HARWiN

CONNECT TECHNOLOGY
WITH CONFIDENCE

PRODUCT RANGE OVERVIEW

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RELIABLE AND HIGH-PERFORMANCE TECHNOLOGIES FOR DEMANDING INTER-CONNECTION APPLICATIONS

WHETHER YOUR PRODUCTS ARE IN HOMES OR FACTORIES, UNDERGROUND OR ORBITING THE EARTH, SAVING LIVES OR BREAKING TECHNOLOGY BOUNDARIES, WE HAVE THE RIGHT CONNECTION.

For over 70 years, Harwin has supplied engineers with the connectors needed to meet the most demanding specifications. Harwin's innovative interconnect portfolio of products is designed for; ultra-high-performance applications in the harshest operating environments or within the tightest of spaces.

HIGH RELIABILITY WITH SUPREME PERFORMANCE

HRi RANGE

INNOVATIVE DESIGNS FOR EASY ASSEMBLY

EZi RANGE

DEPENDABLE CONNECTIVITY ACROSS THE BOARD

BBi RANGE

HRi RANGE

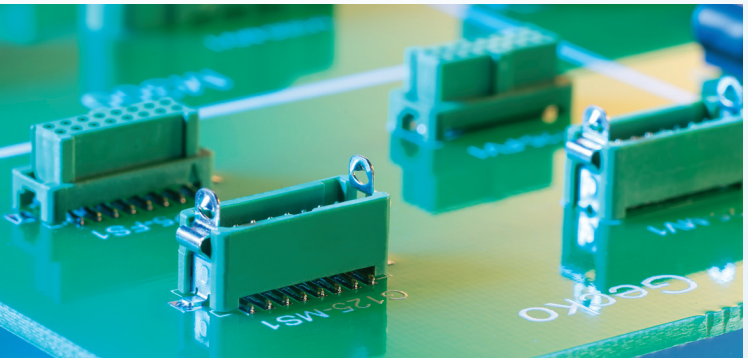
High-reliability (Hi-Rel) interconnect solutions for satellites, aerospace, medical devices, defence and more. Suitable for critical applications where high performance and assured dependability are vital. The portfolio includes the compact and lightweight Gecko (1.25mm pitch), high-density Datamate (2.00mm pitch), M300 (10A), and the high-power (60A) Kona series.

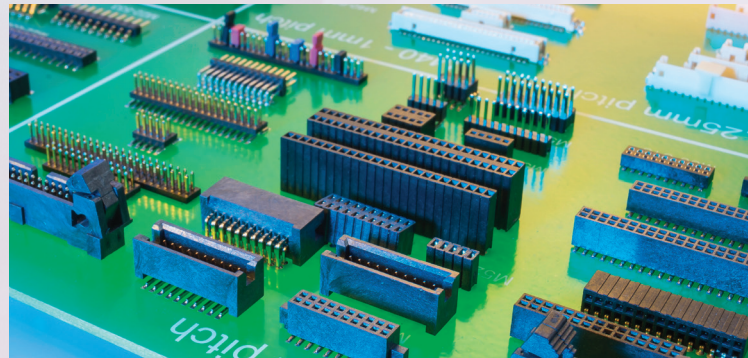
EZi RANGE

Board level shielding solutions and associated accessories that simplify production processes. Highlights include the popular EMI/RFI shielding cans, simple-to-adapt shielding kits, cable clips, and jumper links.

BBi RANGE

Featuring highly-durable board-to-board connectors aimed especially at industrial and embedded applications. Designed for ease of integration and addressing acute space constraints, high-density products start at 0.5mm pitch through to 2.54mm and data rates of 24Gb/s are supported.





gecko

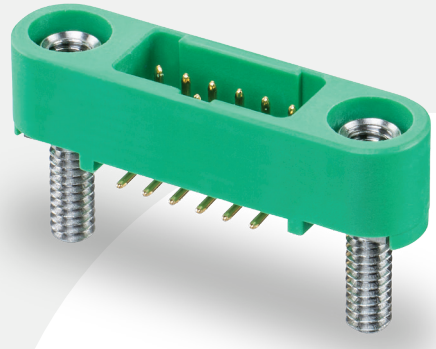
HRi RANGE

HIGH RELIABILITY RECTANGULAR SIGNAL MICRO-MINIATURE CONNECTORS FOR SWAP-C OPTIMIZATION

For applications that must not fail, Gecko brings high-reliability connection at a miniature 1.25mm pitch. Complete flexibility with assured performance under shock/vibration and temperature.

The compact design gives significant space saving over industry standard alternatives, and up to 75% lighter. Cable-to-board, board-to-board and cable-to-cable options in pin counts up to 50.

The multi-finger Beryllium Copper contacts assure signal integrity under heavy vibration and shock, maintaining electrical connectivity in a variety of harsh environments. Temperature resistance covers -65°C to +150°C.



FEATURES

- Mate-before-lock or latches for quick and easy connections
- Assured signal integrity under extreme environments – vibration, shock and temperature resistance
- Low outgassing, great for space, avionics and optronics
- Stainless steel screw-loks for a strong, long-life reliable connection

Housings:	Glass-Filled High-Temperature Thermoplastic, UL94V-0
Current per contact:	2.8A max
Contact resistance:	25mΩ max
Durability:	1,000 mating cycles
Pitch:	1.25mm
Operating temperature:	-65°C to +150°C
Vibration resistance:	20G (196m/s²) for 6 hrs
Shock resistance:	100G (981m/s²) in Z axis / 50G (490m/s²) in X/Y axis

APPLICATIONS

- Aviation and UAVs
- New space
- Motorsport
- Defense & security

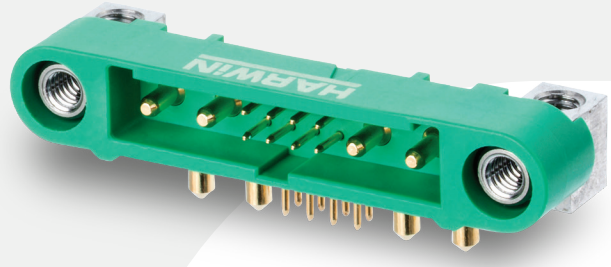
VIEW FULL SERIES & SPECIFICATIONS **HERE**

gecko®

HRi RANGE

HIGH RELIABILITY SIGNAL + POWER, THE SMALLEST, LIGHTEST MIXED-LAYOUT CONNECTORS

The smallest and lightest mixed-layout connector available for high-performance applications, Gecko-MT is the ideal choice when SWaP matters most.



Gecko-MT combines the 1.25mm pitch Gecko signal connector system with 10A power contacts for a flexible mixed technology layout. Cable-to-board, board-to-board and cable-to-cable options.

The multi-finger Beryllium Copper contacts assure signal integrity under heavy vibration and shock, maintaining electrical connectivity in a variety of harsh environments.

FEATURES

- Mate-before-lock or latches for quick and easy connections
- Assured signal integrity under extreme environments – vibration, shock and temperature resistance
- Low outgassing, great for space, avionics and optronics
- Stainless steel screw-loks for a strong, long-life reliable connection

Housings:	Glass-Filled High-Temperature Thermoplastic, UL94V-0
Current per contact:	10A max for power contacts / 2.8A max for signal contacts
Contact resistance:	25mΩ max
Durability:	1,000 mating cycles
Pitch:	1.25mm for signal contacts
Operating temperature:	-65°C to +150°C
Vibration resistance:	20G (196m/s²) for 6 hrs
Shock resistance:	100G (981m/s²) in Z axis / 50G (490m/s²) in X/Y axis

APPLICATIONS

- Aviation and UAVs
- New space
- Motorsport
- Defense & security

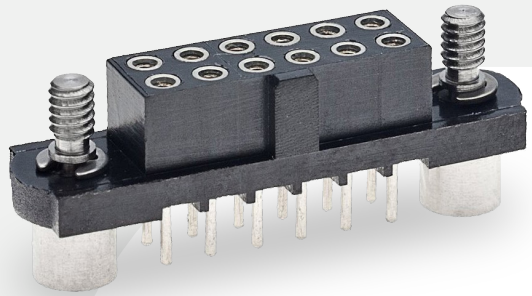
VIEW FULL SERIES & SPECIFICATIONS **HERE**

Datamate®

HRi RANGE

HIGH RELIABILITY RECTANGULAR SIGNAL MINIATURE CONNECTORS FOR SWAP-C OPTIMIZATION

For applications that must not fail, Datamate brings high-reliability connection at a miniature 2.00mm pitch. Complete flexibility with proven performance under shock/vibration and temperature.



The compact design gives space and weight savings over industry standard alternatives. Cable-to-board, board-to-board and cable-to-cable options in pin counts up to 50.

The multi-finger Beryllium Copper contacts deliver proven signal integrity under heavy vibration and shock, maintaining electrical connectivity in a variety of harsh environments. Temperature resistance covers -55°C to +125°C, and contacts can carry up to 3.3A for low power as well as signal requirements.

FEATURES

- Jackscrews, latches or quick-mating bayonet fixings for reliable connections
- Assured signal integrity under extreme environments – vibration, shock and temperature resistance
- Low outgassing, great for space, avionics and optronics

Housings:	Glass-Filled Thermoplastic, UL94V-0
Current per contact:	3.3A max
Contact resistance:	25mΩ max
Durability:	500 mating cycles
Pitch:	2.00mm
Operating temperature:	-55°C to +125°C
Vibration resistance:	10G (98m/s²) for 6 hrs / 20G (196m/s²) for 2 hrs
Shock resistance:	100G (981m/s²)

APPLICATIONS

- Aviation and UAVs
- New space
- Motorsport
- Defense & security

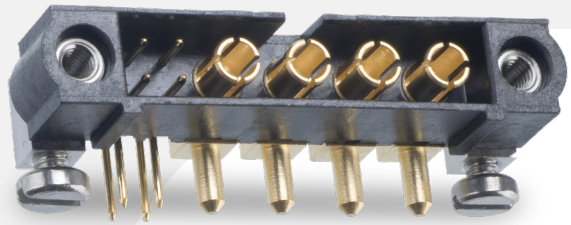
VIEW FULL SERIES & SPECIFICATIONS **HERE**

Datamate®

HRi RANGE

HIGH RELIABILITY SIGNAL/POWER/COAX MINIATURE CONNECTORS FOR SWAP-C OPTIMIZATION

For applications that must not fail, Datamate Mix-Tek brings high-reliability connection at combination 2.00mm/4.00mm pitch. Ultimate flexibility with proven performance under shock/vibration and temperature.



The compact design gives space and weight savings over industry standard alternatives. Cable-to-board, board-to-board and cable-to-cable options; pin counts up to 12 power/coax or mixed with equivalent signal contacts.

Multi-finger Beryllium Copper contacts deliver proven signal integrity under heavy vibration and shock, maintaining electrical connectivity in a variety of harsh environments. Temperature resistance covers -55°C to +125°C.

FEATURES

- Jackscrews, latches or quick-mating bayonet fixings for reliable connections
- Assured signal integrity under extreme environments – vibration, shock and temperature resistance
- Low outgassing, great for space, avionics and optronics
- Mixed Technology connections include 20A or 40A max power, or 6GHz / 50Ω coax

Housings:	Glass-Filled High-Temperature Thermoplastic, UL94V-0
Current per contact:	40A max for power contacts / 3.3A max for signal contacts
Contact resistance:	25mΩ max
Durability:	500 mating cycles
Pitch:	4.00mm for power/coax contacts / 2.00mm for signal contacts
Operating temperature:	-55°C to +125°C
Vibration resistance:	10G (98m/s²) for 6 hrs / 20G (196m/s²) for 2 hrs
Shock resistance:	100G (981m/s²)

APPLICATIONS

- Aviation and UAVs
- New space
- Motorsport
- Defense & security

VIEW FULL SERIES & SPECIFICATIONS **HERE**

KONA®

HRi RANGE

HIGH RELIABILITY HIGH CURRENT MAXIMUM POWER CONNECTORS FOR SWAP-C OPTIMIZATION

For applications that must not fail, Kona brings high-reliability power connection at 8.50mm pitch. High current with robust housings; tough and lightweight performance under shock/vibration and temperature.

Kona contacts are fully and individually shrouded, with built-in polarization for maximum protection and minimal damage due to handling or mis-mating. Cable-to-board and cable-to-cable; pin counts of 2, 3 and 4 at 60A per contact, for a combined power level of 240A. Maximum voltage rating of 3,000V delivered by 6-finger Beryllium copper alloy contacts. Connection integrity and good spring force achieves electrical connectivity in a variety of harsh environments.

FEATURES

- Quick mating screw fixings for reliable proven connections
- High power connection under extreme environments – vibration, shock and temperature resistance
- Low outgassing, great for space, avionics and optronics

Housings:	Glass-Filled High-Temperature Thermoplastic, UL94V-0
Current per contact:	60A max
Contact resistance:	2mΩ max
Durability:	250 mating cycles
Pitch:	8.50mm
Operating temperature:	-65°C to +150°C
Vibration resistance:	20G (196m/s²) for 12 hrs
Shock resistance:	100G (981m/s²)

APPLICATIONS

- Aviation and UAVs
- New Space
- Motorsport, EVs
- Defense & Security
- High-end Industrial

VIEW FULL SERIES & SPECIFICATIONS **HERE**

SOCKETS

EZi RANGE

SINGLE FEMALE CONTACT THROUGHBOARD AND SMT PCB CONTACTS

Durable low profile single contact connections; low contact resistance and high conductivity for use with devices or as PCB stacking connections. Use with removable jumper links for hardware programming.

PCB Sockets provide the simplest method to prevent heat damage to sensitive or expensive components, such as sensors and ICs. Simply solder the sockets in a suitable layout on the PCB, then plug the vulnerable item in afterwards.

Ideal for components with oddform termination layouts. Rework, replacement or upgrade does not require any de-soldering and eliminates any further heat damage.

FEATURES

- Simple and effective method for connecting PCBs and oddform devices
- Remove de-soldering for rework or replacing / upgrading ICs and modules
- Compact and lightweight for wearables and hand-held devices

PCB connection type:	**SMT**	**Throughboard**
Current per contact:	5A to 9A	2A to 20A
Contact resistance:	25mΩ max	25mΩ max
Durability:	25 to 500 mating cycles	500 mating cycles
Operating temperature:	-40°C to +105°C min	-55°C to +125°C
Mating pin range:	Ø0.80mm to Ø1.90mm	Ø0.41mm to Ø2.30mm

APPLICATIONS

- Industrial
- Communications
- Retail
- Instrumentation
- Aerospace and Defense

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POGOPINS

EZi RANGE

SPRING LOADED CONTACTS - SURFACE MOUNTED SINGLE SPRING CONNECTIONS

A lightweight surface-to-surface connection, maintained by the spring force of the Pogo Pin. Highly durable with high number of mating cycles possible over the lifetime of the device.

Pogo Pins, or Spring Loaded Contacts, were originally designed for the clamshell mobile phone industry. The contact design is a short plunger and body, with an integrated coil spring. Mated to the flat surface of the SMT contact pad, the connection is maintained against the spring force by other systems within the equipment.

The low mating force enables rapid and effortless connections. These contacts mate with any conductive surface, and also tolerate significant lateral mating misalignment.

FEATURES

- Durable single connection contacts, absorbs significant misalignment
- High number of mating cycles for frequent use and longer life
- Supplied in tape & reel for high volume surface mount assembly

Current per contact:	1A or 2A
Contact resistance:	50mΩ max
Durability:	10,000 mating cycles
Free / working height:	2.4mm to 8.2mm free height / 1.85mm - 7.2mm working height
Spring force:	0.39N to 1.32N at working height
Operating temperature:	-40°C to +85°C

APPLICATIONS

- Wearable devices
- Medical
- Home entertainment
- POS tracking
- Mobile electronics

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SPRING CONTACTS

EZi RANGE

SURFACE MOUNT ANTENNA, GROUNDING SINGLE PIECE SMT SPRING CONTACTS

Single contact with inherent spring properties. Smaller and lighter PCB connections. Simple to assemble, easy to mate with generous tolerance to misalignment. Also called Shield Fingers, Antenna or Grounding Contacts.

Spring Contact connectors maintain a positive force against a mating surface, are available in different widths and offer a choice of spring contact forces. Contact interconnects suit a wide variety of applications and markets, including antenna contacts in wearable and mobile applications, RFI screening, LED lamp connections, RFID tags, vision systems, PCB grounding and board-to-board contact.

FEATURES

- Simple and effective method for connecting pcbs
- Compact and lightweight for wareables and hand-held devices
- Surface mount, with pick/place zones, supplied tape and reeled for volume automation

Current per contact:	Up to 14A
Durability:	Up to 10,000 mating cycles
Free height:	1.23mm to 10.00mm
Working height:	0.63mm to 9.50mm
Spring force:	0.39N to 2.00N at working height
Operating temperature:	-20°C to +70°C min / -55°C to +125°C max
Spring contact style:	C-shape / Extended Antenna / Positive Stop / Anti-Hook / Multi-Directional

APPLICATIONS

- Industrial
- Communications
- Retail
- Instrumentation
- Consumer

VIEW FULL SERIES & SPECIFICATIONS **HERE**

SHIELDING

EZi RANGE

BOARD LEVEL RFI/EMC SHIELDING - REPLACEABLE SHIELD CANS AND SMT RETENTION CLIPS

Speed up board-level shielding with a Clip and Can system. Faster to assemble, eliminates hand soldering, prevents hot spots and damage to vulnerable devices.

Traditional board-level shielding requires hand soldering to the PCB after the other components and devices have been assembled and reflow soldered. With surface-mounted clips and push-on cans, the soldering is carried out with the rest of the PCB. Supplied on Tape and reel with pick and place zones, full automation is easy.

The cans are then hand-assembled in a very fast secondary operation – just push into place. No additional skilled secondary soldering required, no danger of heat damage to nearby components.

FEATURES

- No secondary solding operations, fast and simple to assemble
- Re-usable shield cans easy to remove for rework and maintenance
- SMT retaining clips supplied tape and reeled for volume automation

Shield can material:	Nickel Silver
Shield can area:	10mm x 10mm min / 50mm x 25mm max
Shield can height:	2.5mm to 5mm
Shield can thickness:	0.15mm, 0.20mm or 0.30mm
SMT clip height:	0.80mm to 5.45mm
SMT clip thickness:	For 0.13mm to 1.00mm thick cans

APPLICATIONS

- Industrial
- Wireless modules
- New space
- Motorsport
- Avionics and space

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KONTROL

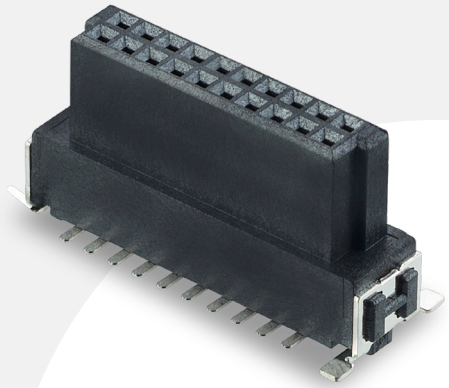
BBi RANGE

INDUSTRIAL CONNECTORS - DURABILITY AND HIGH PERFORMANCE ON 1.27MM (.05”) PITCH

Capable industrial-grade connection with complete flexibility. Reliable and space-saving connections, polarized and protected for automated manufacturing and fault-free assembly.

Kontrol is designed to withstand the demands of industrial applications with a fully flexible connection. The board-to-board mating performs from fully mated to 1.5mm separation, giving a full range of mating heights from 8mm to 20mm parallel board separation.

With horizontal PCB connectors and IDC cable connectors, Kontrol can be used for edge-to-edge, motherboard-to-daughterboard and cable-to board. Mated connectors can carry a data rate up to 3Gb/s.



FEATURES

- Robust and fully shrouded, withstands lateral and twisting forces on mating
- Polarized housings for error-free assembly
- Supplied in tape & reel for high volume surface mount assembly

Housings:	High-Temperature LCP, UL94V-0
Current per contact:	1.2A max for PCB / 0.5A max for cable
Data rate:	Up to 3Gb/s
Durability:	500 mating cycles
Pitch:	1.27mm (.05")
Operating temperature:	-55°C to +125°C for PCB / -20°C to +105°C for cable
Vibration resistance:	20G (196m/s^2) for 12 hrs
Mating height range:	8mm to 20mm (vertical)

APPLICATIONS

- Embedded computing
- Factory automation
- Battery management
- Handheld monitoring

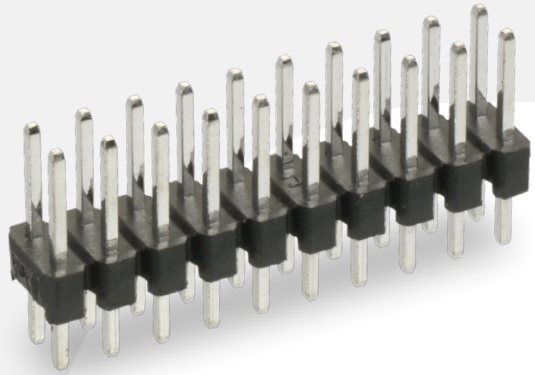
VIEW FULL SERIES & SPECIFICATIONS **HERE**

INDESS

BBi RANGE

PIN HEADER / SOCKET CONNECTORS, DEPENDABLE PERFORMANCE ON 2.54MM (.1”) AND 2.00MM (.079”) PITCH

Reliable all-purpose connectivity with cost-effective simplicity. Stocked in depth across the global distribution network. Compatible with industry-standard designs.



The 2.54mm pitch connector has been a cornerstone of modern electronics for over 60 years. The 2.00mm pitch connectors were added shortly afterwards in the drive for miniaturization – same design, but over 20% smaller.

These connectors are the ultimate in basic and functional design. Males consist of square pins held in place by a plastic carrier strip. Female twin-beam connectors are enclosed in a rectangular protective housing.

FEATURES

- Dependable and reliable, easy to use
- Compatible with industry standard equivalent connectors
- Quality cost-effective connections

Pitch:	**2.54mm (.1")**	**2.00mm (.079")**
Current per contact:	3A max	2A max
Mating height range:	6.29mm to 12.63mm (vertical)	3.60mm to 6.80mm (vertical)
Housings:	Glass-Filled Thermoplastic, UL94V-0	
Durability:	300 mating cycles for gold / 50 mating cycles for tin	
Operating temperature:	-25°C to +105°C for PCB / -25°C to +85°C for cable	

APPLICATIONS

- Embedded computing
- Factory automation
- Consumer electronics
- Metering and monitoring

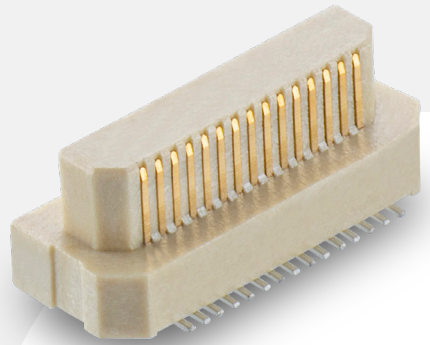
VIEW FULL SERIES & SPECIFICATIONS **HERE**

ARCHER

BBi RANGE

ARCHER .8 / .5 HIGH SPEED COMPACT HIGH PIN COUNT MEZZANINE CONNECTORS

Capable industrial-grade connection for high-speed communications. Minimum PCB real estate, polarized and protected for automated manufacturing and fault-free assembly.



Archer .8 is a miniature connection system for high-speed data rates up to 12GHz or 24Gb/s based on 0.8mm (.0315") Pitch. Archer .5 is based on a smaller pitch of 0.5mm (.0197"), achieving data rates up to 8GHz or 16Gb/s.

The board-to-board designs are great for mezzanine daughterboard to motherboard signal transfer with high contact density. Gull-wing SMT terminations allow easy solder inspection. Up to 120 contacts in a double-row layout. Polarized housings assist with error-free assembly, fully shrouded when mated to protect against accidental damage.

FEATURES

- High speed connectivity for signal/data transfer in industrial applications
- Polarized housings for error-free assembly
- Supplied in tape & reel for high volume surface mount assembly

Pitch:	**0.80mm**	**0.50mm**
Data rate	12GHz, 24Gb/s	8GHz, 16Gb/s
Contact resistance:	100mΩ max	80mΩ max
Operating temperature:	-40°C to +125°C	-55°C to +85°C
Mating height:	5mm	8mm
Housings:	Glass-Filled High-Temperature Thermoplastic, UL94V-0	
Current per contact:	0.5A max	
Durability:	30 mating cycles	

APPLICATIONS

- Embedded computing
- Building automation
- Smart metering
- IOT modules

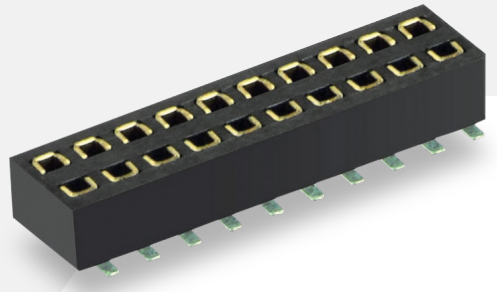
VIEW FULL SERIES & SPECIFICATIONS **HERE**

ARCHER

BBi RANGE

PIN HEADER / SOCKET CONNECTORS, DEPENDABLE PERFORMANCE ON 1.27MM (.05”) PITCH

Reliable all-purpose connectivity with cost-effective simplicity. Stocked in depth across the global distribution network. Compatible with industry-standard designs.



Archer connectors are based on a miniaturized half-pitch version of the M20 2.54mm pitch series. At 1.27mm (.05”) pitch, these connectors give up to 38% space saving on 2mm pitch, and 50% on the 2.54mm pitch. This space saving allows more room for added functionality or smaller PCBs and enclosures. Throughboard and Gull-wing SMT terminations, vertical and horizontal orientations. Contact counts from 2 to 100 are available. Female twin-beam or tuning fork connectors are enclosed in a rectangular protective housing – some designs also include polarization and location pegs.

FEATURES

- Dependable and reliable, easy to use
- Compatible with industry standard equivalent connectors
- Quality cost-effective connections

Housings:	Glass-Filled Thermoplastic, UL94V-0
Current per contact:	0.5A to 1.75A
Contact resistance:	30mΩ max
Durability:	25 to 600 mating cycles
Pitch:	1.27mm (.05")
Operating temperature:	-40°C to +105°C for PCB / -20°C to +105°C for cable

APPLICATIONS

- Embedded computing
- Factory automation
- Consumer electronics
- Metering and monitoring

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