

Product Name: ZX145QSE-RK Samtec Breakout Adapter – in-system rackmount – low profile – Page 1 of 2
TE Mictor SB 0.8mm (0.032") centerline 40 Breakout Adapter

Product Description: 20pins per row x 2 rows -- > 40 pins breakout adapter supporting both Samtec abd TE Mictor SB connector series:
1- Samtec's HI-SPEED Header / Socket QSE Q-Strip Blade & Beam Design connectors.
2- Tyco Electronics, TE, Mictor SB 0.80mm centerline (pitch) 40 positions Mictor-Strip connectors.

ZX145QSE-RK is designed for rackmount or low profile test and measurement applications; servers or networking hardware in any standard rackmount.
Fully compatible with 14x2 28 pins differential pairs, -DP , signaling applications for both TE Mictor SB as well as Samtec connector.
ZX145QSE-RKhas onboard QSE-020 connector, mating with Host QTE-020 and TE Mictor SB receptacle connectors series.

- 1- Each QSE-020 connector's signal is routed to onboard header.
- 2- Listed number adjacent to each header pin represents the associated Samtec QSE pin number.
- 3- 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 QSE QSE series as well as cable assemblies; SQCD
- 9- Mates with any height and form factor QTE-020 connector series such as -D -DP, -RA, -EM configurations.
- 10- Mates with TE Mictor SB 0.80mm centerline plug.
- 11- Flying lead wire assembly may be used for board to board interface – See ordering information, see [ZX100ACC-SS](#)

Electrical:
Insertion loss > -2dB @8GHz
Trace impedance: 50 Ω
Operating Temperature: -55°C to +125°C
Samtec Connector:
Onboard Connector: QSE-020-xx 2rows x 20 pins/row
Mates with: Any QTE-020-xx formfactor
Pitch: 0.0315" (0.8mm) 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

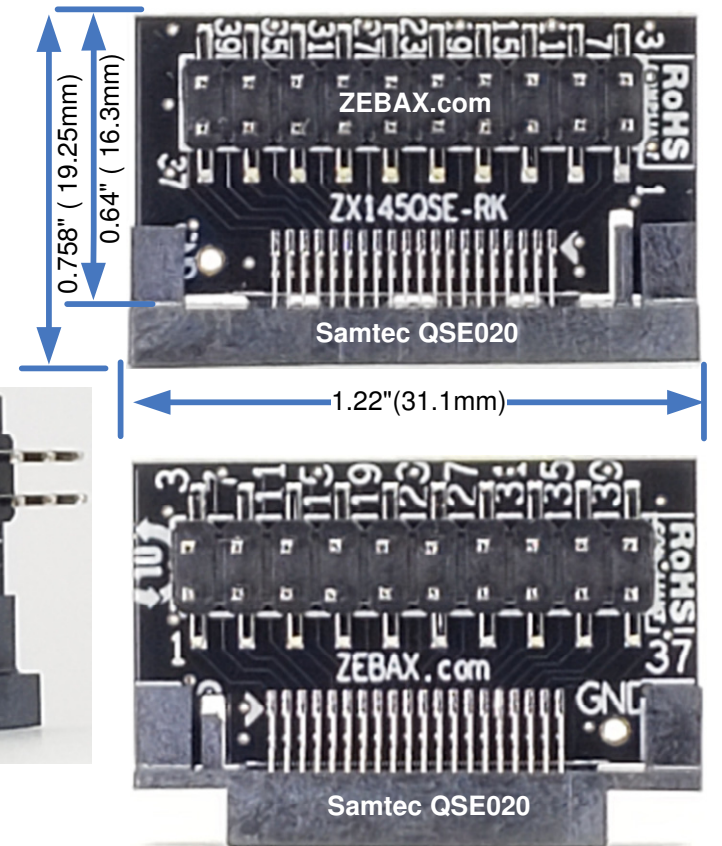
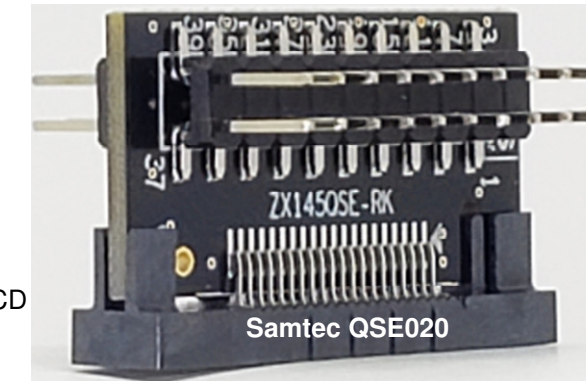
Application: Bringup, testing, emulation, development, modular design evaluations

Mates with : Samtec QTE-020-L-D QSE-014-01-**DP** connectors - EQCD EQSD EQDP EQRF cable assembly, any **1 bank** of QSE-040 (-028 Differential pair, -DP), QTE-060 (-042), QTE-080 (-056) connectors. TE Mictor SB 0.8mm (0.032") centerline 40 positions (2 rows, 20 positions / row) 1658043-1 , 1658012-1 , 1658462-1 TE Mictor SB 0.8mm (0.032") Table 2 lists 40 positions - 2 Rows x 20 Pins/Row TE Mictor SB 0.8mm (0.032") Pitch Connectors **ZX145QSE-RKmates with all listed receptacles** of TE Mictor SB 0.80mm (0.032") centerline 40 positions connectors. Table 3 lists cross matrix compatibility between Samtec and TE Mictor SB 0.8mm (0.032) 40 positions connector. Compatible with – differential Pair (DP), unused signal can be left unconnected or Grounded for improved noise immunity.

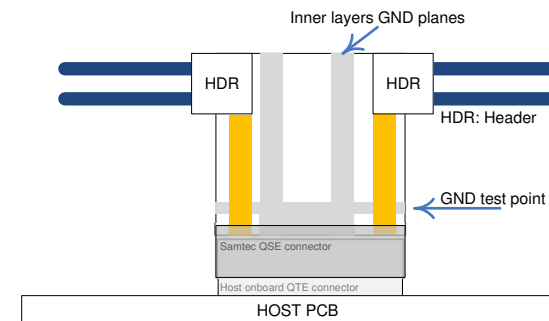
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ZX145QSE-RK simplified cross section diagram



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 connector 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

ZX145QSE-RK package includes:

Part number	Quantity	Description
ZX145QSE-RK	1	Samtec Breakout Adapter module
ZX100ACC-SS	0	Flying leads wire assembly

[ZX100ACC-SS site page](#) for ordering the flying leads wire assembly

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ZEBAX TECHNOLOGIES SANTA CRUZ, CA U.S.A (831) 2 2 2 - 0717 WWW.ZEBAX.COM		
SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT		ASSEMBLY DRAWING ITEM: ZX145QSE-RK
DESCRIPTION: In-system rackmount / low profile Samtec breakout adapter QSE-RK		
CHECKED: M. MARINA	DRAWN: MATTHEW	REVISION: 1.0 SHEET: 1 OF 2

Product Name: ZX145QSE-RK Samtec Breakout Adapter – in-system rackmount – low profile - Page 2 of 2
TE Mictor SB 0.8mm (0.032") centerline 40 Breakout Adapter

Mates with : Samtec QSE-020-L-D QTE-014-01-**DP** connectors - EQCD EQSD EQDP EQRF cable assembly, any **1 bank** of QTE-040 (-028 Differential pair, -DP), QTE-060 (-042), QTE-080 (-056) connectors. TE Mictor SB 0.8mm (0.032") centerline 40 positions (2 rows, 20 positions / row) 1658043-1 , 1658012-1 , 1658462-1 TE Mictor SB 0.8mm (0.032")
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Signal assignments: Table below exhibits the assigned Samtec pin numbers associated with the headers for top and bottom sides of the module. Due to the module size, there are no listed reference designators on this module. The side with “Zebax.com” and Module name , ZX145QSE-RK” is the top side.

ZX145QSE-RK Header pin configuration

Bottom	Headers	J3	4	8	12	16	20	24	28	32	36	40
			2	6	10	14	18	22	26	30	34	38

Top	Headers	J2	3	7	11	15	19	23	27	31	35	39
			1	5	9	13	17	21	25	29	33	37

Header pin numbers refer to the SAMTEC QSE connector pin number

40 positions - 2 Rows x 20 Pins/Row TE Mictor SB 0.8mm (0.032") Pitch Connectors Part numbers		
TE Mictor SD 0.8mm (0.032")	Description	Mated Stack Height
1658043-1 2-1658043-1 1658012-1 2-1658012-1 1658462-1 2-1658462-1	Receptacle	
4-1658043-1 6-1658043-1 4-1658012-1 6-1658012-1 4-1658462-1 6-1658462-1		
1658044-1 2-1658044-1 1658013-1 2-1658013-1 1658463-1 2-1658463-1	Plug	5mm (0.197")
4-1658044-1 6-1658044-1 4-1658013-1 6-1658013-1 4-1658463-1 6-1658463-1		8mm (0.315")
1658045-1 2-1658045-1 1658014-1 2-1658014-1 1658464-1 2-1658464-1		11mm (0.433")
1658046-1 2-1658046-1 1658015-1 2-1658015-1 1658465-1 2-1658465-1		14mm (0.551")
1658046-1 2-1658046-1 1658015-1 2-1658015-1 1658465-1 2-1658465-1		16mm (0.63")
4-1658046-1 6-1658046-1 4-1658015-1 6-1658015-1 4-1658465-1 6-1658465-1		19mm (0.748")
1658437-1 2-1658437-1 1658438-1 2-1658438-1 1658439-1 2-1658439-1		22mm (0.866")
4-1658437-1 6-1658437-1 4-1658438-1 6-1658438-1 4-1658439-1 6-1658439-1		25mm (0.984")
1658047-1 2-1658047-1 1658016-1 2-1658016-1 1658466-1 2-1658466-1		30mm (1.181")
4-1658047-1 6-1658047-1 4-1658016-1 6-1658016-1 4-1658466-1 6-1658466-1		
1658048-1 2-1658048-1 1658017-1 2-1658017-1 1658467-1 2-1658467-1		
1658049-1 2-1658049-1 1658018-1 2-1658018-1 1658468-1 2-1658468-1		
1658050-1 — 1658019-1 — 1658469-1		
1658051-1 — 1658020-1 — 1658470-1		

All above listed TE Mictor SB 0.8mm (0.032") centerline (pitch) are compatible with Samtec QStrip QTE QSE connectors

ZX145 Samtec Qstrip QTE QSE cross matrix compatability with TE Mictor SB 0.8mm (0.032") Pitch Connectors							
TE Mictor SD 0.8mm (0.032")			Samtec QStrip QTE QSE			Description	Mated Stack Height
Gold Flashing	10 μ" Gold Plating	30 μ" Gold Plating	Gold Flashing	10 μ" Gold Plating	30 μ" Gold Plating		
1658043-1	1658012-1	1658462-1	QSE-020-01-F-D-A	QSE-020-01-L-D-A	QSE-020-01-C-D-A	Receptacle	
1658044-1	1658013-1	1658463-1	QTE-020-01-F-D-A	QTE-020-01-L-D-A	QTE-020-01-C-D-A	Plug	5mm (0.197")
1658045-1	1658014-1	1658464-1	QTE-020-02-F-D-A	QTE-020-02-L-D-A	QTE-020-02-C-D-A		8mm (0.315")
1658046-1	1658015-1	1658465-1	QTE-020-03-F-D-A	QTE-020-03-L-D-A	QTE-020-03-C-D-A		11mm (0.433")
1658437-1	1658438-1	1658439-1	QTE-020-09-F-D-A	QTE-020-09-L-D-A	QTE-020-09-C-D-A		14mm (0.551")
1658047-1	1658016-1	1658466-1	QTE-020-04-F-D-A	QTE-020-04-L-D-A	QTE-020-04-C-D-A		16mm (0.63")
1658048-1	1658017-1	1658467-1	QTE-020-05-F-D-A	QTE-020-05-L-D-A	QTE-020-05-C-D-A		19mm (0.748")
1658049-1	1658018-1	1658468-1					22mm (0.866")
1658050-1	1658019-1	1658469-1	QTE-020-07-F-D-A	QTE-020-07-L-D-A	QTE-020-07-C-D-A		25mm (0.984")
1658050-1	1658019-1	1658469-1					30mm (1.181")

Note:
 1- Stack Height : Receptacle with the listed Plug
 2- **Any** listed Samtec QTE Plug is compatible with **Any** TE Mictor SD 0.8mm (0.032") pitch Receptacle connector.
 3- **Any** Listed TE Mictor SD 0.8mm (0.032") pitch Plug is compatible with **Any** Samtec QStrip QSE connector.

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