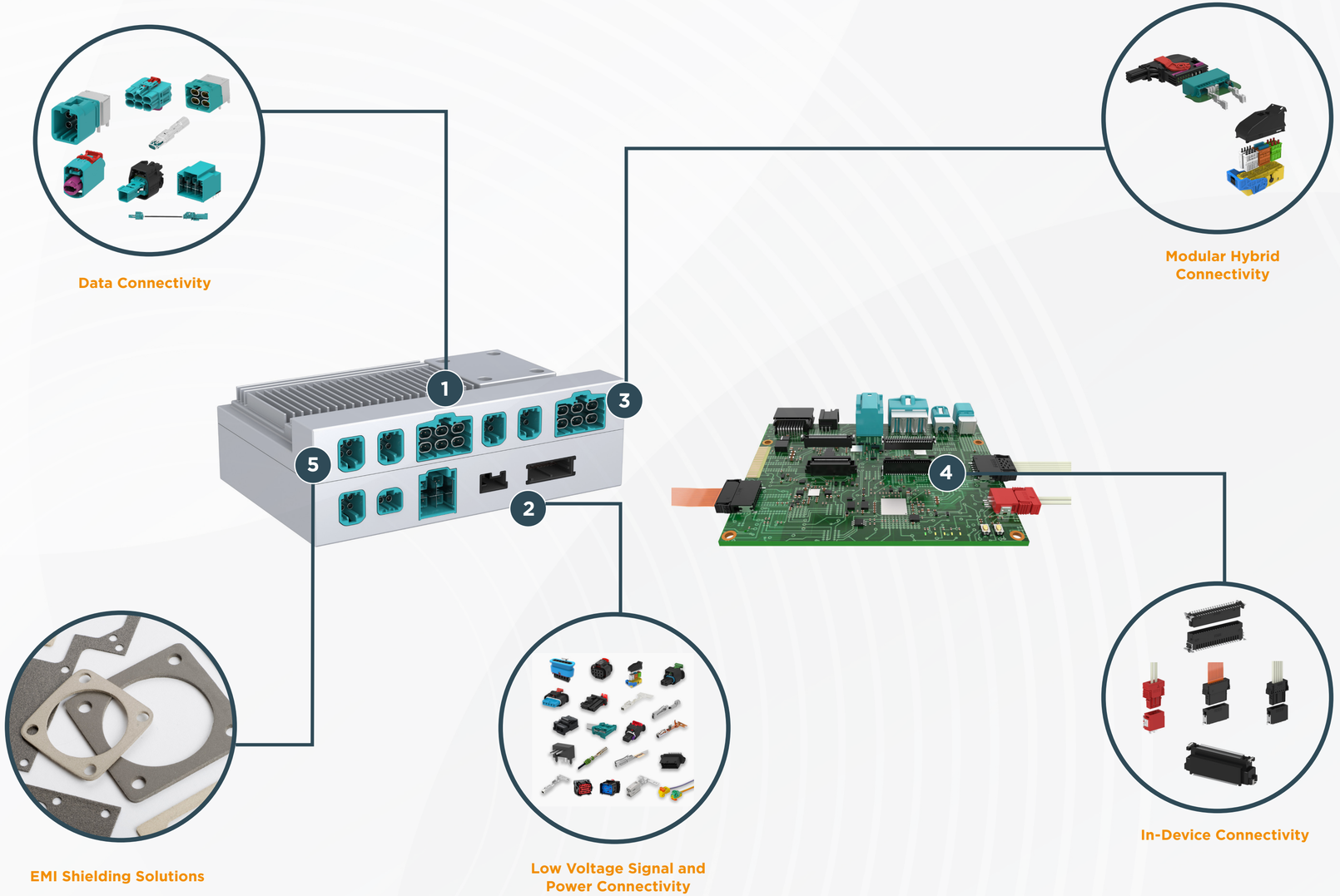
CONNECTIVITY SOLUTIONS FOR AUTOMOTIVE HIGH PERFORMANCE COMPUTERS AND ZONE CONTROLLERS



KEY CONNECTIVITY SOLUTIONS

CLICK AND JUMP TO

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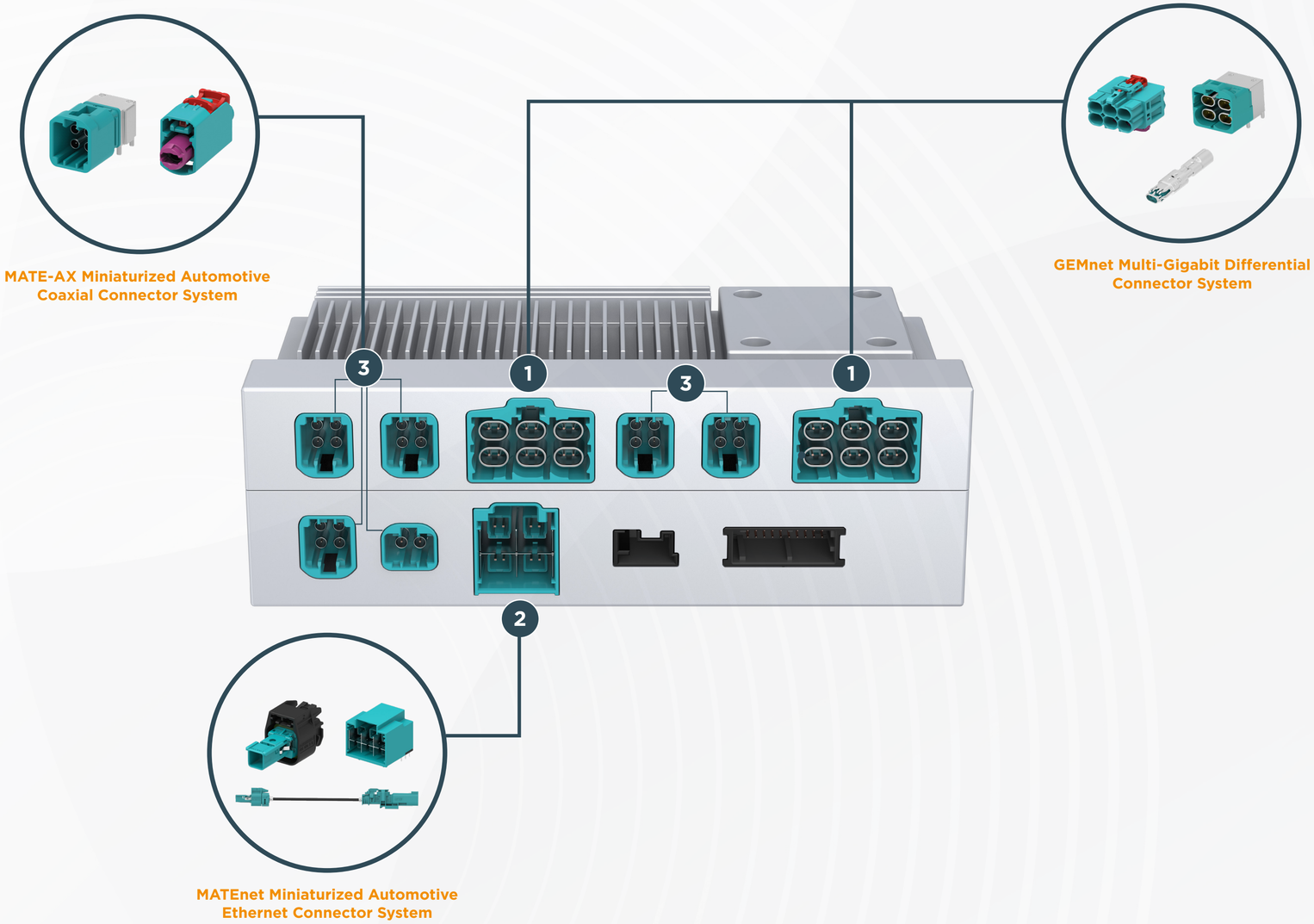
CONNECTIVITY SOLUTIONS FOR AUTOMOTIVE HIGH PERFORMANCE COMPUTERS AND ZONE CONTROLLERS



1 DATA CONNECTIVITY

Click on the image to learn more!

1, GEMnet

Multi-Gigabit Differential Connector System

- Enabling 15 GHz and up to 56 Gbps
- Automotive-grade design: Leads-in, anti-stubbing, lower mating forces
- Protocols: 100BASE-T1, 1000BASE-T1, 2.5/5/10GBASE-T1; GMSL, APIX, GVIF, FPD-Link, ASA Motion Link, MiPi, HDBase-T; USB, PCIe

2, MATEnet

Miniaturized Automotive Ethernet Connector System

- Enabling up to 1 Gbps (100BASE-T1 and 1000BASE-T1) and 4 Gbps with alternative technologies
- Modular and Scalable solution: The standardized core module can be assembled into various housing frames
- Protocols: 100BASE-T1 (100Mbps – IEEE802.3bw) and 1000BASE-T1 (1 Gbps – IEEE802.3bp PoDL / Class 3-48 Volt); A2B; HDBaseT

3, MATE-AX

Miniaturized Automotive Coaxial Connector System

- Enabling up to 9 GHz RF performance
- Up to 75 % space reduction
- Up to 34 % weight reduction (4x 1pos. FAKRA connector vs. 4pos. MATE-AX connector)
- Protocols: MIPI, ASA (Automotive SerDes Alliance), GMSL2/3, FPD-Link

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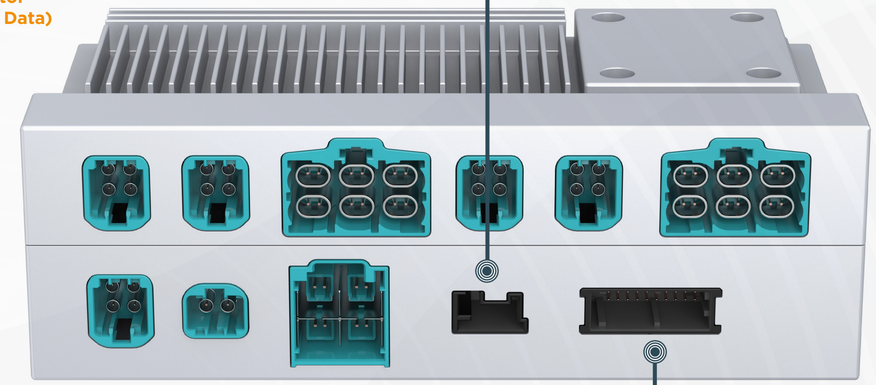
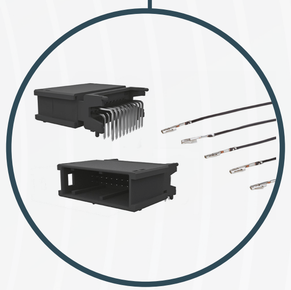
CONNECTIVITY SOLUTIONS FOR AUTOMOTIVE HIGH PERFORMANCE COMPUTERS AND ZONE CONTROLLERS

Mixed and Hybrid Connector Solutions (Signal, Power and Data)





NanoMQS 0.50mm Miniaturized Automotive Connector System

- Temperature Range: -40°C to +140°C (+120°C for tin)
- Orientation: 90°/180°
- Sealed and unsealed are available

2 LOW VOLTAGE SIGNAL AND POWER CONNECTIVITY

Click on the image to learn more!

PicoMQS

Miniaturized Automotive Connector System

- Wire size: 0.13 mm² – 0.75 mm² (0.22FLU/FLR)
- 1.27mm pin pitch
- Current: 4 Amps
- Protocols: LV214

NanoMQS 0.50mm

Miniaturized Automotive Connector System

- Wire size: 0.13 mm² – 0.75 mm²
- 1.8mm pin pitch
- Current: 6 Amps
- Protocols: LV214/ USCAR*

MQS 0.63mm

Automotive Signal Connector System

- Wire size: 0.08 mm² – 0.75 mm²
- 2.54mm pin pitch
- Current: 7.5 Amps
- Protocols: LV214/ USCAR

Generation Y 0.64

Automotive Signal Connector System

- Wire size: 0.13 mm² – 0.75 mm²
- 2.2mm pin pitch
- Current: 10.5 Amps
- Protocols: USCAR

MCON 1.2mm

Automotive Low Power Connector System

- Wire Size: 0.5 mm² – 1.5 mm²
- Current: 17 Amps
- Protocols: LV214/ USCAR

AMP MCP 1.5, 2.8 and 6.3mm

Automotive Medium Power Connector System

- Wire Size: 0.2 mm² – 6.0 mm²
- Current: 18-78 Amps
- Protocols: LV214/USCAR

MCON 8, 9.5 and 12mm

Automotive Medium Power Connector System

- Wire Size: 2.5 mm² – 35 mm²
- Current: 78-179 Amps
- Protocols: LV214/USCAR

Mixed Connectivity Solutions

Mixed Signal and Power in a single connector interface

- 0.50mm to 12mm terminals
- Wire Size: 0.13 mm² – 35 mm²
- Current: 6A - 179A
- 2-152 positions

Hybrid Connectivity Solutions

Signal, Power and Data in a single connector interface

- 0.63mm to 6.3mm terminals / Ethernet and Coax
- Enabling up to 9GHz RF performance and 40A
- 2-280 positions

* USCAR validation in progress

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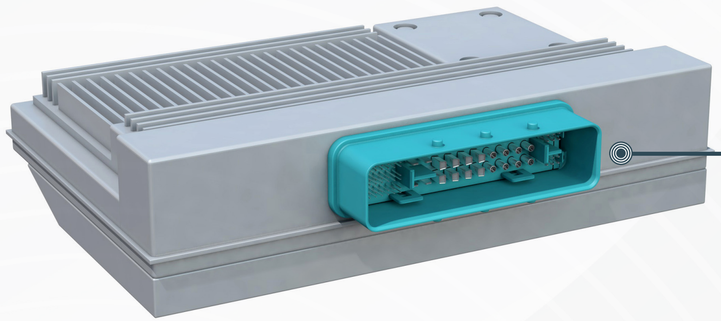
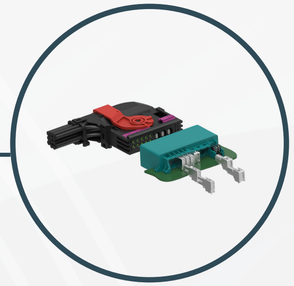
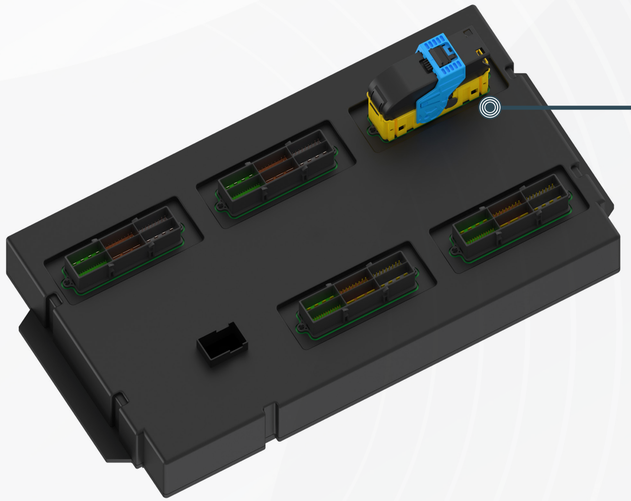
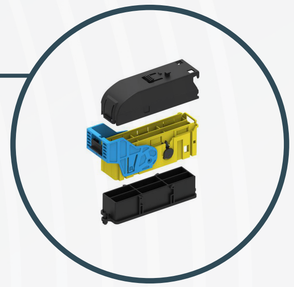




NET-AX+ Modular Hybrid Data Connector System





Modular Hybrid System (MHS)

3 MODULAR HYBRID CONNECTIVITY

Click on the image to learn more!

NET-AX+ Modular Hybrid Data Connector System

- Interfaces / Platform available for
  - GEMnet, BEAMnet, MATE-AX, NanoMQS, AMP MCP 2.8, MCON 1.2

Benefits

- Supports signal, power and data connectivity
- Up to 40% space saving reduction
- Up to 80% fewer mating assemblies

Modular Hybrid System (MHS)

- Interfaces / Platform available for
  - NanoMQS 0.50, MQS 0.63, Generation Y 0.64, MCON 1.2, AMP MCP 2.8, AMP MCP 6.3/4.8K, GEMnet, MATE-AX, HSD

Benefits

- Modular hybrid system featuring flexible plug and header configurations for signal, power and data connectivity
- Scalable for many vehicle platforms
- Delivers up to a 40% reduction in both space and weight
- Automation-ready

the Modular Hybrid Connectivity products are customized solutions

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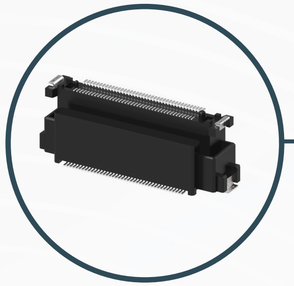
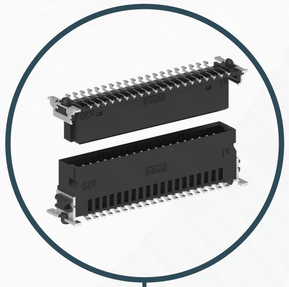
CONNECTIVITY SOLUTIONS FOR AUTOMOTIVE HIGH PERFORMANCE COMPUTERS AND ZONE CONTROLLERS

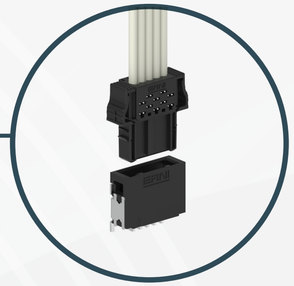
Board to Board Solution
Floating connector system



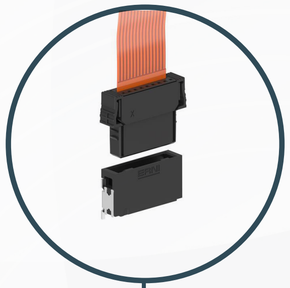
Board to Board Solutions
ERNI SMC connector system



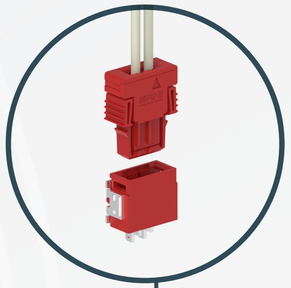
Wire to Board Solution
ERNI MicroBridge connector system

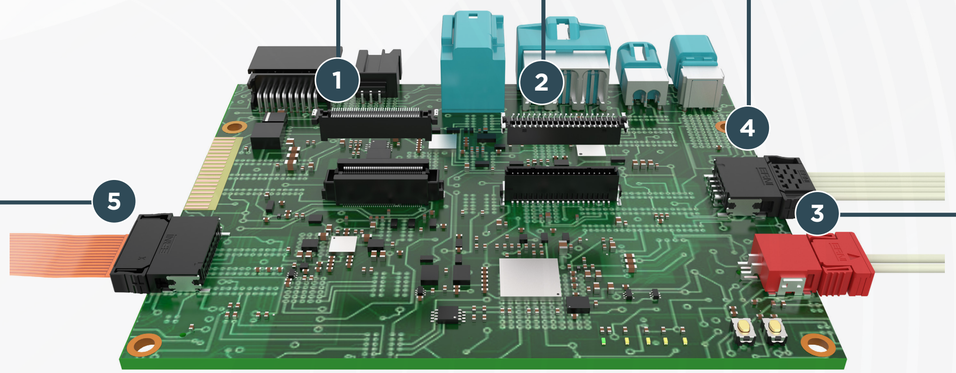


Flex to Board
ERNI MicroBridge Flexfoil connector system



Wire to Board Solution
ERNI MaxiBridge connector system





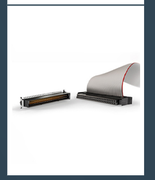
4 IN-DEVICE CONNECTIVITY

Click on the image to learn more!

Board to Board Solutions

1, Floating connector system*

- Current: signal only; signal and power
- Temperature: -55- 125 °C
- No. of Pins: 20-180 Max**
- Pitch: 0.5mm



2, ERNI SMC connector system

- Current: up to 1.7 A per contact
- Temperature: -55- 125 °C
- No. of Pins: 12, 16, 20, 26, 32, 40, 50, 68, 80
- Pitch: 1.27mm
- Standard: LV214 ***
- Terminal technology: SMT

Wire to Board Solutions

2, ERNI SMC connectors (see above)

3, ERNI MaxiBridge connector system

- Current: up to 12 A (depends on cable)
- Temperature: -55- 150 °C
- No. of Pins: 2, 3, 4, 5, 6, 8, 10, 2x5, 2x10
- Pitch: Single- and double-row system with a 2.54mm pitch
- Standard: LV 214 and USCAR-2 compliant
- Terminal technology: Male connector SMT, female connector crimp

4, ERNI MicroBridge connector system

- Current: up to 9A
- Temperature: -40- 150 °C
- No. of Pins: 2-20 pin (single-row) possible
- Pitch: 0.5 x 0.4mm pins with 1.27mm pitch
- Standard: LV 214
- Terminal technology: Male connectors SMT
  Female connectors IDC

Flex to Board Solutions

5, ERNI MicroBridge Flexfoil connector system

- Current: up to 12 A (depends on cable)
- Temperature: -40- 150 °C
- No. of Pins: 8 / 20 (single-row)
- Pitch: 0.5 x 0.4mm pins with 1.27mm pitch
- Standard: LV 214
- Terminal technology: Male connectors SMT
  Female connectors piecing

* The product is not SOP yet, if you get any question please contact us

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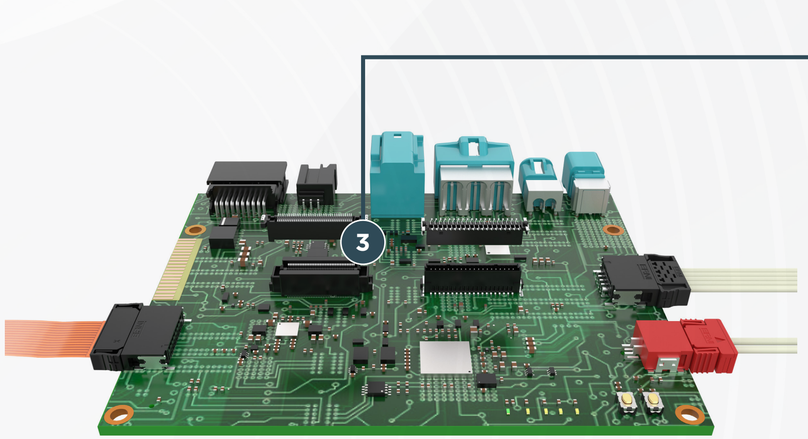
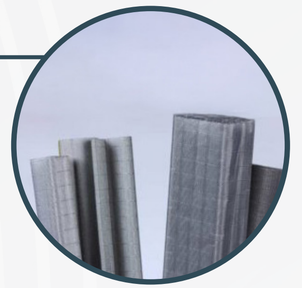
EMI Shielding Conductive Elastomer

EMI Shielding Connector Gasket





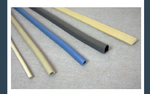
EMI Shielding Fabric over foam

5 EMI SHIELDING SOLUTIONS

Click on the image to learn more!

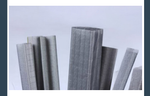
1, EMI Shielding Connector Gasket

- Meet standard size and common sub D connector gaskets
- The compression stop also provides for additional electrical bonding between the surfaces with a very low contact resistance
- Surface mounted gaskets are to be used where groove mounted gaskets such as O-Rings cannot be accommodated



2, EMI Shielding Conductive Elastomer

- Silicone or fluorosilicate loaded with highly conductive particles providing superior performance
- EMI shielding performance combined with excellent environmental sealing
- Material options to provide required EMI performance and galvanic compatibility
- Provides low contact resistance between mating surfaces



3, EMI Shielding Fabric over foam

- Have fire resistant properties to UL94VO
- Compression between approximately 10% and 70%
- Wide variety of profiles where full EMC screening is required between component parts
- Provide an excellent EMI gasket with low compression set
- Excellent abrasion resistance for high cycling and wiping applications

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