

Product Name: ZX146QTE-040 Samtec Breakout Adapter
TE Mictor SB 0.8mm (0.032") centerline 80 Breakout Adapter

Product Description: 40pins x2 rows, 80 pins breakout adapter supporting both Samtec QTE/QSE and TE Mictor SB connector series. It has onboard Samtec's HI-SPEED Header QTE Q-Strip Blade & Beam Design connector. It is fully compatible with Tyco Electronics, TE, Mictor SB 0.80mm centerline (pitch) 80 positions Mictor-Strip connector. It is **Fully compatible** with 24pins x2rows 56 pins differential pairs, -DP , signaling applications for both TE Mictor SB as well as Samtec connectors.

ZX146QTE has onboard QTE connector, mating with host / target QSE or TE Mictor SB Receptacle connectors.

- 1- Each QTE-040 connector's signal is routed to onboard headers.
- 2- Listed number adjacent to each header pin represents the associated Samtec QTE pin number.
- 3- All traces are 50 Ohms impedance controlled.
- 4- Four layers PCB design, inner layers are GND planes.
- 5- Two accessible GND test points, The test points are connected to module's GND planes and direct interface to the connector GND blades (tabs).
- 6- Ease of interface with single channel and differential scope probes.
- 7- Fully compatible with Single Ended , -D, and Differential Pair, -DP, Samtec connector QSE QTE series as well as cable assemblies.
- 8- Mates with any height and form factor QSE-040 connectors series such as -D -DP, -RA, -EM configurations.
- 9- 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: QTE-040-xx 2rows x 40 pins/row
 Mates with: Any QSE-040-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 QSE-040-L-D QSE-028-01-DP connectors
 EQCD EQSD EQDP EQRF cable assembly , any **2 banks** of QSE-060/080 or -DP
 TE Mictor SB 0.8mm (0.032") centerline 80 positions Receptacles.
 Please refer to **page 2** cross matrix compatibility between Samtec , TE Mictor SB 0.8mm connectors.

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

ZX146-QTE-040 pin configuration - J1: QTE040

		J5	6	12	18	24	30	36	42	48	54	60	66	72	78	
Bottom	Headers															
		J4	4	10	16	22	28	34	40	46	52	58	64	70	76	GND
			2	8	14	20	26	32	38	44	50	56	62	68	74	80
Top	Headers															
		J3	5	11	17	23	29	35	41	47	53	59	65	71	77	
		J2	3	9	15	21	27	33	39	45	51	57	63	69	75	GND
			1	7	13	19	25	31	37	43	49	55	61	67	73	79

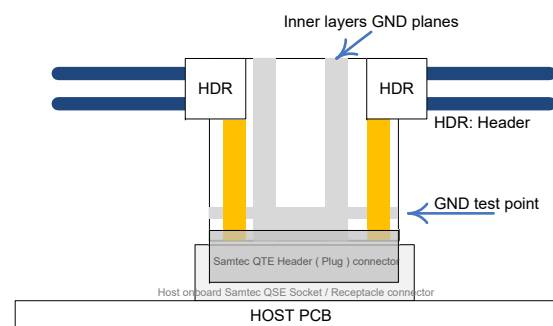
Header pin numbers refer to the SAMTEC QTE connector pin numbers

Notice

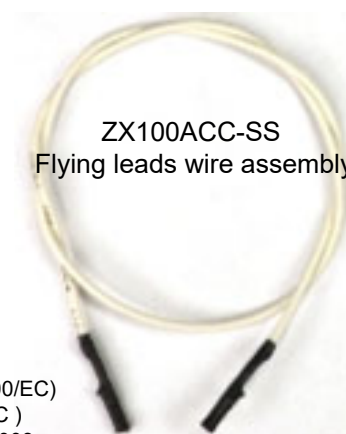
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ZX46QTE simplified cross section diagram

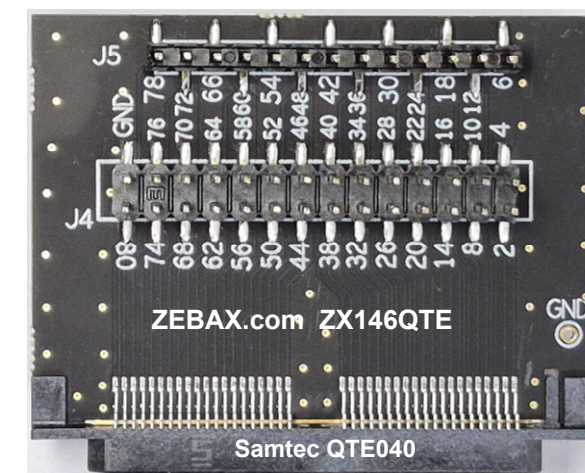
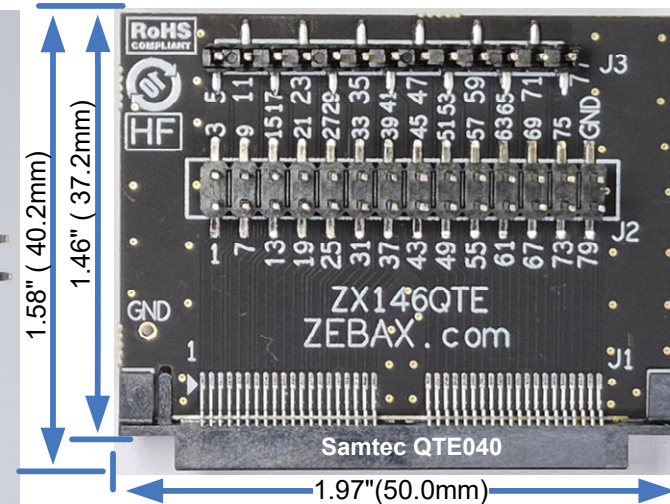
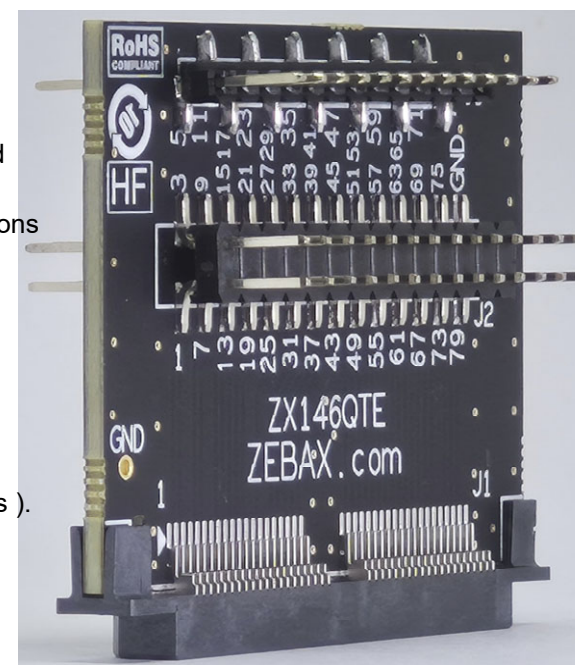


Note:
 Signal layers
 Ground layers, Please note – The GND test point is connector to:
 1- Top/Bottom GND fill
 2- The inner layers ground planes
 3- Samtec QTE connector GND blade.



ZX100ACC-SS
Flying leads wire assembly

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



ZX146QTE-040 package includes:

Part number	Quantity	Description
ZX146QTE-040	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: ZX146QTE-040

DESCRIPTION: Samtec breakout adapter QTE 040
TE Mictor SB 0.80mm 80 breakout adapter

CHECKED: M. MARINA
 DRAWN: SLAVIK
 REVISION: 1.0
 SHEET: 1 OF 2

Product Name: ZX146QTE-040 Samtec Breakout Adapter
TE Mictor SB 0.8mm (0.032") centerline 80 Breakout Adapter

Mates with : Samtec QSE-040-L-D QSE-028-01-DP connectors
EQCD EQSD EQDP EQRF cable assembly , any **2 banks** of QSE-060 or -DP
Samtec QSE-040-L-D QSE-028-01-DP connectors
and any **2 banks** of QSE-060 (-042 Differential pair, -DP), QSE-080 (-056) connectors.

ZX146QTE-040 mates with all -DP (differential pair) QSE connector series, QSE-028 connectors. If interfacing with -DP connector series, please ignore every other signal as the -DP connector only provides access to differential pair signals where the 3rd signal is not present on the -DP connector series.

TE Mictor SB 0.8mm (0.032") centerline 80 positions (2 rows, 40 positions / row) Receptacles.

Table 1 lists 80 positions - 2 Rows x 40 Pins/Row TE Mictor SB 0.8mm (0.032") Pitch Connectors Part numbers
ZX146QTE-040 mates with all listed Receptacles of TE Mictor SB 0.80mm (0.032") centerline 80 position connectors.

Table 2 lists cross matrix compatibility between Samtec and TE Mictor SB 0.8mm (0.032") 80 positions connector.

Table 1: TE Mictor SB 0.8mm (0.032") Pitch Connectors Part numbers

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

All above listed TE Mictor SB 0.80mm (0.032") centerline (pitch) are compatible with Samtec QStrip QTE QSE connectors

Table 2: Cross matrix compatibility between Samtec and TE Mictor SB 0.8mm (0.032") 80 positions connector.

ZX146 Samtec Qstrip QTE QSE cross matrix compatability with TE Mictor SB 0.8mm (0.032") Pitch Connectors							
TE Mictor SB 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		
1658043-2	1658012-2	1658462-2	QSE-040-01-F-D-A	QSE-040-01-L-D-A	QSE-040-01-C-D-A	Receptacle	
1658044-2	1658013-2	1658463-2	QTE-040-01-F-D-A	QTE-040-01-L-D-A	QTE-040-01-C-D-A	Plug	5mm (0.197")
1658045-2	1658014-2	1658464-2	QTE-040-02-F-D-A	QTE-040-02-L-D-A	QTE-040-02-C-D-A		8mm (0.315")
1658046-2	1658015-2	1658465-2	QTE-040-03-F-D-A	QTE-040-03-L-D-A	QTE-040-03-C-D-A		11mm (0.433")
1658437-2	1658438-2	1658439-2	QTE-040-09-F-D-A	QTE-040-09-L-D-A	QTE-040-09-C-D-A		14mm (0.551")
1658047-2	1658016-2	1658466-2	QTE-040-04-F-D-A	QTE-040-04-L-D-A	QTE-040-04-C-D-A		16mm (0.63")
1658048-2	1658017-2	1658467-2	QTE-040-05-F-D-A	QTE-040-05-L-D-A	QTE-040-05-C-D-A		19mm (0.748")
1658049-2	1658018-2	1658468-2					22mm (0.866")
1658050-2	1658019-2	1658469-2	QTE-040-07-F-D-A	QTE-040-07-L-D-A	QTE-040-07-C-D-A		25mm (0.984")
1658051-2	1658020-2	1658470-2					30mm (1.181")

Note:

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

Ground : Samtec QTE & QSE as well as TE Mictor SB 0.8mm centerline connector series include enter line Ground blade.
The Ground blade on the ZX146QTE-LP is connected to two internal PCB ground reference layers as well as top / bottom ground fills.
Please refer to page 1 "simplified cross section diagram" for details.

For proper signal measurements, please connect the GND test point to host / target ground reference point.

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: ZX146QTE-040
DESCRIPTION: Samtec breakout adapter QTE 040 TE Mictor SB 0.80mm 80 breakout adapter		
CHECKED: M. MARINA	DRAWN: SLAVIK	REVISION: 1.0 SHEET: 2 OF 2

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