

3M™ Connectors for PC104 Embedded Systems Applications

3M is offering Connectors for PC104 Embedded Systems Applications as an addition to our embedded computing product line. These connectors conform to PC/104 Embedded-PC Modules. 3M is offering both of the primary connectors specified by PC/104: 8-bit J1/P1 and 16-bit J2/P2 in both stack-through and non-stack-through options. J3/P3 connectors are also available in the PC104 Plus product line on Customer Drawing TS-2391.

Features and Benefits

PC104 Standard Benefits

Compact form factor and stacked design to meet tight space requirements of embedded applications

Self-stacking bus eliminates the need, cost and bulk of backplanes and card cages

Relaxed bus drive (6 mA) lowers power consumption (to 1-2 watts per module) and minimizes component count

Stack-through design is more rugged against shock and vibration effects

3M PC104 Connectors

Standard PC104 pin-and-socket connectors

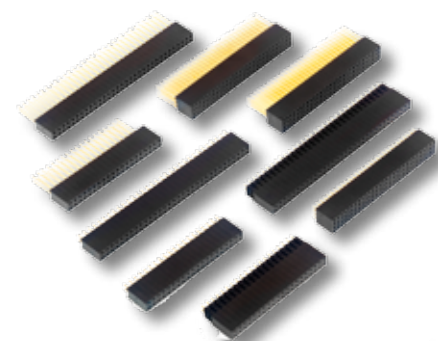
Rugged and reliable 64- and 40-contact male/female headers

Simple contact design to accommodate many standoff heights

Available in solder tail

Product Specifications

Specifications	Product	Available upon request
	Signal Integrity data	Available upon request
Materials	Contacts	Phosphor bronze
	Platings	See Customer Drawings TS-2392 and TS-2395
	Housings	Polyester Nylon-6T (UL 94V-0)
Environmental	Operating Temperature	-40°C to +105°C (+85°C for bus compatible version)
	Max Processing Temp	230°C for 60 seconds 260°C for 10 seconds
Electrical	Current Rating	3 AMPS
	Insulation Resistance	5,000 Megaohms Min
	Contact Resistance	20 Milliohms Max
	Withstanding Voltage	1000 Vac



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Target Markets and Applications

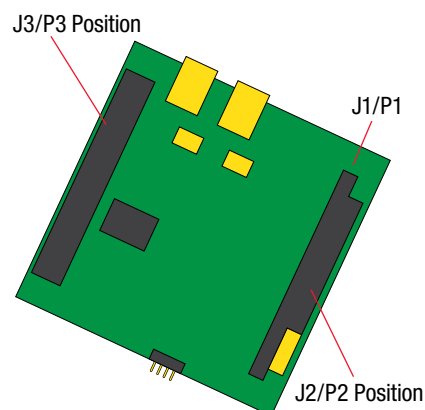
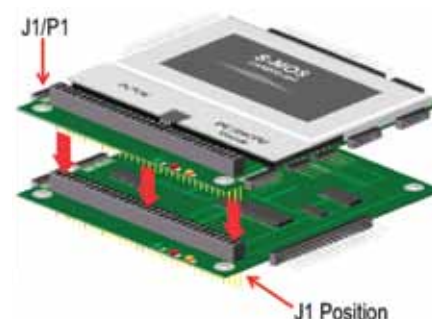
Industrial control and factory automation

Military/aerospace

Medical

Transportation

Gaming



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The following parts are available as part of the 3M backplane connector product family:

Part Number	Description	Customer Drawing
4P01-2A02-XX	PC104 Compliant Non-Stack-Thru, 40-Pin, Solder Tail Module, 11.3 to 19 mm Standoff	TS-2392
4P01-2B02-XX	PC104 Bus Compatible Stack-Thru, 40-Pin, Solder Tail Module, 11.3 to 19 mm Standoff	TS-2392
4P01-2C02-XX	PC104 Compliant Stack-Thru, 40-Pin, Solder Tail Module, 11.3 to 19 mm Standoff	TS-2392
4P01-2D02-XX	PC104 Compliant Stack-Thru, 40-Pin, Solder Tail Module, 11.3 to 19 mm Standoff	TS-2392
4P02-2A02-XX	PC104 Compliant Non-Stack-Thru, 64-Pin, Solder Tail Module, 11.3 to 19 mm Standoff	TS-2392
4P02-2B02-XX	PC104 Bus Compatible Stack-Thru, 64-Pin, Solder Tail Module, 11.3 to 19 mm Standoff	TS-2392
4P02-2C02-XX	PC104 Compliant Stack-Thru, 64-Pin, Solder Tail Module, 11.3 to 19 mm Standoff	TS-2392
4P02-2D02-XX	PC104 Compliant Stack-Thru, 64-Pin, Solder Tail Module, 11.3 to 19 mm Standoff	TS-2392
4P01-2J02-XX	PC104 Bus Compatible Non-Stack-Thru, 40-Pin, Solder Tail Module, >19.9 mm Standoff	TS-2393
4P01-2K02-XX	PC104 Bus Compatible Non-Stack-Thru, 40-Pin, Solder Tail Module, >19.9 mm Standoff	TS-2393
4P02-2J02-XX	PC104 Bus Compatible Non-Stack-Thru, 64-Pin, Solder Tail Module, >19.9 mm Standoff	TS-2393
4P02-2K02-XX	PC104 Bus Compatible Non-Stack-Thru, 64-Pin, Solder Tail Module, >19.9 mm Standoff	TS-2393
4P01-2E02-XX	PC104 Bus Compatible Non-Stack-Thru, 40-Pin, Solder Tail Module, 19.3 to 20 mm Standoff	TS-2394
4P01-2F02-XX	PC104 Bus Compatible Non-Stack-Thru, 40-Pin, Solder Tail Module, 19.3 to 20 mm Standoff	TS-2394
4P01-2G02-XX	PC104 Bus Compatible Non-Stack-Thru, 40-Pin, Solder Tail Module, 19.3 to 20 mm Standoff	TS-2394
4P01-2H02-XX	PC104 Bus Compatible Stack-Thru, 40-Pin, Solder Tail Module, 19.3 to 20 mm Standoff	TS-2394
4P02-2E02-XX	PC104 Bus Compatible Non-Stack-Thru, 64-Pin, Solder Tail Module, 19.3 to 20 mm Standoff	TS-2394
4P02-2F02-XX	PC104 Bus Compatible Non-Stack-Thru, 64-Pin, Solder Tail Module, 19.3 to 20 mm Standoff	TS-2394
4P02-2G02-XX	PC104 Bus Compatible Non-Stack-Thru, 64-Pin, Solder Tail Module, 19.3 to 20 mm Standoff	TS-2394
4P02-2H02-XX	PC104 Bus Compatible Stack-Thru, 64-Pin, Solder Tail Module, 19.3 to 20 mm Standoff	TS-2394
4P01-2L02-XX	PC104 Bus Compatible Non-Stack-Thru, 40-Pin, Solder Tail Module, >27.3 mm Standoff	TS-2395
4P02-2L02-XX	PC104 Bus Compatible Non-Stack-Thru, 64-Pin, Solder Tail Module, >27.3 mm Standoff	TS-2395

Additional Information

	J1/P1 Connector	J2/P2 Connector	J3/P3 Connector
Type of module	PC/104 module	PC/104 module	PC/104-Plus module
Bus Architecture	8-bit (ISA PC/AT)	16-bit (ISA PC/AT)	32-bit (PCI bus)
Description	2 rows of 40 pins - 0.100" (2.54 mm) pitch	2 rows of 64 pins - 0.100" (2.54 mm) pitch	4 rows of 120 pins - 2.00 mm pitch
Options	Stack-through and non-stack-through options	Stack-through and non-stack-through options	Stack-through and non-stack-through options
Customer Drawings	TS-2392, TS-2395	TS-2392, TS-2395	TS-2391

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80-4000-7008-4