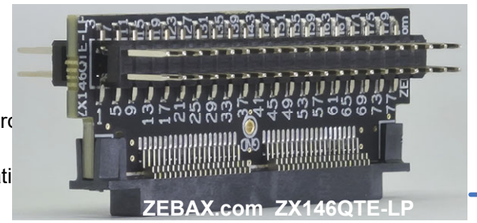
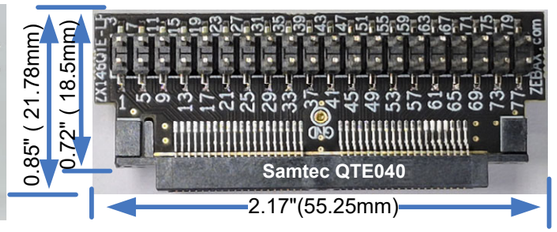
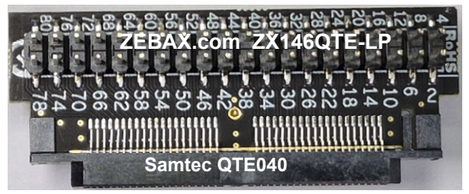
Product Name: **ZX146QTE-LP-040 Samtec Breakout Adapter**
TE Mictor SB 0.8mm (0.032") centerline 80 Breakout Adapter







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 applicati for both TE Mictor SB as well as Samtec connectors.

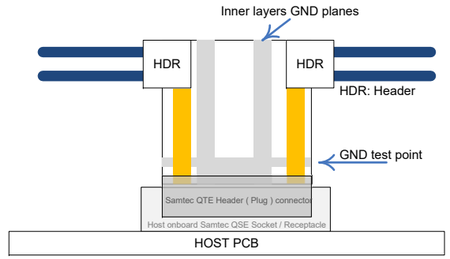
ZX146QTE-LP has onboard QTE connector, mating with host / target QSE or TE Mictor SB Receptacle connectors.

1- Each QTE-040 connector's signal is routed to onboard headers.
3- Listed number adjacent to each header pin represents the associated Samtec QTE pin number.
4- All traces are 50 Ohms impedance controlled.
5- Four layers PCB design, inner layers are GND planes.
6- 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 QSE QTE series as well as cable assemblies.
10- Mates with any height and form factor QSE-040 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°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

ZX46QTE-LP 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.

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 Plug and 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.

ZX146QTE-LP pin configuration - J1: QTE040

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

Header pin numbers refer to the SAMTEC QTE connectors pin numbers

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

ZX146QTE-LP-040 package includes:

Part number	Quantity	Description
ZX146QTE-LP-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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WWW.ZEBAX.COM

SPECIFIED DIMENSIONS ARE INCHES (MM).
ROHS COMPLIANT

ASSEMBLY DRAWING

ITEM: ZX146QTE-LP-040

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

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

Product Name: **ZX146QTE-LP-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 QSE-080 (-056) connectors.

ZX146QTE-LP 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 series only provides access to differential pair signals where the 3rd signal is not present on the -DP connector series. The unused pin could be connected to Ground or left unconnected.

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

Table 1 lists 80 positions - 2 Rows x 40 Pins/Row TE Mictor SB 0.8mm (0.032") Pitch Connectors Part numbers
ZX146QTE-LP 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 SD 0.8mm (0.032")	**Description**	**Mated Stack Height**
1658043-2 2-1658043-2 1658012-2 2-1658012-2 1658462-2 2-1658462-2	Receptacle	
4-1658043-2 6-1658043-2 4-1658012-2 6-1658012-2 4-1658462-2 6-1658462-2		
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		
1658045-2 2-1658045-2 1658014-2 2-1658014-2 1658464-2 2-1658464-2		8mm (0.315")
4-1658045-2 6-1658045-2 4-1658014-2 6-1658014-2 4-1658464-2 6-1658464-2		
1658046-2 2-1658046-2 1658015-2 2-1658015-2 1658465-2 2-1658465-2		11mm (0.433")
4-1658046-2 6-1658046-2 4-1658015-2 6-1658015-2 4-1658465-2 6-1658465-2		
1658437-2 2-1658437-2 1658438-2 2-1658438-2 1658439-2 2-1658439-2		14mm (0.551")
4-1658437-2 6-1658437-2 4-1658438-2 6-1658438-2 4-1658439-2 6-1658439-2		
1658047-2 2-1658047-2 1658016-2 2-1658016-2 1658466-2 2-1658466-2		16mm (0.63")
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		19mm (0.748")
1658049-2 2-1658049-2 1658018-2 2-1658018-2 1658468-2 2-1658468-2		22mm (0.866")
1658050-2 — 1658019-2 — 1658469-2 —		25mm (0.984")
1658051-2 — 1658020-2 — 1658470-2		30mm (1.181")

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 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		
1658043-2	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		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	Plug	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 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.

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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WWW.ZEBAX.COM

SPECIFIED DIMENSIONS ARE INCHES (MM).
ROHS COMPLIANT

ASSEMBLY DRAWING

ITEM: ZX146QTE-LP-040

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

CHECKED: M. MARINA
DRAWN: SLAVIK
REVISSION: 1.0
SHEET: 2 OF 2

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