

Product News 2018/2019

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MicroBridge



MicroBridge cable-to-board connectors were developed based on the LV214 and USCAR automotive test specifications and meet the high requirements of the automotive sector, especially in terms of connection reliability. An optional available electrical CPA (Connector Position Assurance) and Koshiri security guarantee secure and proper connection.

Despite its small pitch (1.27 mm), MicroBridge connectors are extremely robust; they withstand vehicular vibrations thanks to a double-sided interlocking design of the female contact in the cable housing. The MicroBridge female connectors are available with double arranged insulation displacement terminations and an additional integrated strain relief.

- 90° and 180° single-row male and female connectors are possible
- No. of pins: single-row 2 – 20 are possible
- female double arranged IDC termination and additional integrated strain relief
- male connectors with SMT termination
- 1,27 mm pitch
- optional electrical CPA (Connector Position Assurance)
- Koshiri-Security
- compact design
- optional colored and mechanical codings are available

MicroCon



The double-row MicroCon product family with a 0.8 mm grid comprises nothing in terms of its performance, despite its extremely compact design. The male connectors are equipped with reinforced, polarized side walls and improved blind mate pre-centering due to enlarged alignment features. Connectors in this small size are unique in that they use double-sided spring contacts, which ensures high connection reliability. This product family continues to expand in pincount and height variants to achieve demanding board-to-board applications.

- the newly expanded product range allows the following for pin counts of 16, 26, 40, and 80:
 - all PCB distances between 5 and 11 mm
 - 90° PCB arrangement
 - coplanar PCB arrangement
- MicroCon cable connector portfolio expanded:
 - 16-pin, 26-pin, 40-pin, and 50-pin
 - AWG34 makes it the most compact ribbon cable system in the world
- PCB distances up to 19 mm for certain pin counts
- Pitch: 0.8 mm
- Termination: SMT, IDC
- current carrying capacity: up to 2.3 A per pin
- high connection reliability thanks to the double-sided spring contact
- robust design with solder clips that increase shear forces
- Blind-Mate
- high vibration and shock resistance
- polarization for secure mating

iBridge Ultra



The single- and double-row iBridge Ultra connectors with SMT and dip solder terminals represent an expansion of the proven iBridge connector solution with a 2 mm pitch that is compatible for crimp terminations and wire cross sections of AWG 22/24. The high retention force guarantees reliable mating, even in demanding environments subjected to strong vibrations.

This makes iBridge Ultra connectors suitable for use in vehicle technology, LED, telecommunications and data transfer applications. Thanks to their high quality and connection reliability, these connectors also fulfil the specifications defined by the USCAR (the United States Council for Automotive Research) standard.

- pitch: 2 mm (single-row), 2 mm x 2.5 mm (dual-row)
- number of positions: 1x2 to 1x12 (single-row), 2x2 to 2x20 (dual-row)
- right angle and vertical male and inline female
- current carrying capacity: up to 5 A per contact
- dual locking system (TPA) to secure contact retention
- crimp contact accepts discrete stranded wires of AWG 22 and AWG 24
- solder brackets for SMT & longer locating pegs for SMT vertical version to enhance PCB retention force
- blanked contacts to ensure robustness & coplanarity, gold plating version is optional
- polarized contacts and housing for fool-proof mating
- latches on both sides of female connectors to provide positive locking

MaxiBridge 10 pins



Very compact designs with high current capacity have to be combined for various applications. In addition, limited assembly space requests a high mating reliability. The single and dual-row MaxiBridge cable connector system with 2.54 mm pitch is an ideal solution for such applications. Due to its compact design, the cable connector system is well suited for space saving connections between PCBs and decentralized function units, particularly in the automotive segment. Several connection options can be achieved by using the straight and angled male and female connectors with 180° cable outlets. Now the MaxiBridge connectors variety is extended by a 10 pins as Koshiri version. The Koshiri functionality offers a very high level of mating reliability, as it avoids any damage of the male contacts even in case of improper skewed insertion. A high degree of security in the system application can be achieved.

- flexible and versatile usage
- a single row versions
- Housing coding both in colour as well as mechanically
- Usable for different cable cross-sections
- Koshiri security
- high retention force of the housing latching
- double locking of the spring contacts in the housing
- shock and vibration resistant
- high temperature resistance
- high retention forces on the PCB
- Compliance with LV 214 and USCAR requirements

M8 A-coding - 8 pins



M8 connectors have proven to be very reliable in industrial use, like the connection of field devices in industrial automation applications. A-coded round connectors can be used, for example, as sensor connectors or device connectors for digital and analog signal transmission or for the power supply. SMT terminals provide the cost-effective option of automatic machine processing and solder processes. ERNI expands its M8 portfolio with A-coding, introducing 8-pin variants. The higher pin-count enables to reduce the number of device interfaces. For different EMI needs the connectors are available with and without shielding.

- M8 female and male connectors with 8 pins
- design-in suitable for the ERNI M8/M12 range
- SMT, shieldable and suitable for automated processes
- for miniaturized industrial devices
- for functional enhancement of devices
- Applications:
 - safety-sensors, actuators, smart grippers
 - cameras, mini distributor, robots

M12 - 12- and 17 pins

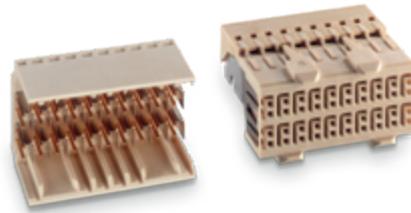


Over the last three decades, the M8/M12 connector system has established itself as that preferred device-connection for use in rough environment which require a reliable, robust coupling solution. With various pin counts and a number of cable types, plug configurations and plug codings, the M8/M12 connector covers a wide spectrum of requirements. ERNI Electronics is now expanding its already-extensive portfolio to include versions with higher pin counts.

- high pin count in the standard M12 design
- design-in suitable for the ERNI M8/M12 range
- SMT, shieldable and suitable for automated processes
- space saving for very compact device design
 - compensation of device interfaces
 - a single plug for bus, I/O, control, service and safety signals
 - enables more ports; for instance, for I/O boxes
 - M12 instead of M23 for multi-pin connections of valve terminals
- Applications:
 - sensors, cameras, scanners, rotary encoders
 - I/O boxes, sensor/actuator multi-pin connections

Central Electric Units

ERmet ZDpro - 2x10



Central electric units control the functions of modern vehicles. The solutions based on printed circuit boards offer many advantages over conventional cable harnesses. Space requirements and susceptibility to errors are reduced while at the same time saving costs. The commercial vehicle sector in particular, which depends on reliable and safe connections at high currents, benefits from the powerful central electrics. ERNI develops and produces high-quality central electric units to meet the requirements of various industries. They are characterized by their shock and vibration resistance and have a high current carrying capacity.

- easy to assemble
- shock and vibration resistant
- high current carrying capacity
- modular and can be combined as required
- low power dissipation
- robust and secure connections
- high degree of flexibility

ERmet ZDpro connectors constitute an addition to the ERmet ZD range and are plug-compatible with ERmet ZD and ERmet ZDplus connectors. The differential high-speed connection system with optimized pressfit pins enables data transmission rates of more than 25 Gbit/s, fulfilling the requirements of the 100G ATCA standard. Two-pair versions (with ten wafers and thus 20 signal pairs in total) now being added to the previously available four-pair right angle female connectors and straight male connectors with pressfit pins.

- 25 Gbit/s per differential pair
- pitch:
 - 2.5 mm from wafer to wafer
 - 1.0 mm 1.0 mm between signal pins
 - 4.5 mm between pairs
- compatible to ERmet ZD and ZDplus connectors
- improved crosstalk behavior
- improved layout on daughter cards
- meets the requirements of 100G ATCA technology

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