ept

0.8 mm SMT Board-to-Board connector

March 2022

Zero8

edition

Zero8

SMT connector with high scalability

Discover the 5 superpowers of the Zero8 connector family!

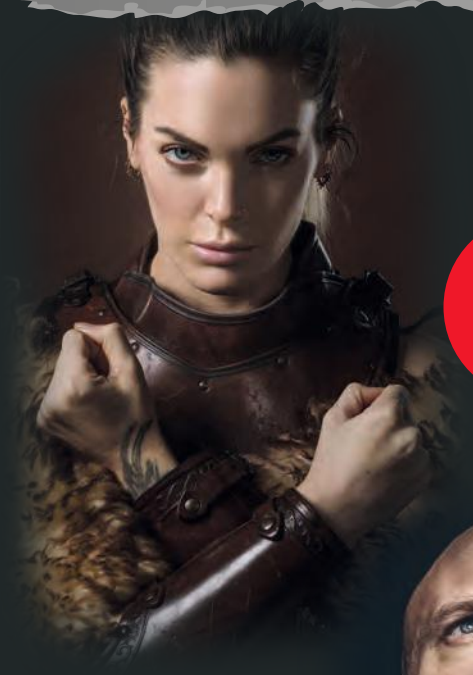
SUPERPOWER
EFFICIENCY

SUPERPOWER
SIGNAL PROTECTION

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Developers can count on the Zero8 super powers to make work easier for them:

- **Efficiency through exceptional scalability and variability,**
- **Signal protection through effective EM-shielding,**
- **Contact reliability through innovative ScaleX contact system with high tolerance,**
- **Robustness through board lock and compact anti-twist design with contact protection,**
- **Speed of up to 16 Gbps through HighSpeed-optimized contact design**



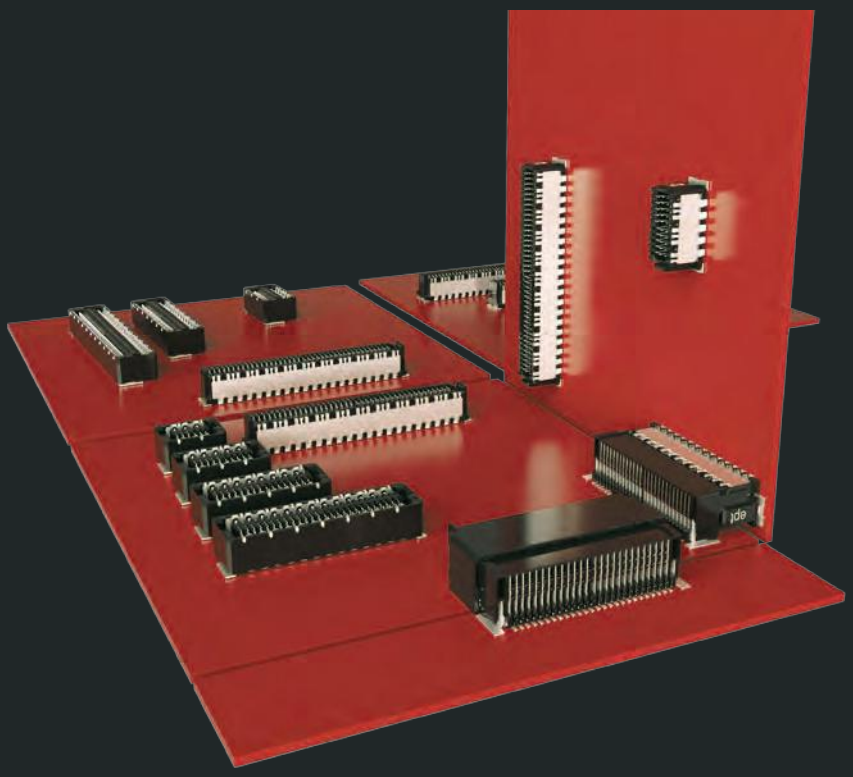
SUPERPOWER
CONTACT RELIABILITY

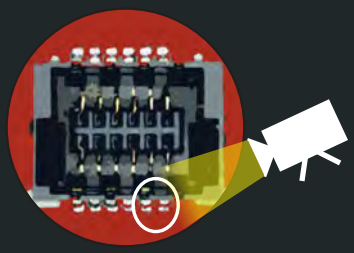
SUPERPOWER
ROBUSTNESS

SUPERPOWER
SPEED

SUPERPOWER EFFICIENCY

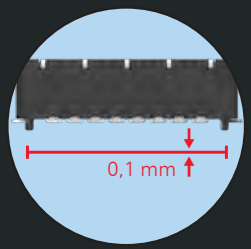
- Saves space thanks to 0.8 mm pitch
- Variable number of contacts from 12 to 80
- Vailable with or without shielding
- Stack heights from 6 to 21 mm
- Angled types for 90° and 180° applications





AOI control

optimized contact design for automated testing after soldering



coplanarity

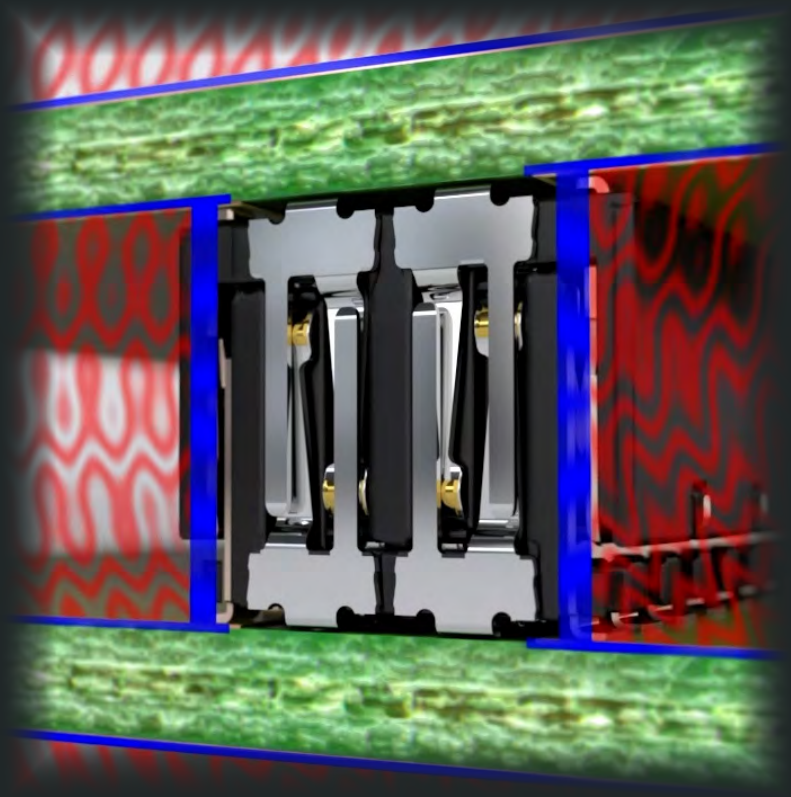
soldering under controlled process conditions

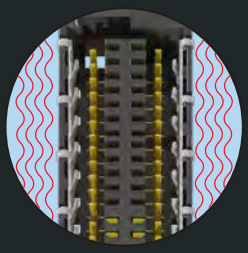
ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

A hero with many faces: He is fast. He gets you to your destination. But above all, he is versatile. With the Zero8, you develop your solutions with maximum efficiency. Its features ensure that you get to your goal faster and benefit from an enormous range of variants. Even angled designs for 90° and 180° applications are available.

SUPERPOWER
SIGNAL PROTECTION

- Newly developed EMC shielding concept
- Optimal discharge of interference currents
- Coupling inductance of max. 10 picohenry (pH)
- Without shielding - as an alternative





EMC shielding

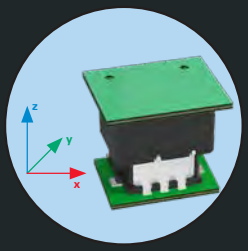
double sided shielding ensures a high electromagnetic compatibility for optimal signal integrity in the industrial environment

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

The Zero8 connector won't let you down: with its newly developed, two-sided shielding concept, it ensures interference-free high-speed transmission in industrial environments. The shielding material used is especially suitable for components with high electromagnetic compatibility requirements and guarantees a coupling inductance of max. 10 pH for the connector.

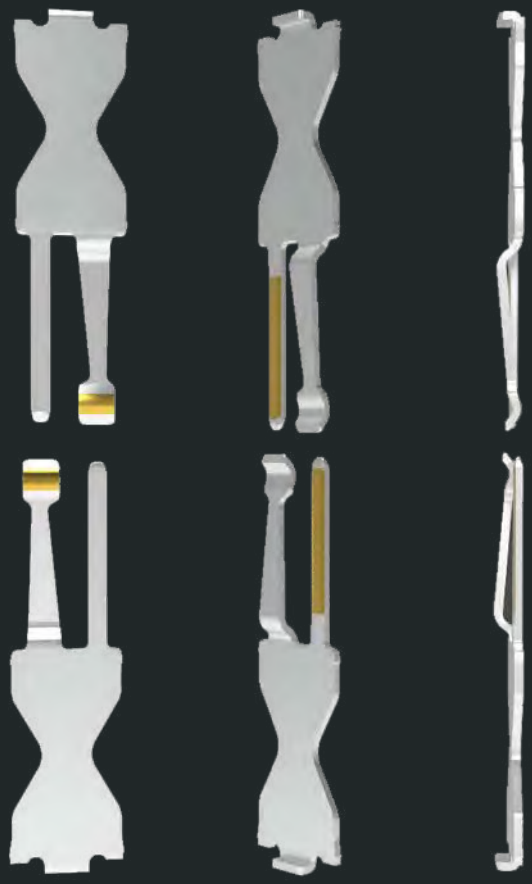
SUPERPOWER
CONTACT RELIABILITY

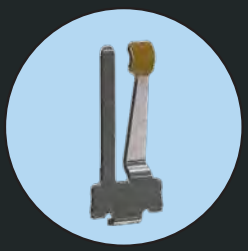
- Innovative ScaleX contact system
- Two contact areas per pin
- Resistance to shock and vibration
- Absolutely secure mating
- Able to withstand at least 500 mating cycles



tolerance compensation

high reliability through tolerance compensation





smooth contact surface

the contact on the homogenous rolled side with high-end surface allows for up to 500 mating cycles

double sided contact system

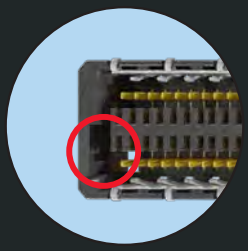
for a secure connection in industrial environments (shock, vibration,thermal cycles, corrosive gas)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Delivers what it promises: Thanks to its robust and double-sided ScaleX technology, the Zero8 always ensures a reliable connection. It defies typically harsh conditions in industrial applications. And it does so even under extreme environmental and mechanical stress such as shock and vibration.

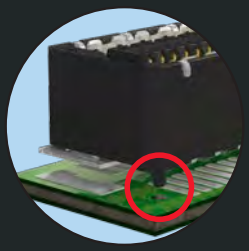
SUPERPOWER ROBUSTNESS

- All contacts are protected
- Anti-twist protection during mating
- Mechanical relief provided by two board locks
- Offset compensation of up to 0.7 mm during installation
- High tolerance compensation during operation



twist guard

for correct connection of plug and socket



positioning pins

optimal processing through precise positioning

protected contacts

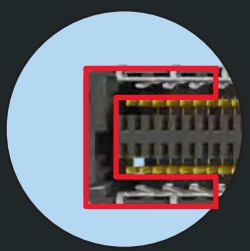
optimized contact and casing geometry reduce damage to contacts

boardlock

absorbs mechanical stress and ensures a reliable connection to the PCB

solder meniscus

guarantees a robust surface mount connection



insertion chamfer

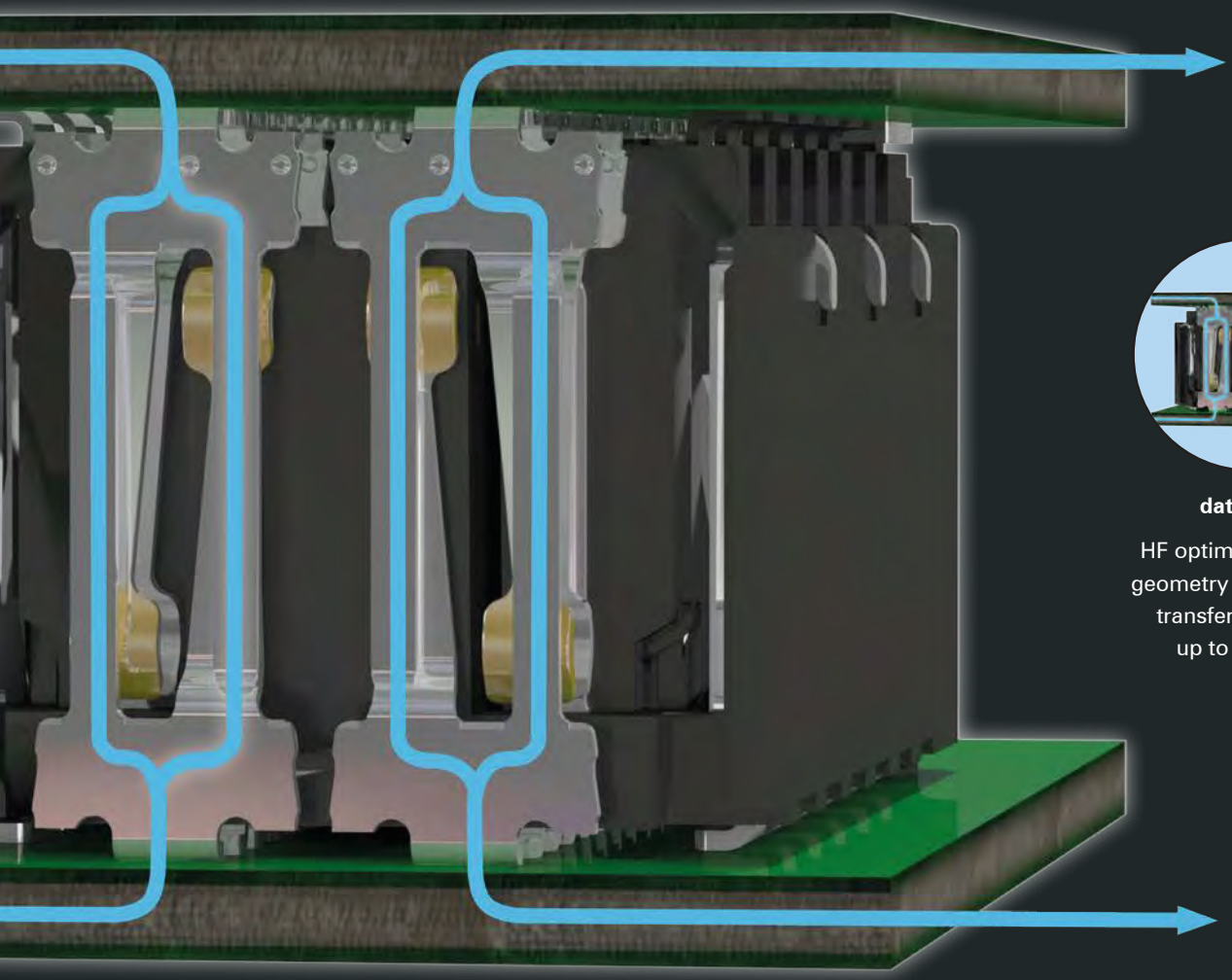
for compensation of misalignment and angular inclination

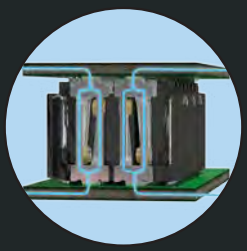
ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Another ace up its sleeve: With its clever anti-twist protection during mating, a tolerance compensation of ± 0.4 mm when mated and an offset compensation of up to 0.7 mm during installation, the Zero8 is unbreakable. In addition to all these top features, its incredible robustness makes it a very reliable companion - even under the most adverse environmental conditions.

SUPERPOWER SPEED

- Suitable for PCIe 4.0 and Industrial Ethernet
- RF signal transmission of 16 Gbps +
- Additional signal protection through shielding
- SI models available





data flow

HF optimized contact geometry ensures data transfer speeds of up to 16 Gpbs

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Fast as lightning: High-speed simulations with the Zero8 connector system feature excellent signal integrity at 16 Gbps and are therefore predestined for the PCIe 4.0 and Industrial Ethernet transmission standards. We are happy to provide the S-parameters for your application simulations.

Zero8 – 0.8 mm SMT for Board-to-Board Applications

Scalable & Robust

The product group Zero8 with ScaleX technology offers a high level of design, stacking and pin count scalability. This connector series is available with double sided shielding or as an unshielded version.

The robust ScaleX connector technology ensures a secure contact during mechanical stress (vibration, shock) and compensates for unit tolerances in all directions (x,y,z). The connector's sophisticated geometry protects its contacts from faulty handling.

ScaleX - Double sided, robust contact technology in a versatile and scalable connector system.

For more information please visit www.ept.de/Zero8

Key Features:

- up to 16 Gbps
- 12 to 80 pins
- 1.4 A operational current
- 500 mating cycles
- reliable contact
- optimized contact damage prevention
- packed in Tape & Reel

Applications:

- board-to-board (mezzanine) from 6 - 21 mm
- parallel and perpendicular connection
- shielded and unshielded version

Termination

SMT

Application

HighSpeed

High Density

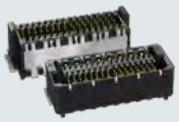
EMC

Rugged

Variability

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Zero8 – Product Overview

Type of Zero8 connector			Height	Number of pins	Mating configurations			Page
					Parallel	Horizontal	Perpendicular	
	Plug Socket low-profile	shielded	1.15 mm 4.85 mm	12 ... 80	✓		✓	22, 23
	Plug Socket mid-profile	shielded	2.65 mm 7.85 mm	12 ... 80	✓		✓	24, 25
	Plug Socket (coming soon) high-profile	shielded	7.15 mm 10.85 mm	12 ... 80	✓		✓	26, 27
	Plug X-high	shielded	8.65 mm	12 ... 80	✓		✓	28
	Plug Socket angled	shielded		12 ... 80		✓	✓	30, 31
	Plug Socket low-profile	unshielded	1.15 mm 4.85 mm	12 ... 80	✓		✓	32, 33
	Plug Socket mid-profile	unshielded	2.65 mm 7.85 mm	12 ... 80	✓		✓	34, 35
	Plug Socket (coming soon) high-profile	unshielded	7.15 mm 10.85 mm	12 ... 80	✓		✓	36, 37
	Plug X-high	unshielded	8.65 mm	12 ... 80	✓		✓	38
	Plug Socket angled	unshielded		12 ... 80		✓	✓	40, 41

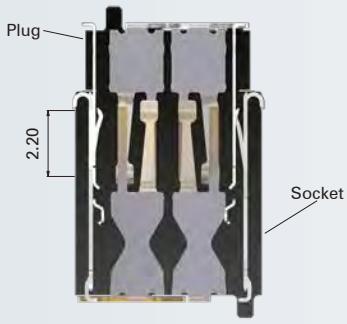
PCB Distances Board-to-Board

Board-to-Board distances of 6.00 to 21.00 mm can be achieved using Zero8 connections – whether you decide on a shielded or unshielded version.

6.00 - 21.00 mm

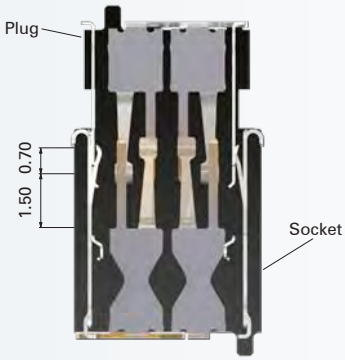
socket \ plug	plug low	plug mid	plug high	plug x-high
socket low	**6.00 - 7.50 mm** plug low p. 22 socket low p. 23	**7.50 - 9.00 mm** plug mid p. 24 socket low p. 23	**12.00 - 13.50 mm** plug high p. 26 socket low p. 23	**13.50 - 15.00 mm** plug x-high p. 28 socket low p. 23
socket mid	**9.00 - 10.50 mm** plug low p. 22 socket mid p. 25	**10.50 - 12.00 mm** plug mid p. 24 socket mid p. 25	**15.00 - 16.50 mm** plug high p. 26 socket mid p. 25	**16.50 - 18.00 mm** plug x-high p. 28 socket mid p. 25
socket high (coming soon)	**12.00 - 13.50 mm** plug low p. 22 socket high p. 27	**13.50 - 15.00 mm** plug mid p. 24 socket high p. 27	**18.00 - 19.50 mm** plug high p. 26 socket high p. 27	**19.50 - 21.00 mm** plug x-high p. 28 socket high p. 27

Connection for min. PCB distance



The minimum possible board-to-board distance is achieved by plugging the connector all the way into the stop position.

Connection for max. PCB distance



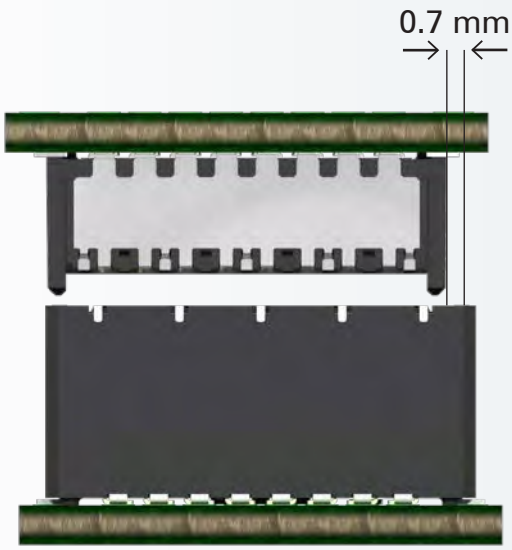
The plug and socket can be inserted anywhere within a range of 1.5 mm, thus allowing for the maximum possible board-to-board distance. The remaining 0.7 mm ensure secure contact mating.

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Misalignment Zero8 Connectors

Allowed misalignment tolerances

longitudinal: ± 0.7 mm

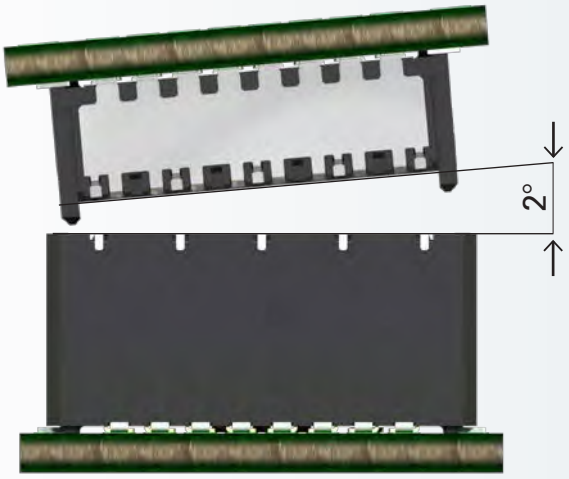


transverse: ± 0.7 mm

Angular Inclination Zero8 Connectors

Allowed angular inclination tolerances

longitudinal: ± 2°

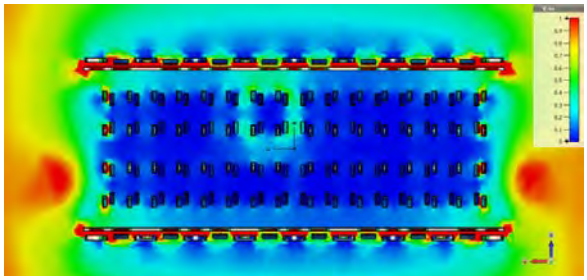
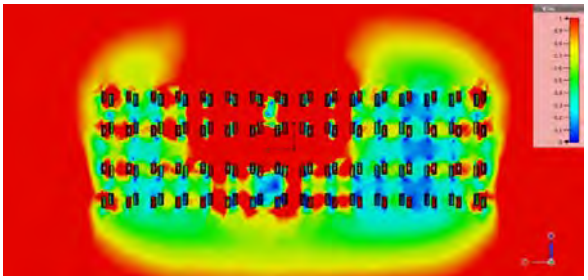
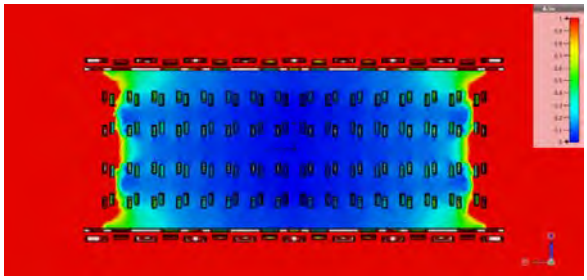
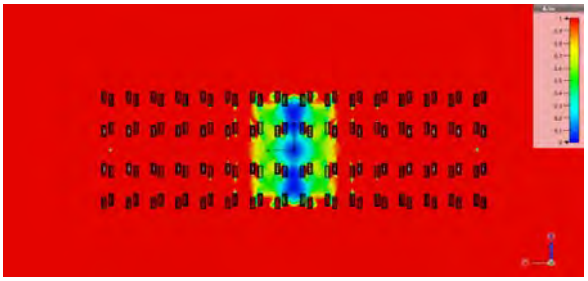


transverse: ± 4°

Electromagentic Compatibility

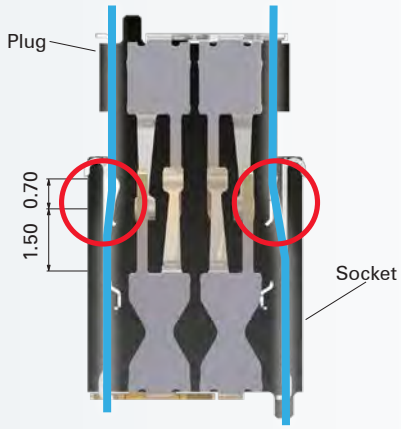
The double sided shielding concept guarantees a interference-free HighSpeed transfer for the industrial environment: The utilized shielding material works especially well for components with high electromagentic compatibility requirements and guarantees a coupling inductivity of max. 10pH for the connector.

Electric and magnetic field strength influence of the connector can be simulated through the coupling inductivity.

Shielded Connector	Unshielded Connector
Electric Field Strength	
	
Magnetic Field Strength	
	

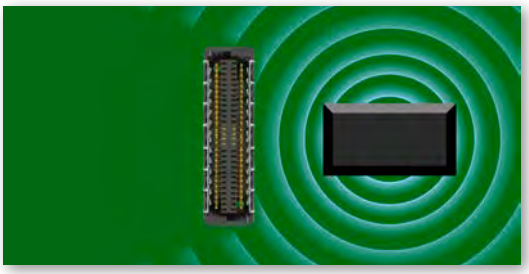
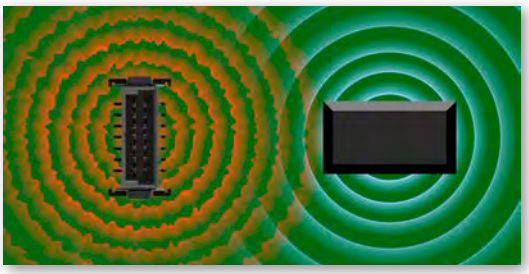
The extensive shielding concept uses multiple contact points to channel interferences away from mass connections.

Secure connections of individual PCB distances of 6 - 21 mm are guaranteed by the shielding concept's extended mating area of 2.2 mm.



ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

The continuously evolving digitalisation in all sectors, (industrial) Internet of Things, Industry 4.0, Smart Grid as well as Smart Home, requires HighSpeed data transfers from sensor to cloud. Signals of up to 16 Gbps and faster need to be transfered reliably and have to exhibit a high electromagentic compatibility. Disruptions, corruption and especially interruptions of the transferred data should be prevented, which makes EMC protection more relevant than ever. To ensure EMC, outgoing as well as incoming disruption has to be reduced. Proper EMC shielding makes both possible. Applications, which act as a disrupting source as well as disrupting sink, can be protected through EMC shielding and won't influence neighboring components.

Shielded Connector	Unshielded Connector
Shielding enables closer placement of individual components to each other.	
	
Protection like this is of upmost importance in todays trend of miniaturisation and increasing integration density!	

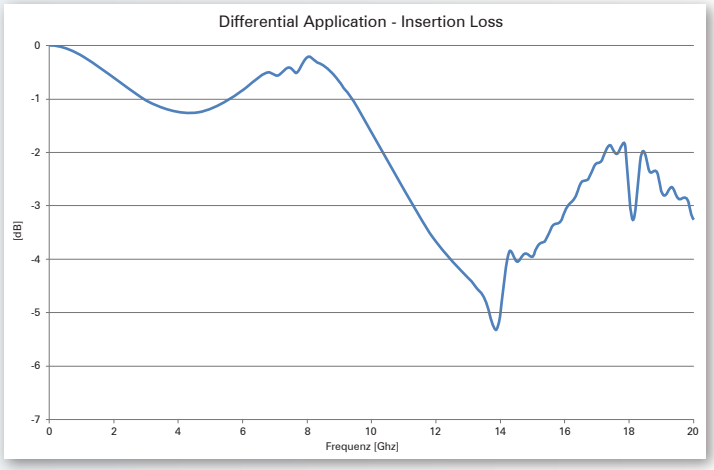
Examples of applications that require especially effective EMC protection are PLC/IO-controls, routers, human machine interfaces such as control and display units, cameras and intelligent sensors with bus connections such as light barriers, temperature-, pressure-, power- and water meters.

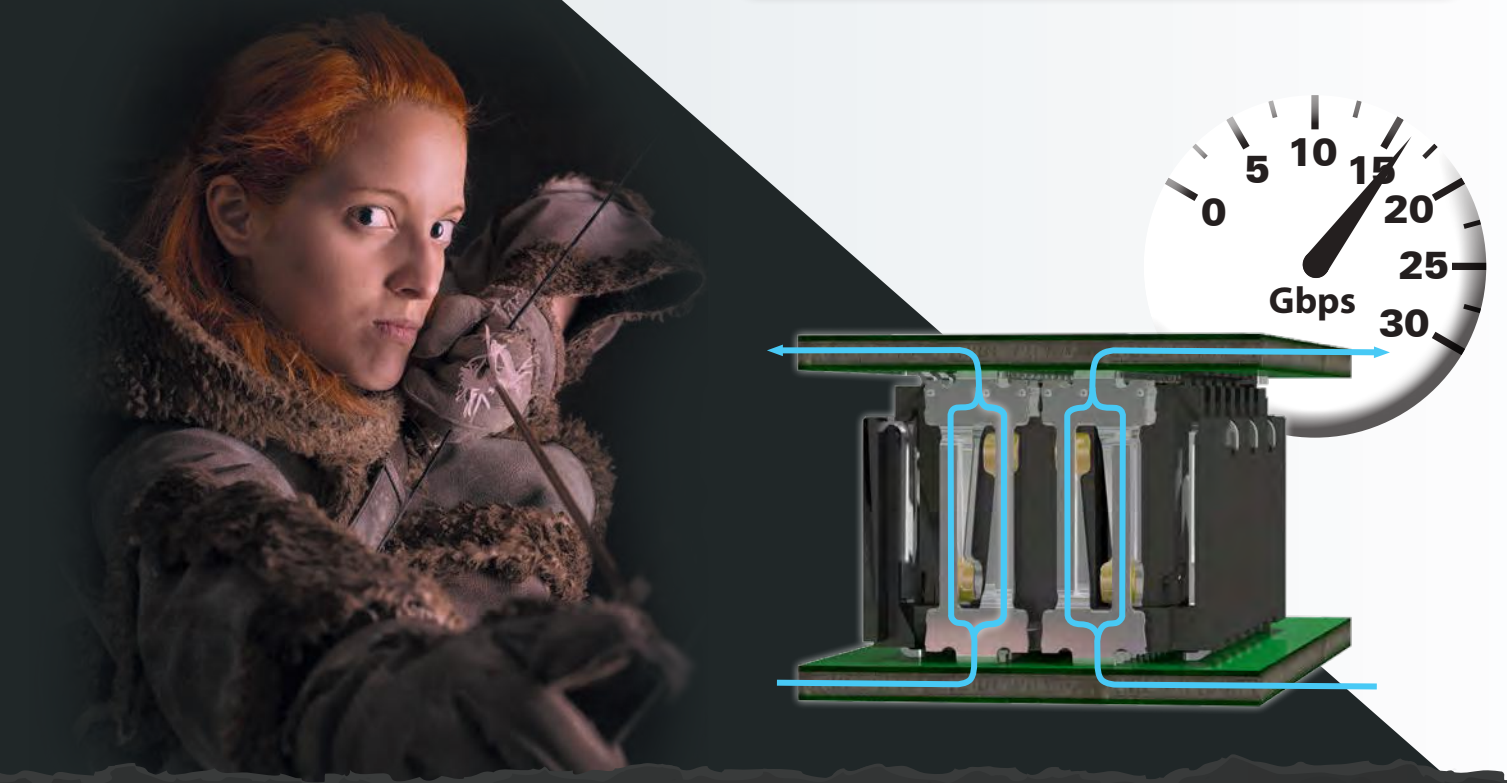
HighSpeed - Zero8

ScaleX provides the ideal solution for robust and industry-ready PCB-connections with HighSpeed transfer rates of up to 16 Gbps.

This data rate is achieved by an optimized contact design and materials that provide excellent electrical conductivity.

Simulations with the Zero8 connector at 16 Gbps exhibit an excellent signal integrity. S-Parameter can be provided for your application simulations. Please contact us for more information at **sales@ept.de** and ask for a free sample.

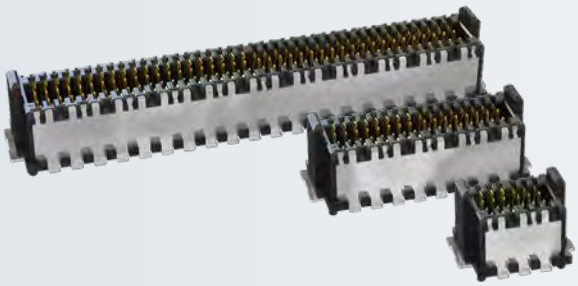




ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Technical specification	Zero8	
	Test Standard	0.8 mm SMT Board-to-Board Connectors
Basics		
Number of pins		12 / 20 / 32 / 52 / 80
Termination		SMT
Operating temperature range		-55°C bis +125°C
Material		
Insulator material		LCP, UL 94 V-0
CTI value	IEC 60112	150
Contact material		Copper alloy
Contact surface		Au over Ni
Termination area		Sn over Ni
Mechanical		
Pitch		0.8 mm
Mating- and separating force per Contact shielded / unshielded		≤ 0.5 N / ≤ 0.4 N
Durability	IEC 60512-9-1:2010	Performance level I: 500 mating cycles
Coplanarity		max. 0.1 mm
Vibration, sinusoidal	IEC 60512-6-4:2002	10 - 2000 Hz 20 g
Contact mating problems if vibrations occur, sinusoidal	IEC 60512-2-5:2003	≤ 1 µs
Shock, semi-sinusoidal	IEC 60512-6-3:2002	50 g 11 ms
Contact mating problems if shocks occur, semi-sinusoidal	IEC 60512-2-5:2003	≤ 1 µs
Electrical		
Operational current	IEC 60512-5-2:2002	max. 1.7 A at 20°C (52 pins) max. 5.5 A at 20°C (2 of 52 pins)
Contact resistance	IEC 60512-2-1:2002	max. 25 mΩ
Clearance and creepage		min. 0.25 mm
Insulation resistance	IEC 60512-3-1:2002	min. 5 GΩ
Test voltage	IEC 60512-4-1:2003	500 V AC
Data transfer rate		16 Gbps
Coupling inductivity		10 pH
Processing		
Soldering temperature	JEDEC J-STD-020E	260°C
MSL	JEDEC J-STD-020E	1
Packaging		Tape and Reel
Assembly		Pick and place
Approval		
UL file		E130314
Environment		RoHS compliant

Plug low-profile Shielded



Type: Plug straight low-profile
1.15 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Plug low-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-52112-51	500
20	405-52120-51	
32	405-52132-51	
52	405-52152-51	
80	405-52180-51	

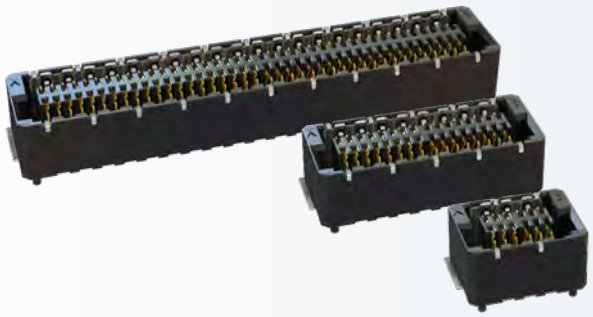
On request

- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 23, 25, 27)
for perpendicular applications (S. 31)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de



Type: Socket straight low-profile
4.85 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Socket low-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	406-52112-51	500
20	406-52120-51	
32	406-52132-51	
52	406-52152-51	
80	406-52180-51	

On request
- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 22, 24, 26, 28)

for perpendicular applications (S. 30)

Plug mid-profile shielded

Type: Plug straight mid-profile
2.65 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Plug mid-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-53112-51	250
20	405-53120-51	
32	405-53132-51	
52	405-53152-51	
80	405-53180-51	

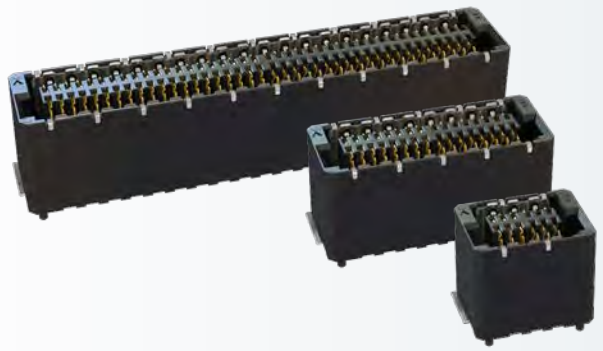
On request

- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 23, 25, 27)
for perpendicular applications (S. 31)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de



Type: Socket straight mid-profile
7.85 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

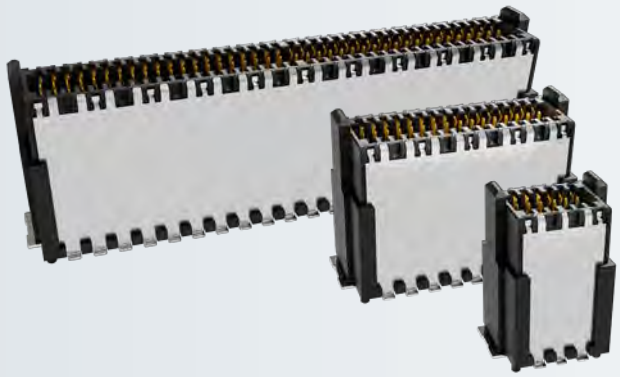
Socket mid-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	406-53112-51	250
20	406-53120-51	
32	406-53132-51	
52	406-53152-51	
80	406-53180-51	

On request
- different number of pins
- other performance level

Mating connector / Application:
- for parallel applications (S. 22, 24, 26, 28)
- for perpendicular applications (S. 30)

Plug high-profile shielded



Type: Plug straight high-profile
7.15 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Plug high-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-54112-51	250
20	405-54120-51	
32	405-54132-51	
52	405-54152-51	
80	405-54180-51	

On request

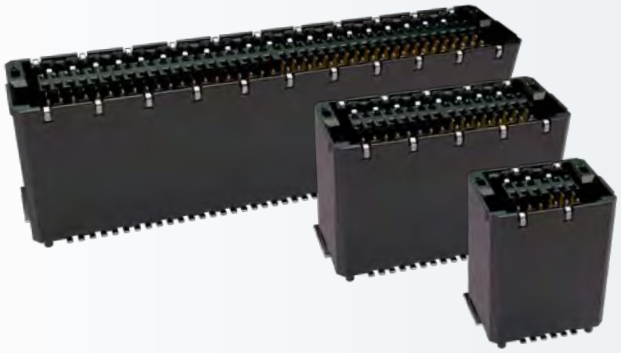
- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 23, 25, 27)

for perpendicular applications (S. 31)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de



Type: Socket straight high-profile
10.85 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Socket high-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	coming soon	250
20	coming soon	
32	coming soon	
52	coming soon	
80	coming soon	

On request
- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 22, 24, 26, 28)
for perpendicular applications (S. 30)

Plug x-high-profile shielded

Type: Plug straight x-high-profile
8.65 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Plug x-high-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-55112-51	250
20	405-55120-51	
32	405-55132-51	
52	405-55152-51	
80	405-55180-51	

On request

- different number of pins
- other performance level

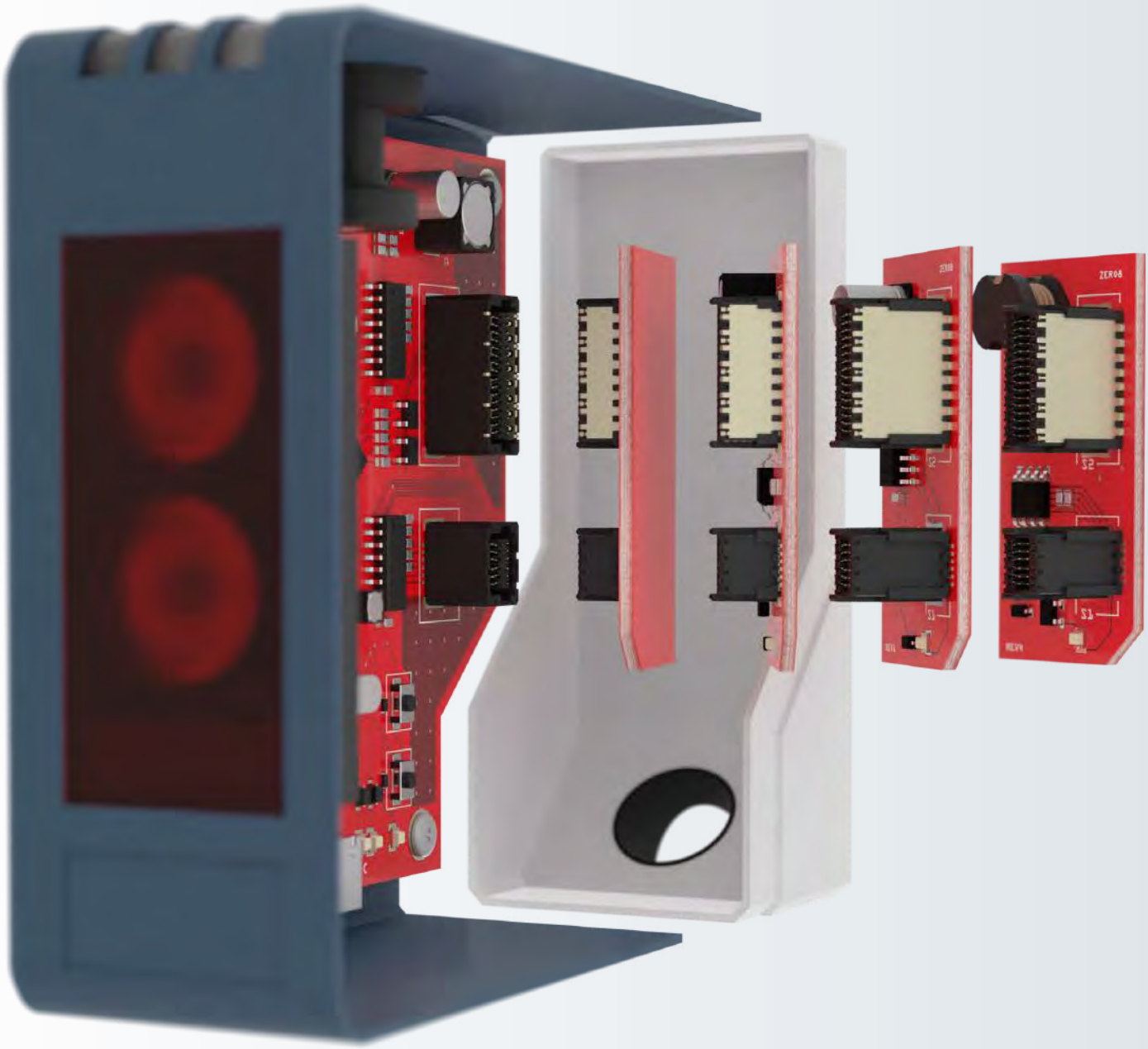
Mating connector / Application:

for parallel applications (S. 23, 25, 27)

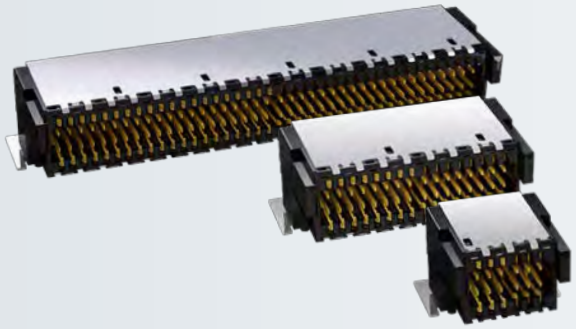
for perpendicular applications (S. 31)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Application example sensor technology



Plug angled shielded



Type: Plug angled

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: cULus RoHS COMPLIANT

Technical Specifications on page 21

Plug angled - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-51112-51	250
20	405-51120-51	
32	405-51132-51	
52	405-51152-51	
80	405-51180-51	

On request

- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 31)

for perpendicular applications (S. 23, 25, 27)

ept GmbH | Tel. +49 (0) 88 61/25 01 0 | Fax +49 (0) 88 61/25 01 700 | E-Mail sales@ept.de | www.ept.de

Type: Socket angled

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

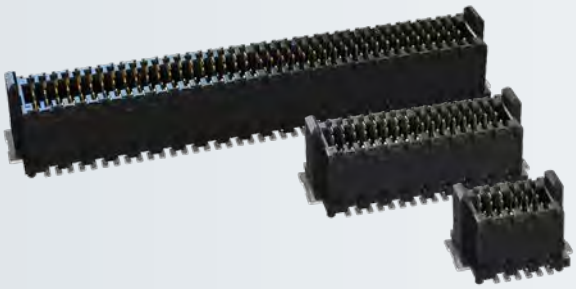
Socket angled - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	406-51112-51	250
20	406-51120-51	
32	406-51132-51	
52	406-51152-51	
80	406-51180-51	

On request
- different number of pins
- other performance level

Mating connector / Application:
- for parallelo applications (S. 30)
- for perpendicular applications (S. 22, 24, 26, 28)

Plug low-profile unshielded



Type: Plug straight low-profile
1.15 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Plug low-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-52012-51	500
20	405-52020-51	
32	405-52032-51	
52	405-52052-51	
80	405-52080-51	

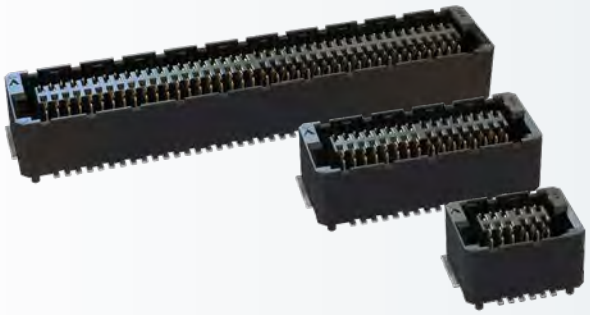
On request

- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 33, 35, 37)
for perpendicular applications (S. 41)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de



Type: Socket straight low-profile
4.85 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Socket low-profile - Performance Level I

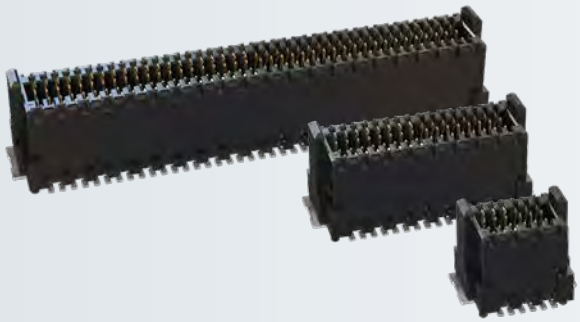
Number of pins	Part number	PU (Tape & Reel)
12	406-52012-51	500
20	406-52020-51	
32	406-52032-51	
52	406-52052-51	
80	406-52080-51	

On request
- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 32, 34, 36, 38)
for perpendicular applications (S. 40)

Plug mid-profile unshielded



Type: Plug straight mid-profile
2.65 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Plug mid-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-53012-51	250
20	405-53020-51	
32	405-53032-51	
52	405-53052-51	
80	405-53080-51	

On request

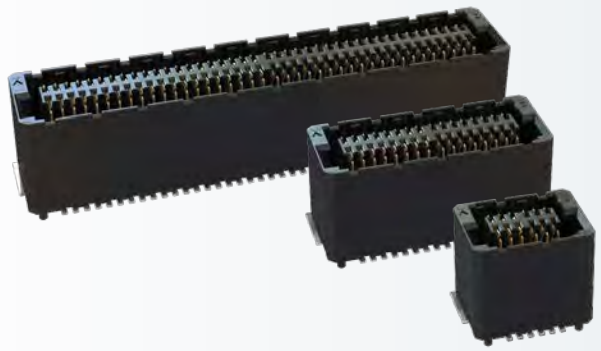
- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 33, 35, 37)

for perpendicular applications (S. 41)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de



Type: Socket straight mid-profile
7.85 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Socket mid-profile - Performance Level I

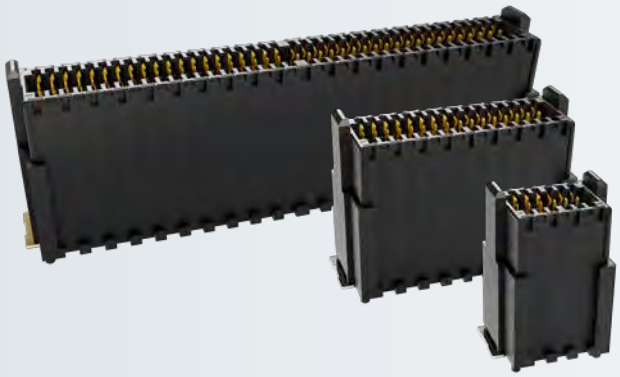
Number of pins	Part number	PU (Tape & Reel)
12	406-53012-51	250
20	406-53020-51	
32	406-53032-51	
52	406-53052-51	
80	406-53080-51	

On request
- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 32, 34, 36, 38)
for perpendicular applications (S. 40)

Plug high-profile unshielded



Type: Plug straight high-profile
7.15 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Plug high-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-54012-51	250
20	405-54020-51	
32	405-54032-51	
52	405-54052-51	
80	405-54080-51	

On request

- different number of pins
- other performance level

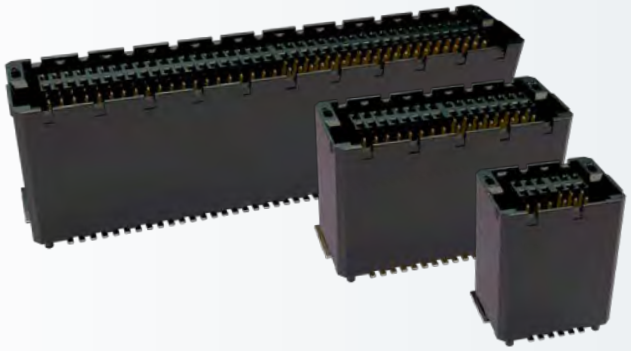
Mating connector / Application:

for parallel applications (S. 33, 35, 37)

for perpendicular applications (S. 41)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Socket high-profile unshielded



Type: Socket straight high-profile
10.85 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Socket high-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	coming soon	250
20	coming soon	
32	coming soon	
52	coming soon	
80	coming soon	

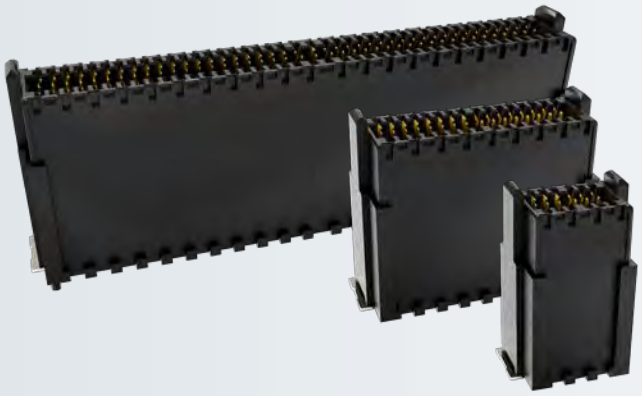
On request
- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 32, 34, 36, 38)

for perpendicular applications (S. 40)

Plug x-high-profile unshielded



Type: Plug straight x-high-profile
8.65 mm unmated

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Plug x-high-profile - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-55012-51	250
20	405-55020-51	
32	405-55032-51	
52	405-55052-51	
80	405-55080-51	

On request

- different number of pins
- other performance level

Mating connector / Application:

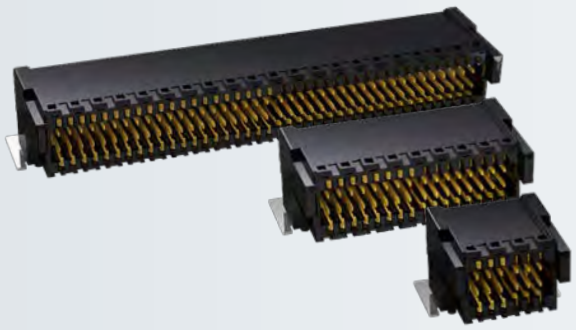
for parallel applications (S. 33, 35, 37)

for perpendicular applications (S. 41)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

Application example smart home control

Plug angled unshielded



Type: Plug angled

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Plug angled - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	405-51012-51	250
20	405-51020-51	
32	405-51032-51	
52	405-51052-51	
80	405-51080-51	

On request

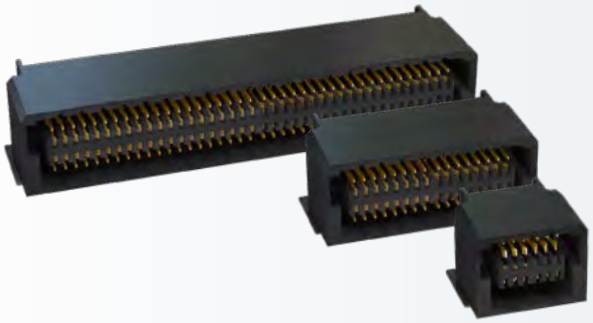
- different number of pins
- other performance level

Mating connector / Application:

for parallel applications (S. 41)

for perpendicular applications (S. 33, 35, 37)

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de



Type: Socket angled

Number of pins: 12 to 80

Pitch: 0.8 mm

Operational current: max. 1.7 A at 20°C (52 pins)
max. 5.5 A at 20°C (2 of 52 pins)

Packaging: Tape & Reel

Approval: c UL us RoHS COMPLIANT

Technical Specifications on page 21

Socket angled - Performance Level I

Number of pins	Part number	PU (Tape & Reel)
12	406-51012-51	250
20	406-51020-51	
32	406-51032-51	
52	406-51052-51	
80	406-51080-51	

On request
- different number of pins
- other performance level

Mating connector / Application:

for parallelo applications (S. 40)

for perpendicular applications (S. 32, 34, 36, 38)

Notes

ept GmbH I Tel. +49 (0) 88 61/25 01 0 I Fax +49 (0) 88 61/25 01 700 I E-Mail sales@ept.de I www.ept.de

ept designs, produces and distributes electronic connectors for highquality applications. Founded by Bernhard Guglhör over 45 years ago, we are proud to remain an independent and family owned company. Today, we employ about 1.200 people at six locations worldwide.

Over decades we have built trusting and successful partnerships with our customers, who are the primary focus of all. Our products and core competencies are used in high-level applications.

With our motto "Precision with Passion" ept stands for the highest quality and reliability under the personal and individual touch of dedicated employees.

We are looking forward to working with you.
Your ept-Team

ept GmbH
Bergwerkstr. 50
86971 Peiting, Germany
Tel. +49 (0) 88 61 / 25 01 0
Fax +49 (0) 88 61 / 25 01 700
sales@ept.de

ept, inc.
1624 Ashton Park Dr.
South Chesterfield, VA 23834, USA
Tel. +1 804 530 0820
800 323 2568
Fax +1 804 530 0837
sales@eptusa.com

ept Electronic Precision Technology (Shanghai) Ltd.
6F Building 37,
No. 333 Qin Jiang Road
Shanghai, P. R. China
Post code: 20 02 33
Tel. +86 (0) 21-54 26-09 88
Fax +86 (0) 21-64 95-39 49
sales@eptcn.com

www.zero8.ept.de

Scan here for a free sample box!