

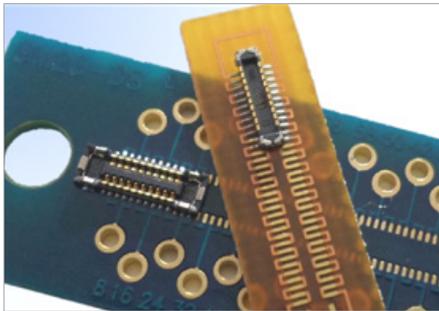


Hirose 5G solutions

# Hirose 5G connectors

Forward looking product development, using in-house technologies, means Hirose is well placed to meet the changing demands of the 5G landscape. Solutions include industry-leading, specialised connectors for data centres and environmentally resistant, high-capacity power connectors for telecommunications and networking. Micro-engineered, compact, low-profile and high speed connectors support the next generation of mobile communication devices, wearable and smartphone devices and others.

## BM23FR series



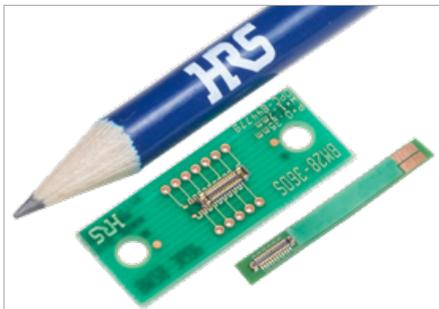
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The BM23FR is a robust, space-saving, FPC-to-board, board-to-board, series of connectors for applications needing small footprints. A well designed mating operation provides highly reliable contacts to support USB 3.1 gen. 2 (10Gbps) transmissions.

### FEATURES

- 0.35mm pitch
- 0.6mm/0.8mm height
- Rated current up to 0.3A
- Rated voltage: 30V AC-DC
- Operating temperature: -55°C to +85°C
- Supports USB 3.1 gen.2 (10Gbps) transmission

## BM28 series



[VIEW PRODUCT DETAILS](#) 

Hirose's BM28 series of connectors provides a robust, high power and space-saving connectivity solution for miniaturised applications requiring USB 3.1 connectivity.

### FEATURES

- Number of contacts: 6, 10, 16, 18, 20, 24, 30, 34, 36, 40, 44, 50, 58, 60
- Current rating: 5A
- Voltage rating: AC 30V
- Temperature: -40°C to +85°C
- Mounting style: SMT
- Mating cycles: 10
- Supports USB 2.0, USB 3.0, USB 3.1

## CX series USB type-C connectors



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The CX series is a USB type-C 3.1 gen. 2 connector, developed as a standard high-speed transmission interface solution for consumer, industrial machinery and automotive applications. Along with various hybrid designs, and a reversible interface for easy mating, this series has a clear tactile click to ensure secure mating.

### FEATURES

- Number of contacts: 16, 24
- Pitch: 0.5mm
- Current rating: 1.25A (Pin no. A1, A4, A9, A12, B1, B4, B9, B12) 0.25A (others)
- Voltage rating: AC 20V
- Transmission speed: 10Gbps
- Mating cycles: 10,000

## DF40GB series



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The advanced design and specialist materials used to develop the DF40GB series of compact connectors ensures their suitability and reliability in harsh environments. All products in this series are designed for high-speed transmission and further specialised with regards to shielding, locking mechanisms and heat resistance. This gives wide ranging flexibility in design and application. Supports USB 2.0, USB 3.0, USB 3.1 gen. 2, MIPI, SATA, PCIe.

### FEATURES

- Contact pitch: 0.4mm
- Stack height: 1.5mm
- Rated current: 0.3A
- Rated voltage: AC 30V
- Operating temperature: -35°C to +85°C
- Number of contacts: 10, 30, 48 (1.5mm stack height) 48, 70 (3mm stack height)
- Mating cycles: 30
- Halogen-free

## DF60 series



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Hirose's DF60 series of compact and low-profile robust wire-to-board and wire-to-wire connectors is designed to meet the increased demand for high powered connectors, offering advanced reliability for industrial equipment. The robust lock provides a positive tactile sensation and an audible click when mated. The DF60 series is part of the EnerBee product family. The EnerBee family features wire-to-board and wire-to-wire power connectors to provide technically advanced connectivity solutions for industrial power sources.

### FEATURES

- 1 to 6 contact positions (right angle, in-line, vertical versions)
- Contact pitch: 10.16mm
- Current rating: 65A (max.)
- Cable size: AWG 8 to 12
- Operating temperature: -55°C to +105°C
- 30 mating cycles
- Voltage rating: AC-DC 1000V
- UL, C-UL, TÜV Certified

## DF63 high powered wire-to-board connectors



[VIEW PRODUCT DETAILS](#) 

The DF63 series of connectors consists of cable mount, female crimp sockets and board mount variations, with vertical and right angle male headers that can handle up to 15A (amps) max current rating. Waterproof and non-waterproof in-line versions have been added to the range (DF63W waterproof). The overall size has been designed with space saving in mind. The three position header for example, only occupies 88mm<sup>2</sup> approximate board space due to the small pitch.

### FEATURES

- Number of contacts: 1, 2, 3, 4, 5, 6
- Contact pitch: 3.96mm, 7.92mm
- Rated current: 15 max.
- Rated voltage: AD-DC 630V
- Solder technology: THT
- AWG: 16, 18, 20, 22
- Temperature: -55°C to +105°C
- Mating cycles: 30 (tin), 50 (gold)



## HR41 series circular connectors



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Hirose HR41 series circular connectors feature an IP67 and IP68 rated, lightweight, waterproof design for outdoor applications. The connectors feature a user-friendly bayonet locking system that facilitates blind mating in dark or low-light areas and are compatible with JIS C 9711 standard commercial tooling. A 5 position plug is designed to facilitate hot swapping, and the walled structure isolates contacts and provides insulation against up to 15kV surges caused by lightning.

### FEATURES

- Contact positions: 3, 5
- Current rating: 24A
- Cable size: AWG 10 to 18
- Voltage rating: AC-DC 1000V
- Waterproof rating: IP67 and IP68
- Temperature: -40°C to +105°C
- Lightning surge protection: 15kV
- Locking mechanism: bayonet
- Compliance: 2000hrs sunshine weather test. 1500hrs salt spray
- UL, TÜV certified

## IX series high-speed connectors



[VIEW PRODUCT DETAILS](#)

The IX Industrial™ series reduces functional space by up to 75% and footprint by two-thirds compared to RJ45 solutions. Supporting CAT5e (1Gbps) and CAT6A (10Gbps) cabling, this series of I/O connectors features an optimised EMI/ESD shielding design for safe and secure data transmission up to 10Gbps. Compliant with the standard IEC 61076-3-124, the range features receptacles and plugs with two keying codes, differentiating Ethernet according to IEEE 802.3 from other applications.

### FEATURES

- Current rating: 1.5A if all used/3A if only 4 pins used (1, 2, 6, 7)
- Rated voltage: 50VAC/60VDC
- Contact pitch: 1mm
- Number of contacts: 10
- Operating temperature: -40°C to +85°C
- Mating cycles: 5,000
- Solder technology: THT/SMT
- Insertion/extraction force: 25N
- RoHS compliant

## XG1 series



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Hirose's XG1 series of stacking connectors, has a 0.5mm pitch and supports transmission speeds of 16+Gbps. Multiple combinations of transmission blades are available. A large self-alignment structure facilitates insertion and the anti-damage design allows angled insertion of up to 5°. Using the same contact design for both signal and ground, conducts the heat equally, allowing reliable soldering.

### FEATURES

- Number of contacts: 60, 100, 200
- Contact pitch: 0.5mm
- Stacking height: 20mm to 23mm (2 pieces), 25mm to 44mm (3 pieces)
- Rated current: 0.3 max.
- Rated voltage: AC 50V
- Solder technology: SMT
- Temperature: -55°C to +85°C
- Mating cycles: 20

## ASK AN EXPERT

Our Europe wide team of product specialists work closely with Hirose to offer you the highest levels of engineering support for your design. To arrange a visit or to discuss your design requirements, contact this team in your local language or at [avnet-abacus.eu/ask-an-expert](http://avnet-abacus.eu/ask-an-expert)

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