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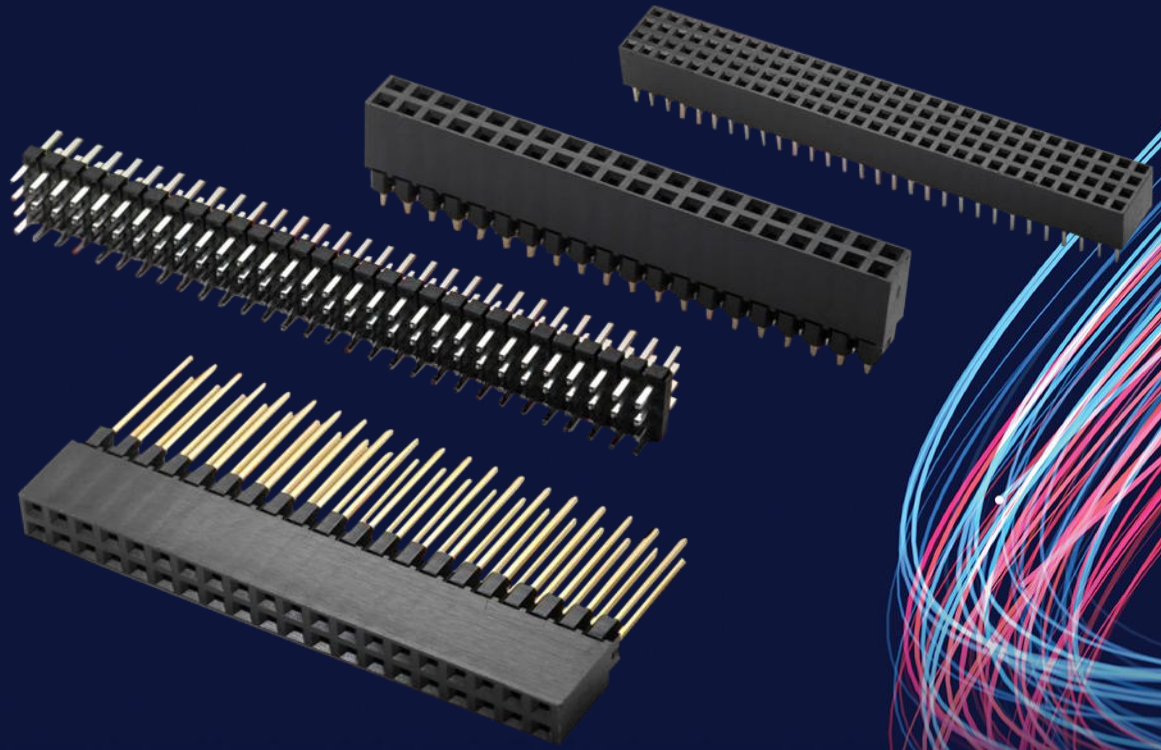
PC/104 and PC/104 Plus



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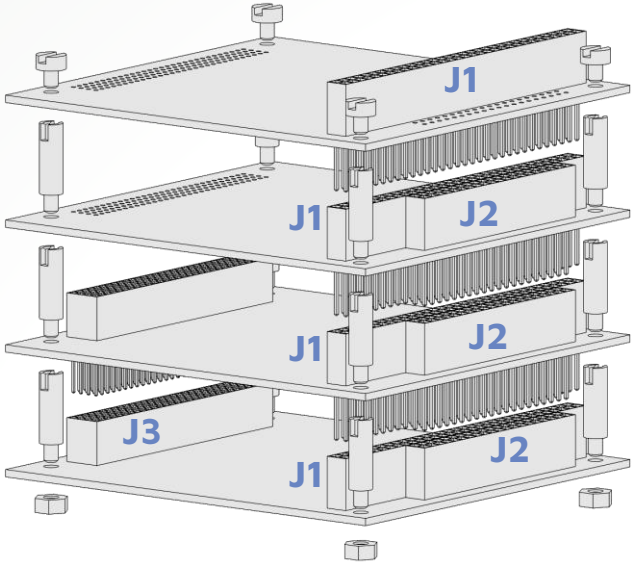
INDUSTRY STANDARD FOR EMBEDDED PCS

Stackthrough

Non-Stackthrough



The PC/104 and PC/104 Plus connection system is a popular industry standard used for embedded PC applications, designed for stacked boards with a common bus system.

- Using just the 2.54mm pitch PC/104 32+32-contact connector, an 8-bit bus is achieved (J1).
- Adding the 20+20-contact connector increases this to a 16-bit bus (J1 + J2).
- With the inclusion of the 2mm pitch PC/104 Plus connector (4 rows x 30 contact), the system becomes PCI Bus compatible (J1, J2, J3).

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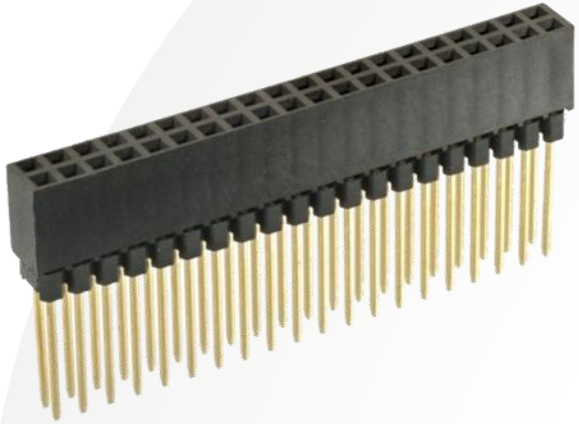
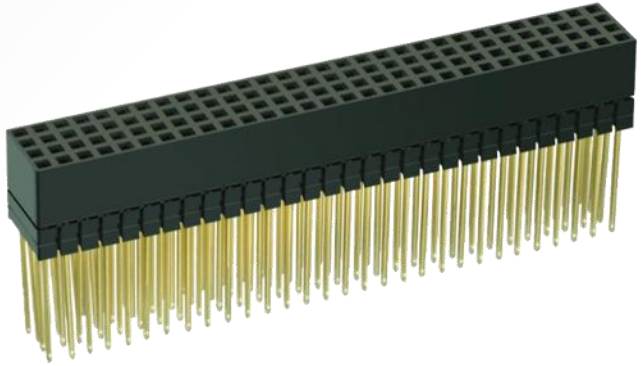
STACKTHROUGH CONNECTION





The Harwin PC/104 connectors are based on a tuning fork contact, which allows stamped connections with tails just like male plug Pin Headers. The terminations of the upper connector in the stack can therefore plug into the connector below it.

- PC/104 (2.54mm pitch), 32+32 contacts = M20-6103245
- PC/104 (2.54mm pitch), 20+20 contacts = M20-6102045
- PC/104 Plus (2.00mm pitch), 4 x 30 contacts = M22-6003005

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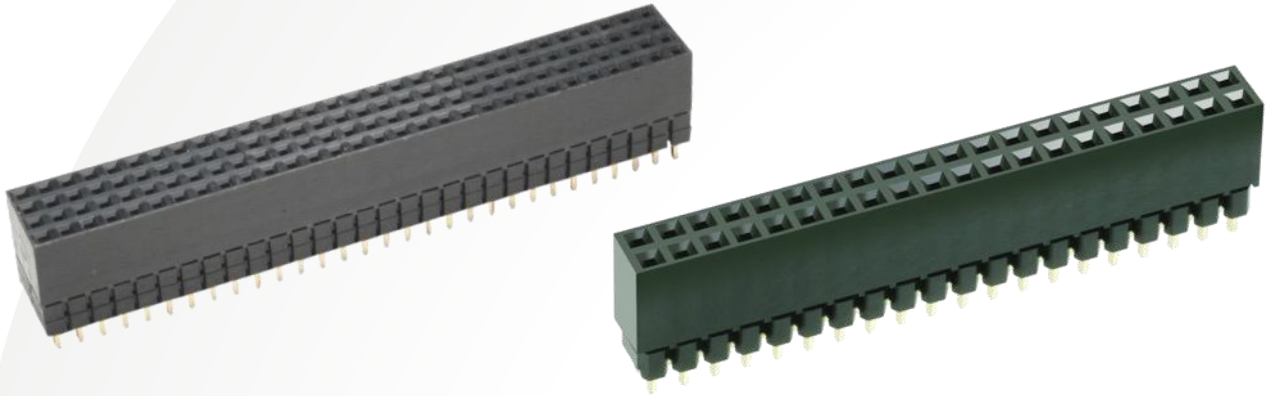
NON-STACKTHROUGH CONNECTION



To complete the bottom layer of the PC Bus, a non-stackthrough connector is required. These connectors have sort tails, designed for soldering to a standard 1.6mm thick PCB.

- PC/104 (2.54mm pitch), 32+32 contacts = M20-6113245
- PC/104 (2.54mm pitch), 20+20 contacts = M20-6112045
- PC/104 Plus (2.00mm pitch), 4 x 30 contacts = M22-6013005

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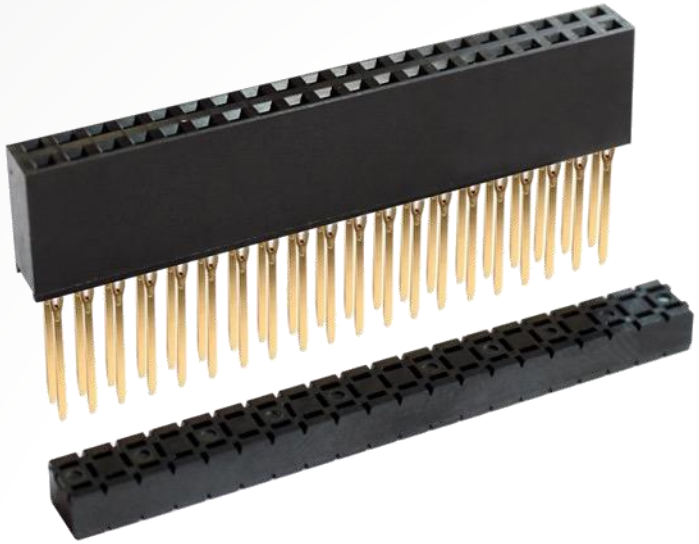
PRESS-FIT CONNECTION – NO SOLDER REQUIRED



PC/104 connectors (2.54mm pitch) have the alternative option of press-fit terminations. This removes the requirement for soldering, by forming a gas-tight joint with a plated-through hole on the PCB. This option is available on both the stackthrough and non-stackthrough connectors:

- Stackthrough, 32+32 contacts = M20-6153205
- Stackthrough, 20+20 contacts = M20-6152005
- Non-Stackthrough, 32+32 contacts = M20-6163205
- Non-Stackthrough, 20+20 contacts = M20-6162005

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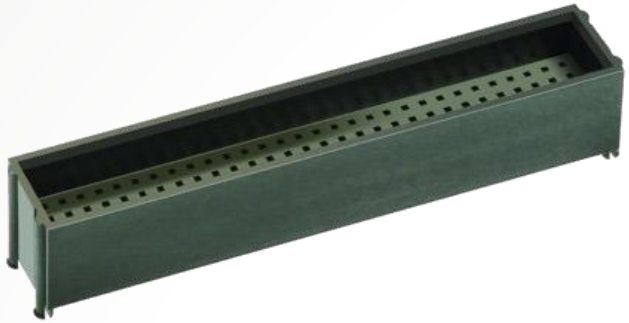
ACCESSORIES



As part of the PC/104 range, Harwin also offer:

- PC/104 Plus Shroud for use with stackthrough terminations (assembles to underside of PCB) – M22-6043098
- Male plug/Female receptacle Spacer, 15.24mm (0.6") body length, for PC/104 board stacking – R6104-02

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ELECTRICAL SPECIFICATIONS

Current Rating	PC/104 Solder Tail = **3A** per contact PC/104 Press-Fit = 1A per contact PC/104 Plus = 1A per contact
Contact Resistance	50mΩ max
Insulation Resistance	**5,000MΩ min**

The full Component Specification for Harwin's PC/104 range is available to download.

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MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Temperature Range	**-55°C to +105°C**
Durability (mating)	10 mating operations
Durability (Press-fit to PCB)	3 mating operations

All Solder Termination connectors are manufactured using the same housing materials used on Surface Mount connectors, and can therefore withstand the same reflow soldering processes.

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MARKETS

The main PCB applications using PC/104 and PC/104 Plus are Embedded PCs. These are well established in applications such as industrial machinery and larger electronics systems.

- Production Equipment
- Communications
- Drives and Controls
- Industrial Monitoring
- Embedded Computing

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