**Product Name:** **ZX103 Samtec Breakout Adapter – QSH 060 QTH 060**

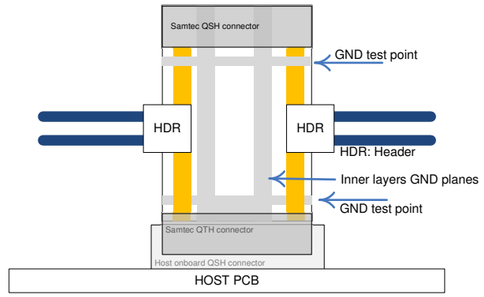
**Product Description:** 60pins per row x 2 rows -- > 120 pins Samtec breakout adapter designed for test and measurement applications; servers or networking systems. ZX103 has onboard QTH-060 and QSH-060 Samtec connectors, mating with QSH-060 and QTH-060 connector series.

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- Offering low profile design test & measurement applications.
8- Ease of interface with single channel and differential scope probes.
9- Fully compatible with Single Ended , -D, and Differential Pair, -DP, Samtec connector QSH QTH series as well as cable assemblies; HQCD , HQDP
10- Mates with any height and form factor QSH-060 QTH-060 connectors series such as -D -DP, -RA, -EM configurations.
11- Flying lead wire assembly may be used for board to board interface – See ordering information, see ZX100ACC-SS

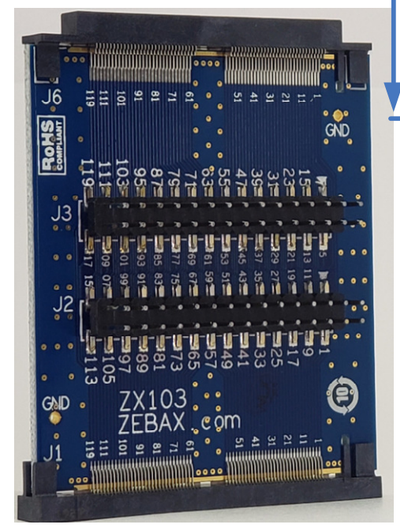
**Electrical:**

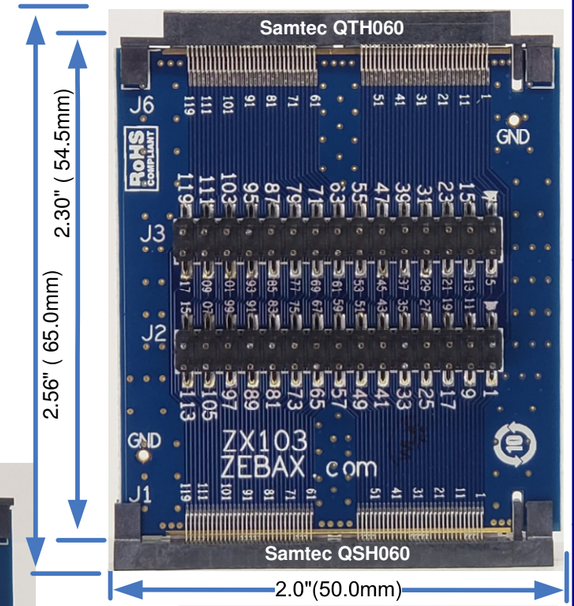
Insertion loss > -2dB @3GHz
Trace impedance: 50 Ω
Operating Temperature: -55℃ to +125℃
Samtec Connector:
Onboard Connector: QTH-060-xx 2rows x 60 pins/row
QSH-060-xx 2rows x 60 pins/row
Mates with: Any QSH-060-xx and QTH-060-xx formfactor
Pitch: 0.0197" ( 0.50mm ) pin to pin pitch
Plating: Gold Flash
Header:
Pitch: 0.1" ( 2.54mm ) pin to pin pitch
Pin: Square 0.025" ( 0.635mm )
Height: 0.24" ( 6mm )
Plating: Gold Flash

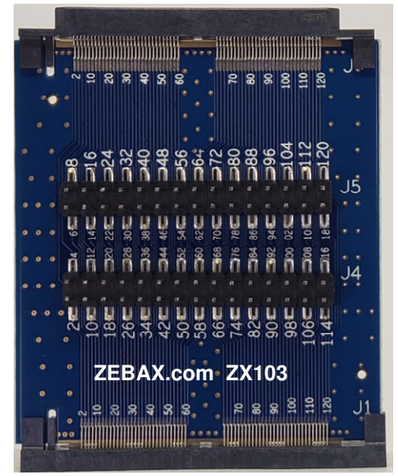
ZX103 simplified cross section diagram




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.




**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-QSHQTH060 pin assignments - J1: QSH060 J6: QTH60**

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bottom Headers | J5 | 120 | 112 | 104 | 96 | 88 | 80 | 72 | 64 | 56 | 48 | 40 | 32 | 24 | 16 | 8 |
| | | 118 | 110 | 102 | 94 | 86 | 78 | 70 | 62 | 54 | 46 | 38 | 30 | 22 | 14 | 6 |
| | J4 | 116 | 108 | 100 | 92 | 84 | 76 | 68 | 60 | 52 | 44 | 36 | 28 | 20 | 12 | 4 |
| | | 114 | 106 | 98 | 90 | 82 | 74 | 66 | 58 | 50 | 42 | 34 | 26 | 18 | 10 | 2 |
| Top Headers | J3 | 119 | 111 | 103 | 95 | 87 | 79 | 71 | 63 | 55 | 47 | 39 | 31 | 23 | 15 | 7 |
| | | 117 | 109 | 101 | 93 | 85 | 77 | 69 | 61 | 53 | 45 | 37 | 29 | 21 | 13 | 5 |
| | J2 | 115 | 107 | 99 | 91 | 83 | 75 | 67 | 59 | 51 | 43 | 35 | 27 | 19 | 11 | 3 |
| | | 113 | 105 | 97 | 89 | 81 | 73 | 65 | 57 | 49 | 41 | 33 | 25 | 17 | 9 | 1 |

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

**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

ZX100ACC-SS
Flying leads wire assembly

**ZX103 package includes:**

| Part number | Quantity | Description |
|---|---|---|
| ZX103 | 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: ZX103 |
| DESCRIPTION: | Samtec Breakout Adapter QSH 060 QTH 060 |
| CHECKED: M. MARINA | DRAWN: MATTHEEW |
| REVISSION: 1.0 | SHEET: 1 OF 1 |