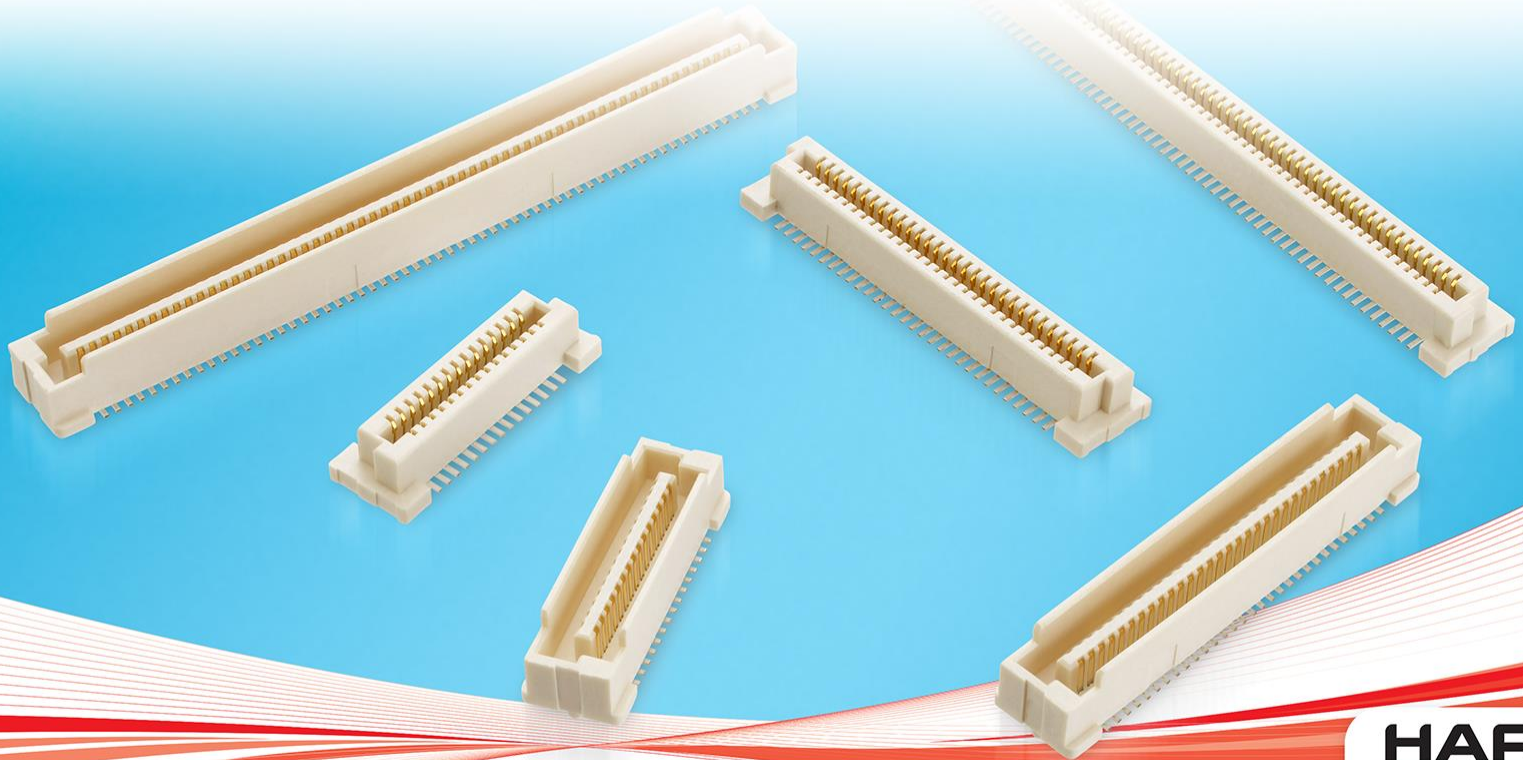


Archer .8



Archer .8

Smaller connections for Industry



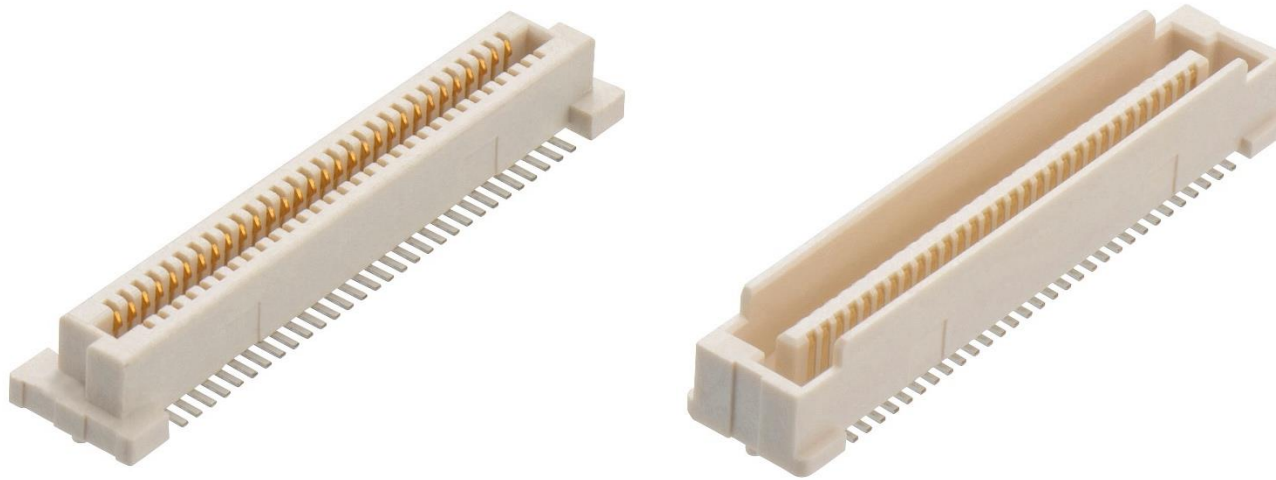
It's not just consumer electronics that are either getting smaller or packing in more functionality. Industrial and automation systems also benefit from less space, less weight and more features.

These applications require smaller packages with high performance – which Archer .8 delivers.



Archer .8

The basics



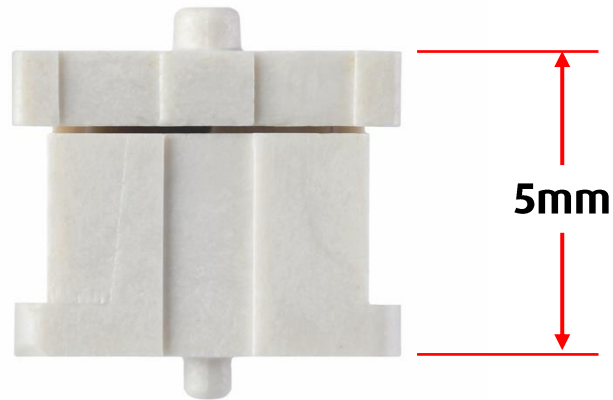
Archer .8 is a board-to-board connection system. The pitch of the contacts is 0.8mm – double row layout enclosed in high temperature UL94V-0 plastic housings.

The contact area is gold for durability and conductivity; the terminations are 100% tin for optimal surface mount soldering.



Archer .8

Compact board-to-board

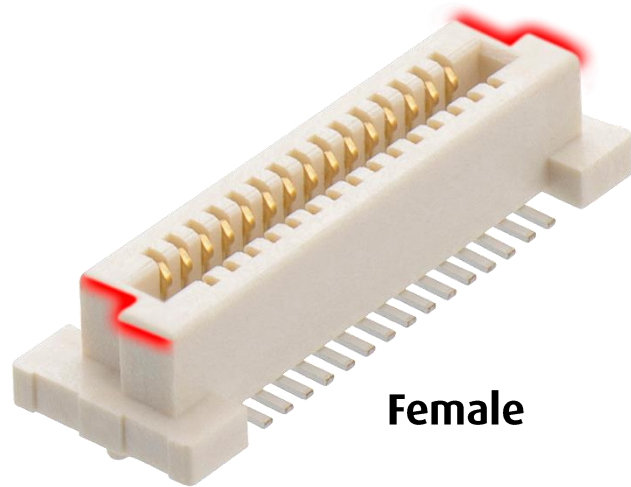


At 5mm between mating PCBs, this compact design is great for mezzanine daughterboards mated to motherboards.

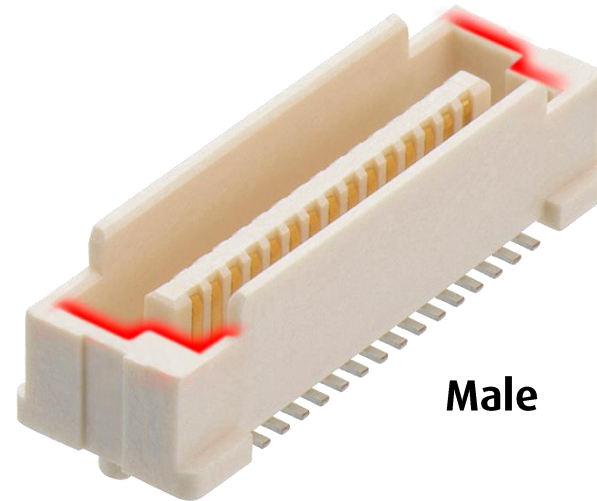
Or you can also use it as a [low-profile alternative to cabling](#), by mounting one connector half to a custom Flexible Printed Circuit.

Archer .8

Eliminate mis-mating



Female



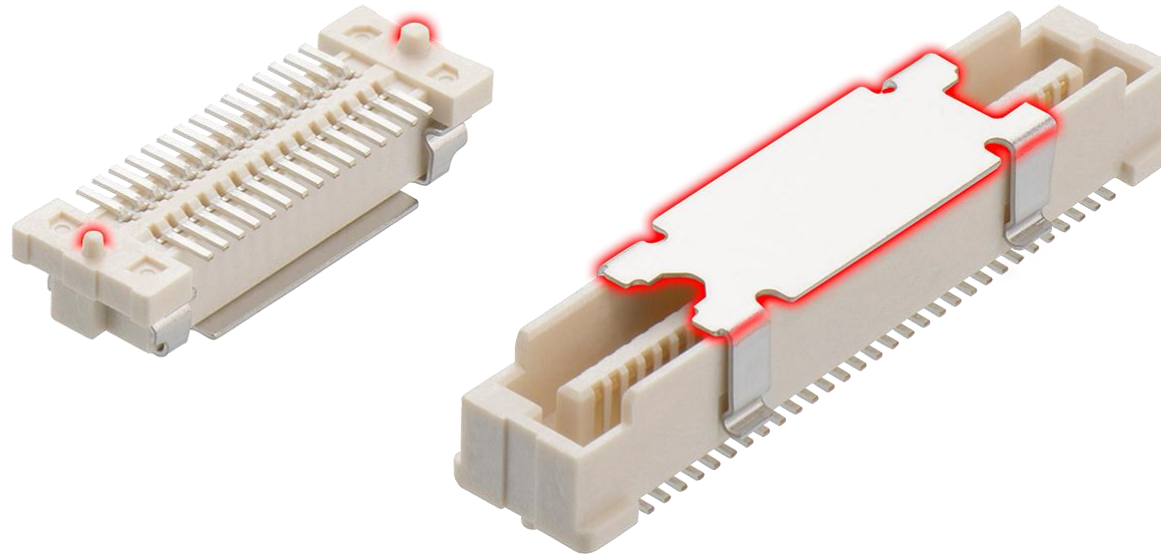
Male

The precision plastic housings have built-in polarizing features, to ensure correct mating every time.

The contacts are recessed and shrouded on both male and female connector styles, to prevent accidental damage from partial mis-mating or external knocks.

Archer .8

Ready for **automated** production

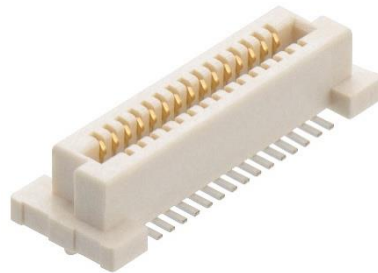


All Archer .8 connectors are supplied in Tape and Reel packaging. Every connector is fitted with a removable pick and place cap for automated vacuum pick-up and SMT assembly.

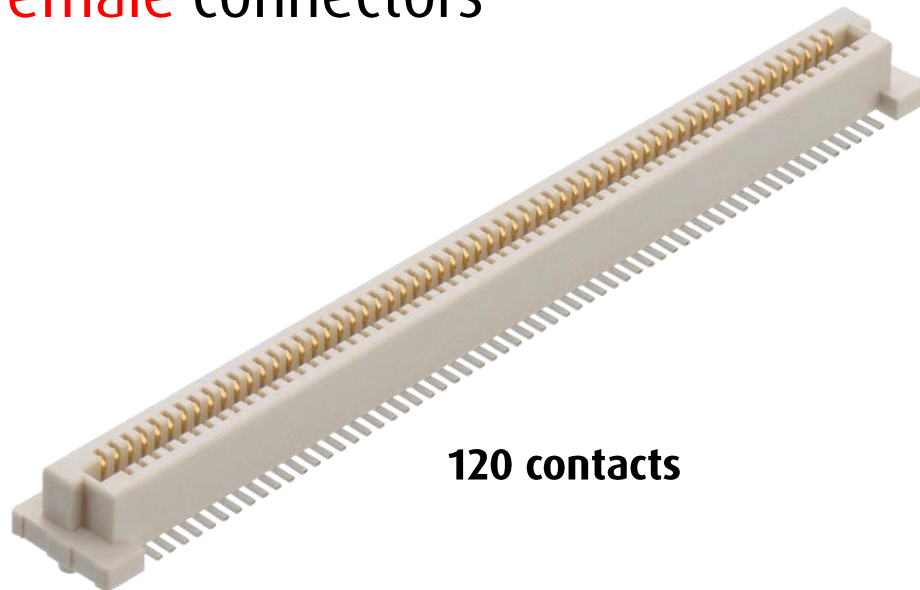
To minimize movement on the PCB and during the reflow process, each housing has built-in location pegs. The pegs on each end are different diameters, to ensure that connectors are assembled in the right orientation on the PCB for both hand and robotic assembly.

Archer .8

Female connectors



30 contacts



120 contacts

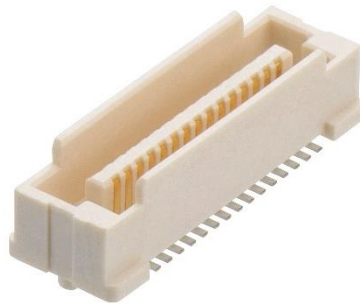
High contact counts are standard for this range. The female connectors come in the following contact counts:

- [M58-2800342R](#) = 30 (15 + 15)
- [M58-2800642R](#) = 60 (30 + 30)
- [M58-2801042R](#) = 100 (50 + 50)
- [M58-2800442R](#) = 40 (20 + 20)
- [M58-2800842R](#) = 80 (40 + 40)
- [M58-2801242R](#) = 120 (60 + 60)

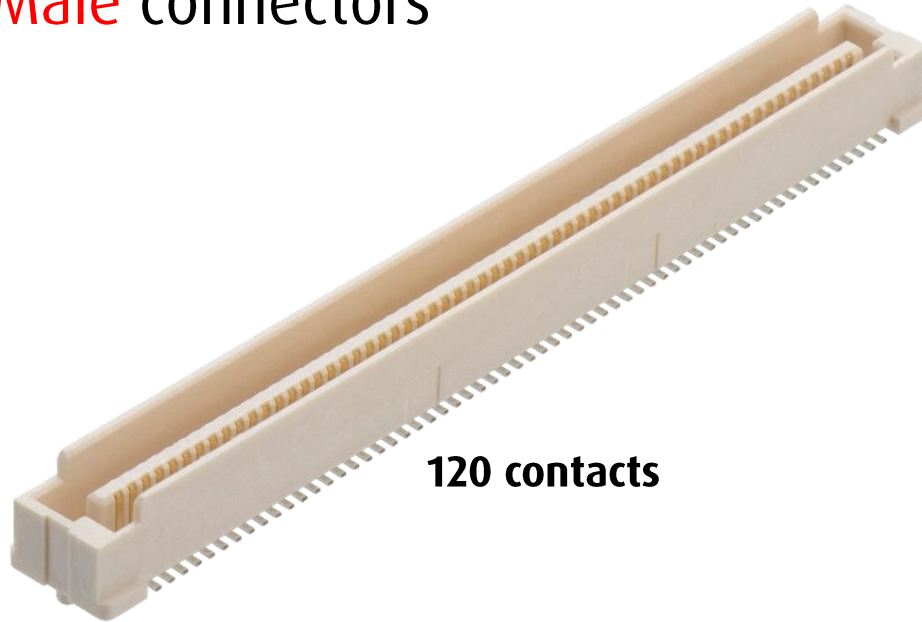
Female connectors have contacts facing inwards, with a slight bump for single contact connection to the mating male contact.

Archer .8

Male connectors



30 contacts



120 contacts

The male connectors are available in the same contact come in the following contact counts:

- [M58-3800342R](#) = 30 (15 + 15)
- [M58-3800442R](#) = 40 (20 + 20)
- [M58-3800642R](#) = 60 (30 + 30)
- [M58-3800842R](#) = 80 (40 + 40)
- [M58-3801042R](#) = 100 (50 + 50)
- [M58-3801242R](#) = 120 (60 + 60)

Male connectors have contacts facing outwards, with an outer shroud to ensure contacts are protected when the connectors are not mated.

Archer .8

Performance – Electrical Specifications

Current Rating	0.5A	EIA-364-70
Contact Resistance	50mΩ max (initial) 100mΩ max (final)	EIA-364-23
Insulation Resistance	1,000MΩ min	EIA-364-21
Maximum Voltage	500V AC	EIA-364-20

At 0.5A per contact, the performance of this range is equal to larger pitch connectors (such as 1.00mm and 1.25mm).

Consult the complete [Component Specification C053XX \(latest issue\)](#) for more information and other specifications.



Archer .8

Performance – Signal Integrity Specifications

High Speed Connectivity	12GHz, 24Gb/s
Impedance Range	84 to 100 Ω @ 50ps edge (10-90%) 77 to 92 Ω @ 35ps edge (10-90%)
Return Loss	-10dB up to 15GHz
Insertion Loss	-1.5dB up to 16GHz
Crosstalk	NEXT: -20dB up to 20GHz FEXT: -25dB up to 20GHz

Archer .8 delivers high speed connectivity suitable for Signal and Data transfer at 12GHz, which equates to 24Gbit/s. Consult the [Test Report Summary HT080XX \(latest issue\)](#) for more detailed information on the signal integrity testing.

Archer .8

Environmental & Mechanical Specifications

Operating Temperature	-40°C to +125°C	EIA-364-32 Cond. I
Durability	30 mating cycles	EIA-364-09
Vibration	10-55-10Hz, 1.5mm P-P 6 hours total (2 hours per axis)	EIA-364-28 Cond. I
Shock	50G (490m/s ²) 18 total shocks (6 per axis)	EIA-364-27 Cond. A

With a high shock resistance and a wide operating temperature range, these connectors perform better than comparable industrial / commercial connectors at larger pitches.

Consult the complete [Component Specification C053XX \(latest issue\)](#) for more information and other specifications.



Archer .8

Environmentally friendly materials



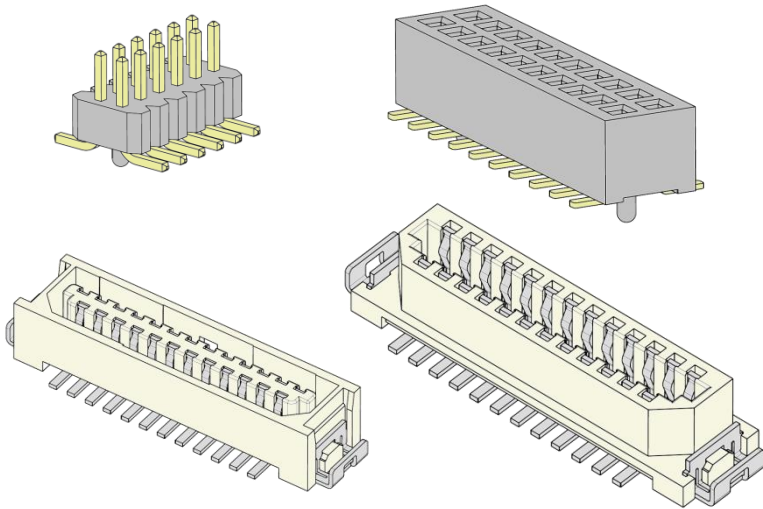
The materials used in the Archer .8 connectors do not contain any Lead, Halogens, Brominated Flame Retardants, Red Phosphor (PFOS/PFOA) or Antimony. They are fully RoHS Compatible and contain no REACH SVHCs.

This will help future-proof your design against material legislation requirements.

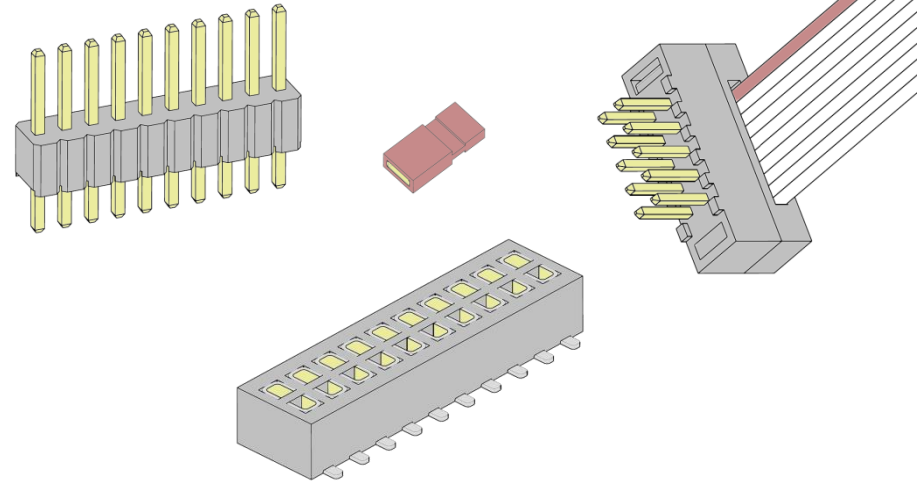


If you like this product, try...

Fine Pitch



ARCHER - 1.27mm Pitch



- 1mm and 1.25mm pitch Industry Standard
- Pin header and Socket or single-contact connectors
- Discrete Cable connectors, pre-cabled contacts
- Vertical SMT options with low board-to-board heights
- Tape and Reel packaging options

- 1.27mm pitch Industry Standard
- Pin header and Socket system, with Jumper Sockets
- IDC Ribbon Cable connectors
- Vertical and Horizontal, Throughboard and SMT options
- Single and Double row versions



Get Help from a Harwin Expert

Our experts are specialists in their field with many years of experience in their respective roles and industries.

Find an expert that can help you with your enquiry.

Click Here >>

CAD Models and Evaluation Samples also available at www.harwin.com

