

Product Name: ZX107-QSH-QTH090 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 systems. ZX107 has onboard QTH-090 and QSH-090 Samtec connectors, mating with QSH-090 and QTH-090 connector series.

- 1- Passthrough design where pin 1 of the QTH plug (header) is connected to pin 1 of QSH socket (receptacle).
- 2- Each QTH-090 connector's signal is routed to onboard QSH-090 connector via onboard headers.
- 3- Listed number adjacent to each header pin represents the associated Samtec QTH-QSH pin number.
- 4- All traces are 50 Ohms impedance controlled.
- 5- Four layers PCB design, inner layers are GND planes.
- 6- Two accessible GND test points, The test points are connected to module's GND planes and direct interface to the connector GND blades (tabs).
- 7- Ease of interface with single channel and differential scope probes.
- 8- Fully compatible with Single Ended , -D, and Differential Pair, -DP, Samtec connector QSH QTH series as well as cable assemblies; HQCD , HQDP
- 9- Mates with any height and form factor QSH-090 QTH-090 connectors 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
 QSH-090-xx 2rows x 90 pins/row
 Mates with: Any QSH-090-xx and QTH-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 QSH090 QTH090(DP) QSH090(DP) - HFHM2 HQCD, HQDP
 Compatible with – differential Pair (DP), unused signal can be left unconnected or grounded for improved noise immunity. Fully compatible with Altera Cyclone Development, supporting Altera High Speed Mezzanine HSMC interface ASP-122952-01 ASP-122953-01

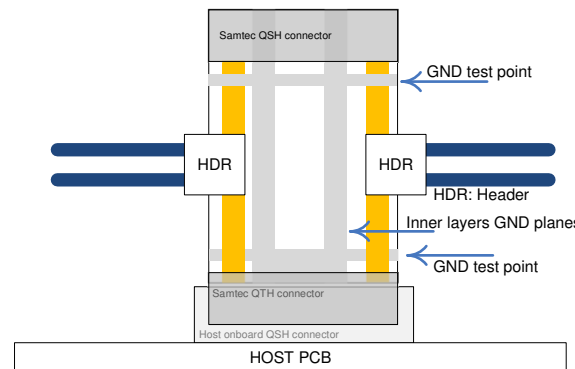
Signal assignments: Table below lists the assigned Samtec pin numbers associated with the headers.

ZX107-QSHQTH090 pin configuration - J1: QSH090 J6: QTH090

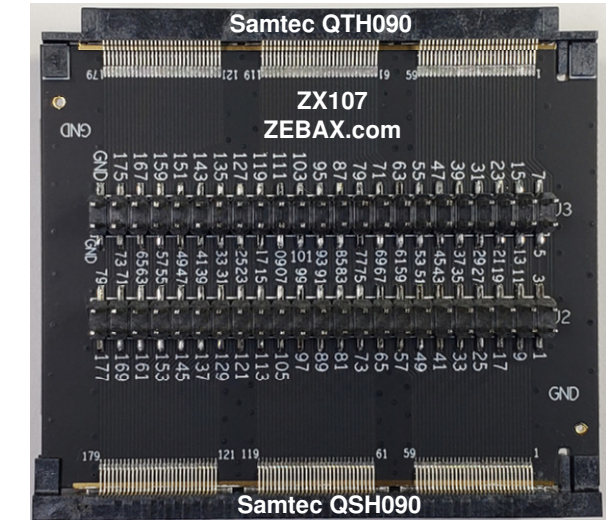
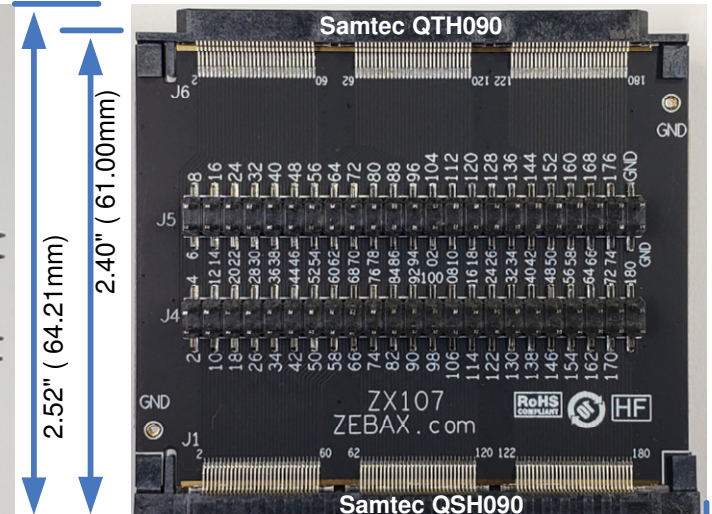
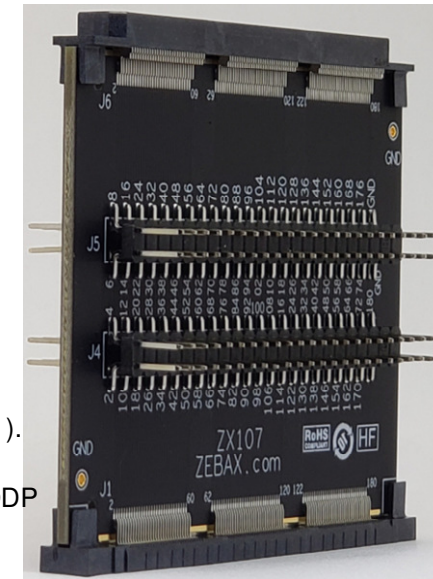
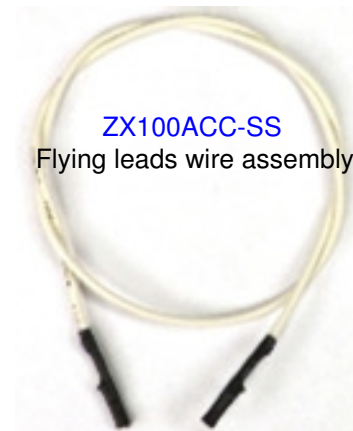
		GND	176	168	160	152	144	136	128	120	112	104	96	88	80	72	64	56	48	40	16	8	16	8	
Bottom	Headers	J3	GND	174	166	158	150	142	134	126	118	110	102	94	86	78	70	62	54	46	38	14	6	14	6
		J2	180	172	164	156	148	140	132	124	116	108	100	92	84	76	68	60	52	44	36	12	4	12	4
			178	170	162	154	146	138	130	122	114	106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

Header pin numbers refer to the SAMTEC QSH-QTH connectors pin number

ZX107 simplified cross section diagram



Note:
 Signal layers
 Ground layers, Please note – The GND test point is connector to:
 1- Top/Bottom GND fill
 2- The inner layers ground planes
 3- Samtec connectors' GND blade.



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

ZX107 package includes:

Part number	Quantity	Description
ZX107	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.

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SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT	ASSEMBLY DRAWING	
	ITEM: ZX107	
DESCRIPTION: Samtec Breakout Adapter QSH 090 QTH 090 HSMC		
CHECKED: M. MARINA	DRAWN: SLAVIK	REVISION: 1.0 SHEET: 1 OF 1

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