Samtec QSH-090 Samtec connector, mating with any formfactor QTH-090 connector series as well as HSMC interfaces
- 2- Each QSH-090 connector's signal is routed to onboard header.
- 3- Listed number adjacent to each header pin represents the associated Samtec QSH pin number.
- 4- All traces are 50 Ohms impedance controlled.
- 4- Four layers PCB design, inner layers are GND planes.
- 5- One accessible GND test point, The test point is connected to module's GND planes and direct interface to the connector GND blade.
- 6- Offering Low profile design, targeting in-system rackmount or low profile design test & measurement applications.
- 7- Ease of interface with single channel and differential scope probes.
- 8- Fully compatible with Single Ended , -D, and Differential Pair, -DP, Samtec connector QTH series as well as cable assemblies; HQCD,HQDP
- 9- Mates with any height and form factor QTH-090 connector series such as -D -DP, -RA, -EM configurations.
- 10- Flying lead wire assembly may be used for board to board interface – See ordering information, ZX100ACC-SS

Electrical: Insertion loss > -2dB @3GHz  
Trace impedance: 50 Ω  
Operating Temperature: -55°C to +125°C  
Samtec Connector:  
Onboard Connector: QTH-090-xx 2rows x 90 pins/row  
Mates with: Any QSH-090-xx formfactor  
Pitch: 0.0197" ( 0.50mm ) pin to pin pitch  
Plating: Gold Flash  
Header:  
Pitch: 0.1" ( 2.54mm ) pin to pin pitch  
Pin: Square 0.025" ( 0.635mm )  
Height: 0.24" ( 6mm )  
Plating: Gold Flash

Application: Bringup, testing, emulation, development, modular design evaluations

Mates with : Samtec QTH090 QTH080(DP) - Also mates with HFHM2 HQCD, HQDP  
Compatible with – differential Pair (DP), unused signal can be left unconnected or Grounded for improved noise immunity.  
Interface with Altera's emulation boards/systems. Interface with Altera's emulation boards/systems. Fully compatible with Altera HSMC Development board supporting Altera High Speed Mezzanine HSMC interface ASP953--12201

Signal assignments: Table below exhibits the assigned Samtec pin numbers associated with the headers for top and bottom sides of the module.

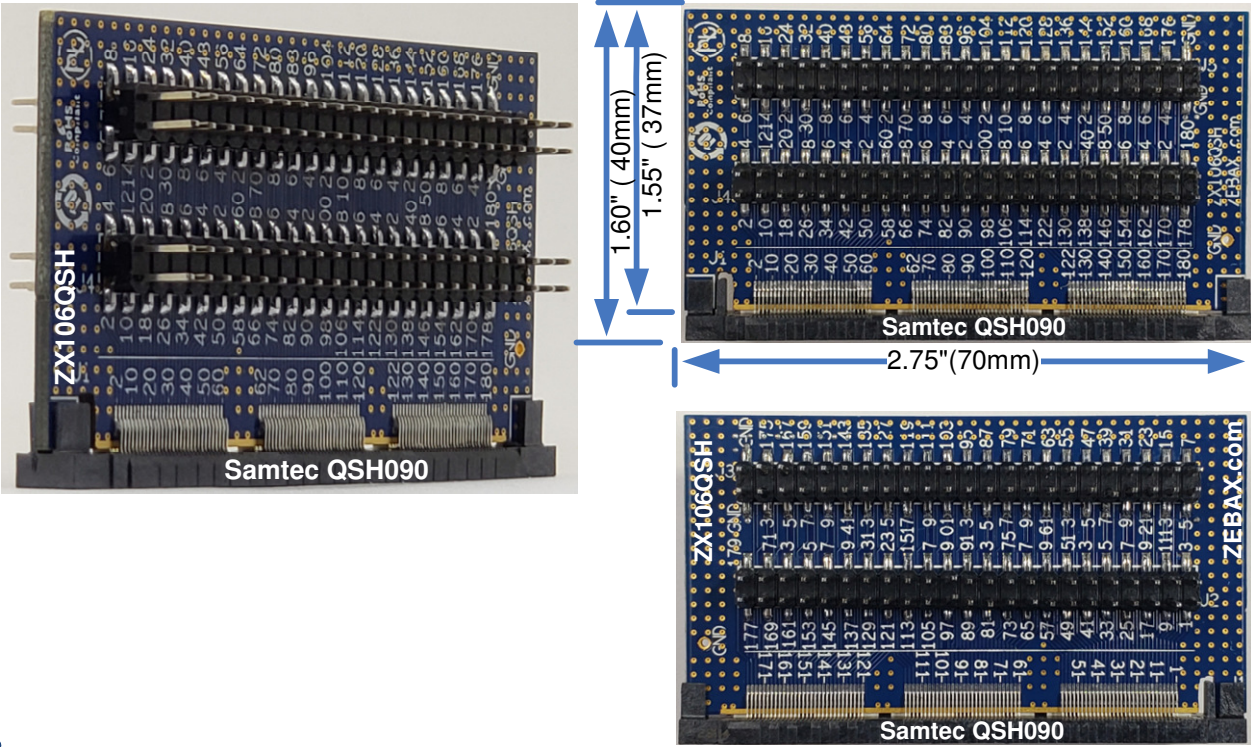
ZX106-QSH090 pin configuration - J1: QSH090																									
Layer																									
Bottom	Headers	J3	GND	175	167	159	151	143	135	127	119	111	103	95	87	79	71	63	55	47	39	31	23	15	7
			GND	173	165	157	149	141	133	125	117	109	101	93	85	77	69	61	53	45	37	29	21	13	5
		J2	179	171	163	155	147	139	131	123	115	107	99	91	83	75	67	59	51	43	35	27	19	11	3
			177	169	161	153	145	137	129	121	113	105	97	89	81	73	65	57	49	41	33	25	17	9	1
Top	Headers	J5	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160	168	176	GND
			6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126	134	142	150	158	166	174	GND
		J4	4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124	132	140	148	156	164	172	180
			2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122	130	138	146	154	162	170	178

Header pin numbers refer to the SAMTEC QSH connector pin number

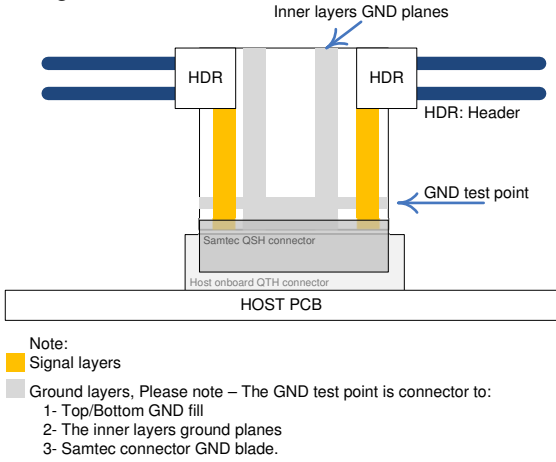
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ZX106-QSH090-ST simplified cross section diagram



Compliance: ISO2001 certified  
RoHs - Lead Free  
EU RoHS2  
UL E111594 document  
ELV- Vehicle Directive ( Directive 2000/EC)  
European Union Directive ( 203/11/EC )  
Halogen Free per IEC-61249-2.21 : 2003  
RoHs Directive 2011/65/EU  
WEEE Directive ( 2012/12/EU)  
  
Certificate of Compliance for Radioactive substances  
Certificate of Compliance for Asbestos  
Certificate of Compliance for Ozone Depleting Substances, ODS  
Certificate REACH SVHC  
Certificate of Compliance RoHS\_EN\_CoC

ZX106-QSH090-ST package includes:

Part number	Quantity	Description
ZX106-QSH090-ST	1	Samtec Breakout Adapter module
ZX100ACC-SS	0	Flying leads wire assembly

ZX100ACC-SS site page for ordering the flying leads wire assembly

Note - ALL ZEBAX products are RoHS compliant and Lead Free unless otherwise indicated.

**ZEBAX TECHNOLOGIES**  
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SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT	ASSEMBLY DRAWING	
	ITEM: ZX106-QSH090-ST	
DESCRIPTION: Samtec breakout adapter HSMC QSH 090		
CHECKED: M. MARINA	DRAWN: SLAVIK	REVISION: 1.0
		SHEET: 1 OF 1