

**Product Name: ZX103-S Samtec Breakout Adapter - low profile**

**Product Description:** 60pins per row x 2 rows --> 120 pins Samtec breakout adapter designed for low profile test and measurement applications; servers or networking systems. ZX103-S has onboard QTH-060 and QSH-060 Samtec connectors, mating with QSH-060 and QTH-060 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-060 connector's signal is routed to onboard QSH-060 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- Exposed copper area are provided for GND probe soldering, if required.
- 8- Offering low profile design test & measurement applications.
- 9- Ease of interface with single channel and differential scope probes.
- 10- Fully compatible with Single Ended , -D, and Differential Pair, -DP, Samtec connector QSH QTH series as well as cable assemblies; HQCD , HQDP
- 11- Mates with any height and form factor QSH-060 QTH-060 connectors series such as -D -DP, -RA, -EM configurations.
- 12- Flying lead wire assembly may be used for board to board interface – See ordering information, see [ZX100ACC-SS](#)

**Electrical:**  
 Insertion loss > -2dB @3GHz  
 Trace impedance: 50 Ω  
 Operating Temperature: -55°C to +125°C  
 Samtec Connector:

Onboard Connector: QTH-060-xx 2rows x 60 pins/row  
 QSH-060-xx 2rows x 60 pins/row  
 Mates with: Any QSH-060-xx and QTH-060-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 QTH060 QSH060 QTH040(DP) QSH040(DP) - Also mates with ANY two banks of QSH090, QSH120 : QSH060(DP) QSH080(DP) HFHM2 HQCD, HQDP  
 Compatible with – differential Pair (DP), unused signal can be left unconnected or Grounded for improved noise immunity.

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

**ZX103-S header pin assignments - J1: QTH060 J6: QSH60**

		ZX103-S header pin assignments - J1: QTH060 J6: QSH60															
Bottom	Headers	J5	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
		J4	6	14	22	30	38	46	54	62	70	78	86	94	102	110	118
Top	Headers	J3	7	15	23	31	39	47	55	63	71	79	87	95	103	111	119
		J2	5	13	21	29	37	45	53	61	69	77	85	93	101	109	117
		J2	3	11	19	27	35	43	51	59	67	75	83	91	99	107	115
		J1	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113

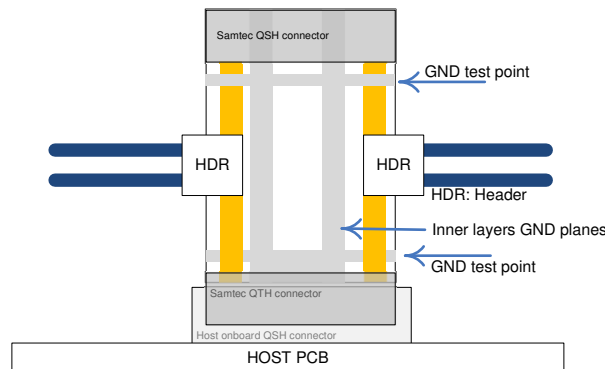
Header pin numbers refer to the SAMTEC QSH - QTH connectors pin numbers - Pin 1 of QSH is connected to Pin 1 of QTH

**Notice**

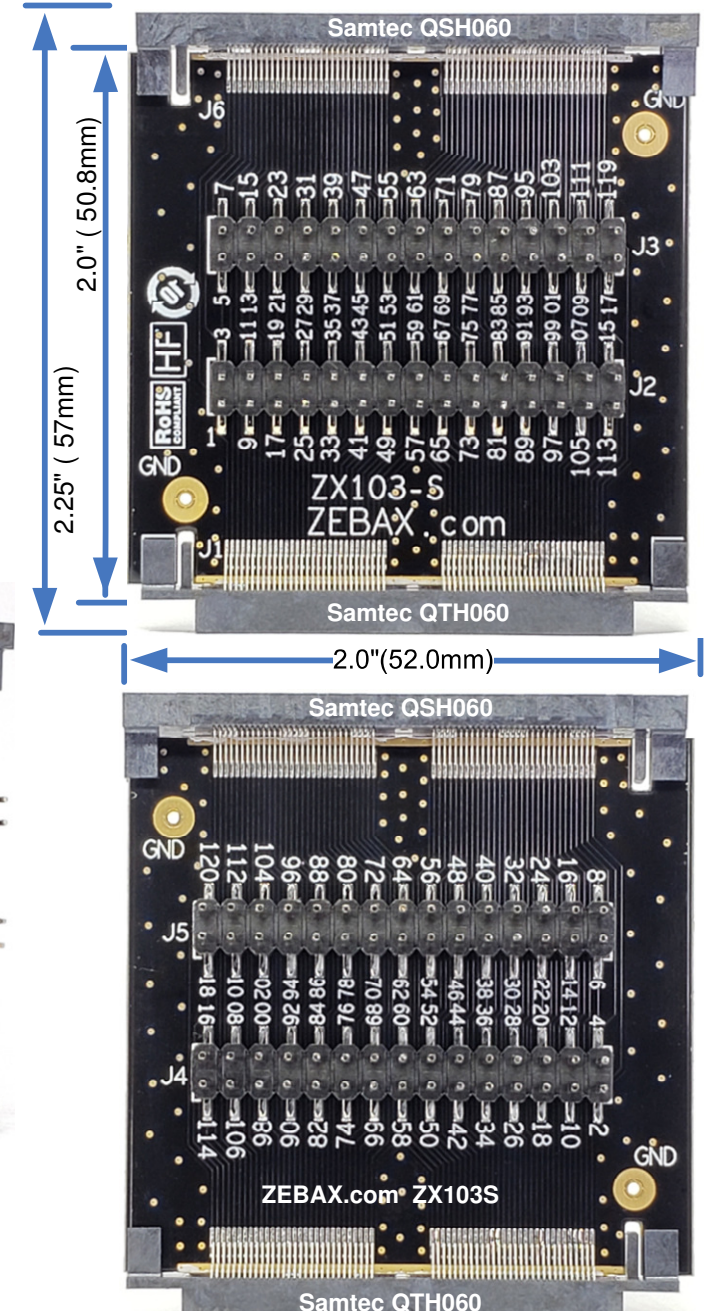
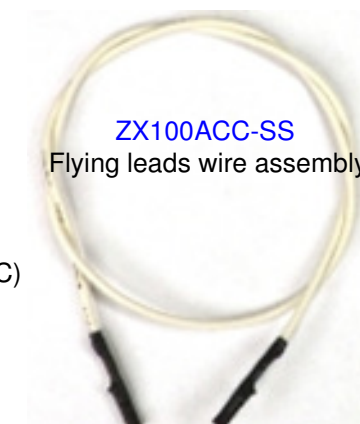
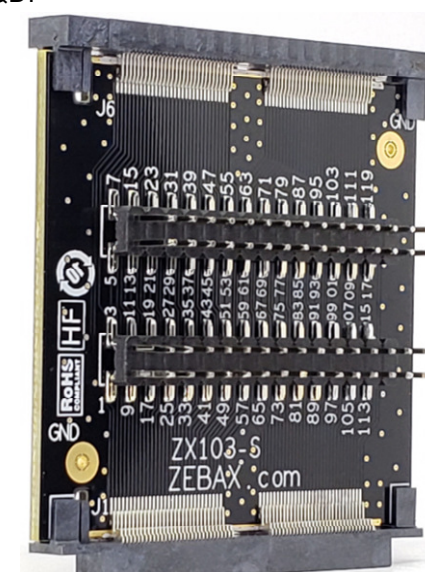
ALL ZEBAX TECHNOLOGIES DESIGN SPECIFICATIONS, DRAWINGS, PUBLICATIONS, AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." ZEBAX MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE MATERIALS, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NO INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE.

Information furnished is believed to be accurate and reliable. However, Zebax Technologies assumes no responsibility for the consequences of use of such information or for any infringement of patents or other rights of third parties that may result from its use. Specifications mentioned in this publication are subject to change without notice. This publication replaces all other information previously supplied. Zebax Technologies products are not authorized as in life support devices or systems.

ZX103-S 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

**ZX103-S package includes:**

Part number	Quantity	Description
ZX103-S	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**  
 SANTA CRUZ, CA U.S.A (831) 222-0717  
 WWW.ZEBAX.COM

SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT	ASSEMBLY DRAWING
	ITEM: ZX103-S
<b>DESCRIPTION: Samtec low profile Breakout Adapter</b>	
CHECKED: M. MARINA	DRAWN: MATTHEEW
	REVISION: 1.0
	SHEET: 1 OF 1