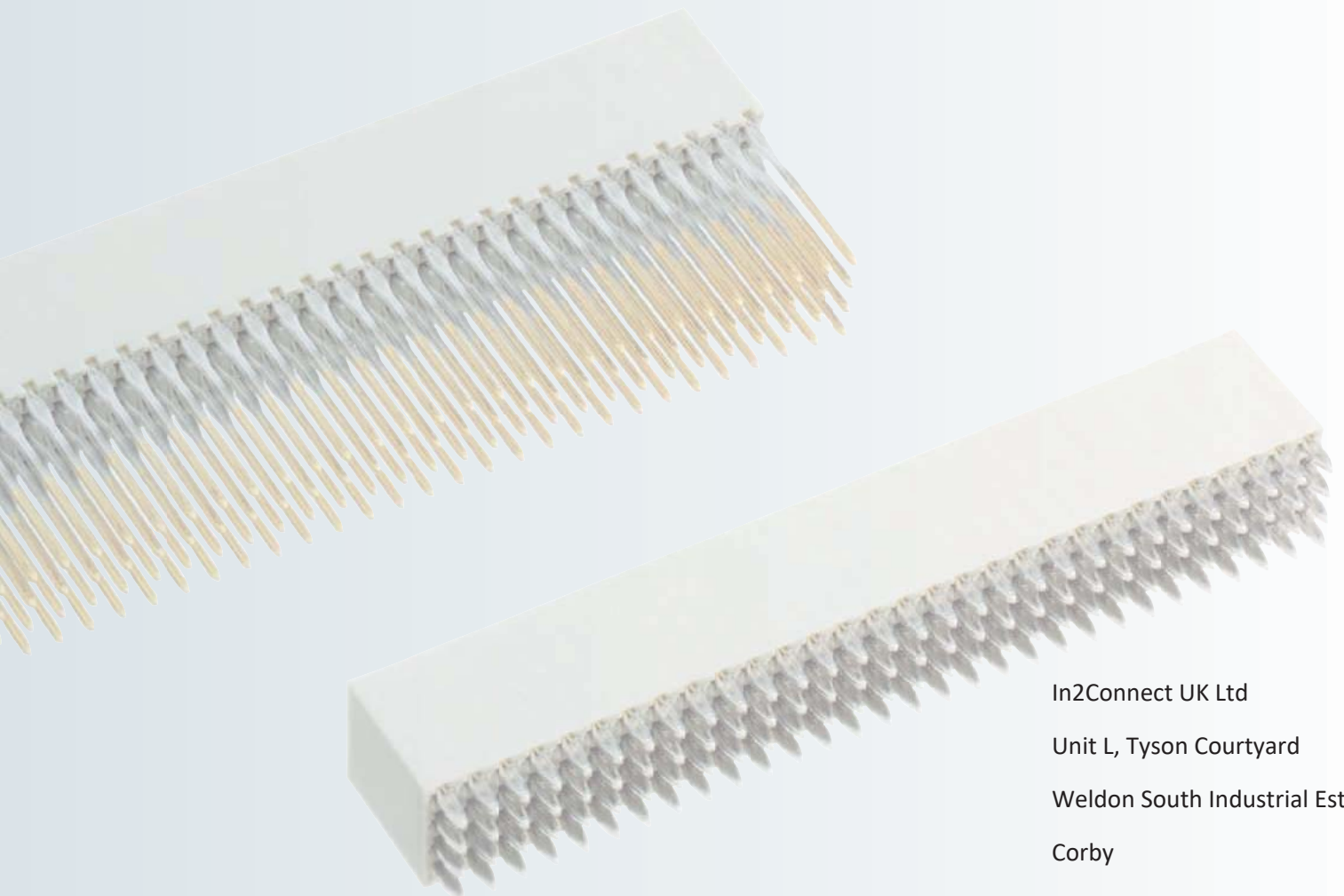


PC/104, PC/104-Plus Easy Stacking with Press-fit



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Introduction	198
Overview	199
The Standard	200
Technical Specifications	202
Hole Specifications	203
PC/104	204
PC/104-Plus	206
Accessories: PC/104-Plus	209

PC/104, PC/104-Plus

Highest Quality for Established Form Factor

PC/104 and PC/104-Plus is a standard for PC-compatible modules which are intermateable to set up a complete computing system. The PC/104 and PC/104-Plus ensures complete hardware and software compatibility, is extremely compact (96 mm x 90 mm), and comes with a standardized PC/104 Bus (ISA). Due to this standardization, different PC/104 cards can be combined to implement a defined task.

Based on PC/104, many different boards are offered such as:

- complete single-board computers
- I/O boards for digital or analog I/O
- boards for CAN, Profibus, LON, Ethernet
- PCMCIA boards

Key Features:

- ept's proven press-fit technology Tcom press®
- PC/104-Plus available for 22 mm Board-to-Board distance
- shrouds as accessory available
- individual performance level and contact number possible

Applications:

- PC/104
- PC/104-Plus
- Board-to-Board for PCB distance 15.24 mm and 22 mm

Termination



Press-fit

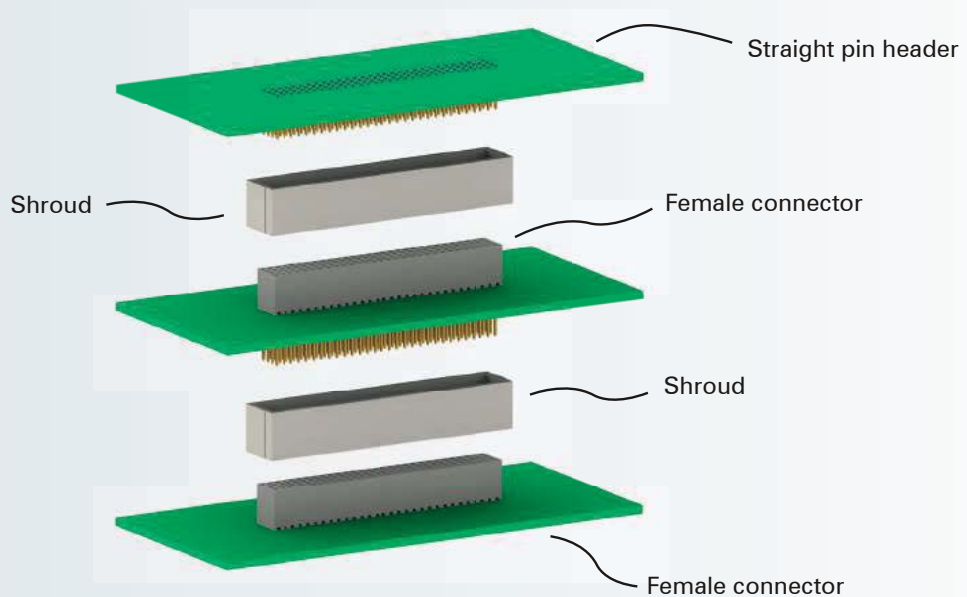


Solder

Mating Configuration

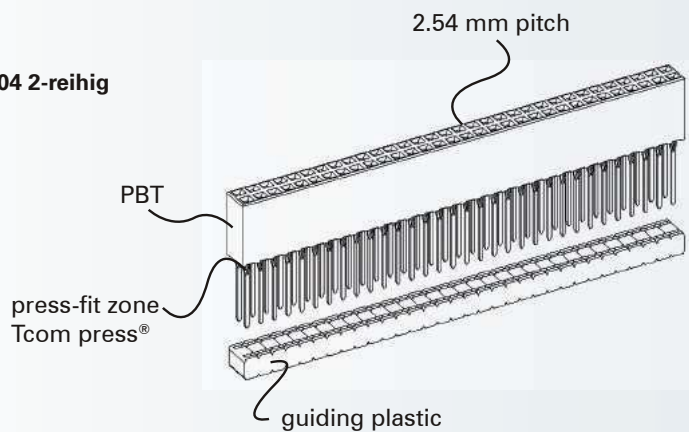


Parallel

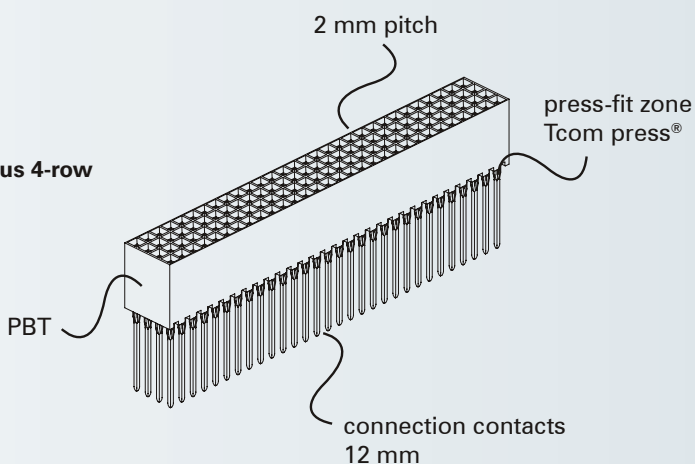


	Type		Pitch (mm)	Number of contacts	Termination	Mating connector	Page reference
PC/104		PC/104 Female connector	2.54	40 / 64	Press-fit, solder	PC/104 Female connector	p. 204
PC/104-Plus		PC/104-Plus Female connector	2	120	Press-fit, solder	PC/104-Plus Female connector	p. 206
		PC/104-Plus Female connector 22 mm	2	120	Press-fit	PC/104-Plus Female connector	p. 207
		PC/104-Plus Pin header	2	60	Press-fit	PC/104-Plus Female connector	p. 208

PC/104 2-reihig



PC/104-Plus 4-row



available with or without transfer zone

PC/104 and PC/104-Plus

Since more powerful components are available, the PC/104 systems had to be supplemented with a faster bus system. The PC/104 system was supplemented with the PCI bus and thus it was further developed. This supplement is described in the PC/104-Plus specification.

figure). The clearances specified by the PC/104 consortium are ensured by using spacers and shrouds. The additional use of spacing bolts is therefore not required.

PC/104 and PC/104-Plus Connector

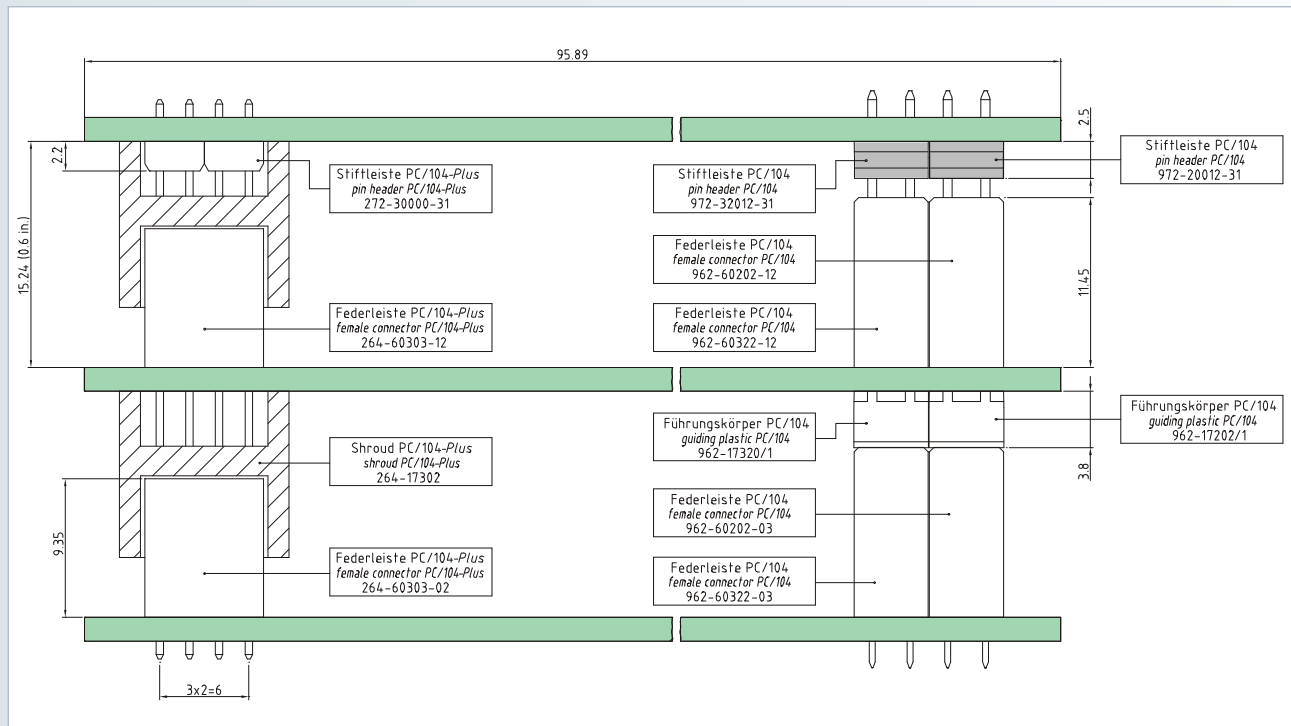
While the PC/104 bus comprises two connectors with 40 and 64 pins which can be placed side-by-side and a grid size of 2.54 mm, the PC/104-Plus features 120 pins with a distance of 2.00 mm.

By using connectors with long pins in press-fit technology, several boards can be stacked on top of each other (see



PC/104

Embedded PC Modules



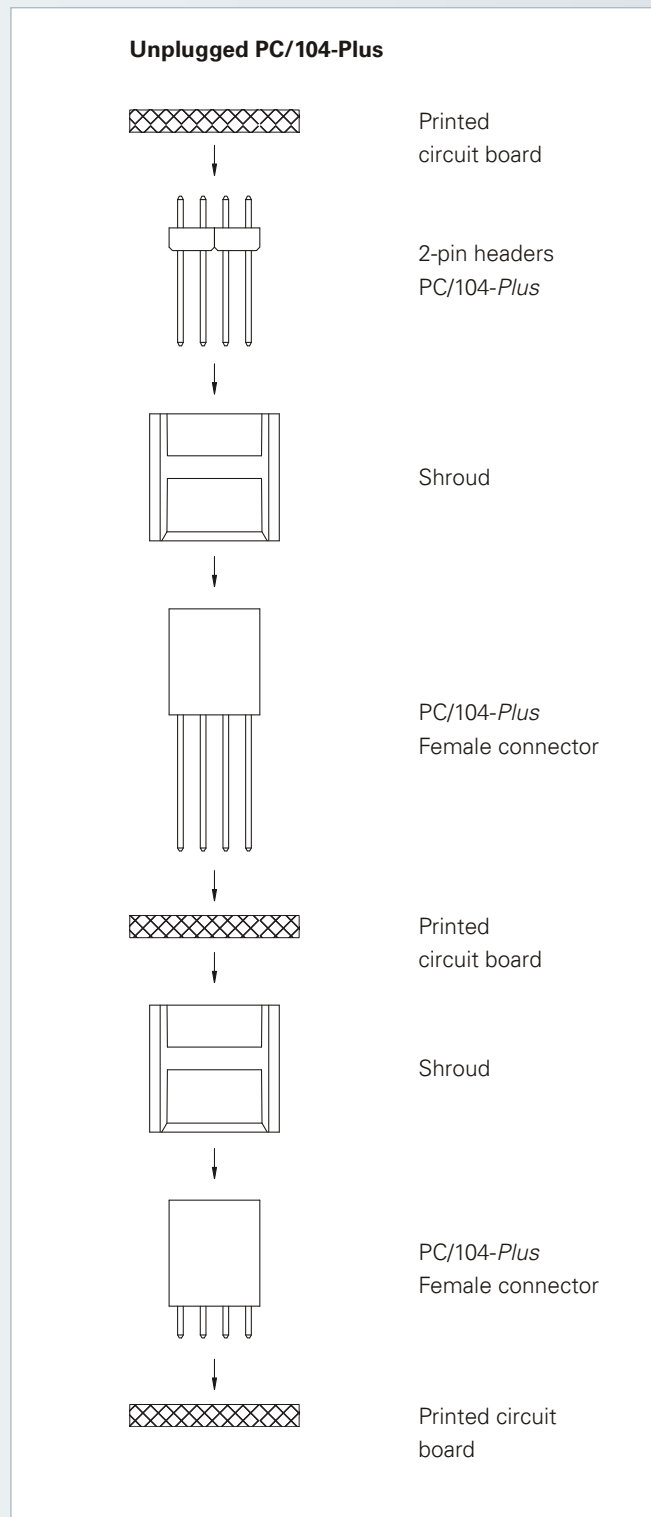
PC/104 and PC/104-Plus press-fit connectors from ept offer various advantages:

- The female connectors are pressed in by means of a simple flat rock press-fit tool
- No additional costs due to complex manual soldering
- No reworking at the rear mating zone (solder bridges, solder splashes)
- Less inspection overhead
- Lower engaging and separating forces; therefore bending of the rear mating zone is prevented
- When female connectors with rear mating zone are pressed in, a guiding block is pushed up from below. This offers the following advantages:
 - No bending of the rear mating zone
 - Serves as spacer so that the clearance of 0.6" is achieved when the modules are plugged in
 - Serves as support tool when pressing in and prevents that the strip lines between the through connections are damaged.

The shroud is reliably fixed on the PCB by additional press in of the shroud housing onto the rear mating zone.

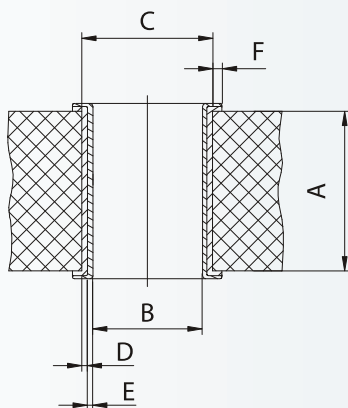
Customer-specific Solutions

Within the scope of PC/104 and PC/104-Plus applications, upon request ept also offers various customer-specific solutions with 2.0 mm and 2.54 mm grid.



Technical Specifications

Technical Specifications	PC/104, PC/104-Plus		
	Testing Standard	PC/104	PC/104-Plus
Basics			
Specification		PC/104	PC/104-Plus
Performance level		2 / 3	
Number of contacts		40 to 120	
Termination		Press-fit, solder	
Operating temperature range		-55°C to +125°C	
Material			
Insulator material		PBT glass filled	
Contact material		Copper alloy	
Contact surface		Au over PdNi or Au over NiP over Ni	
Mechanical			
Pitch		2.54 mm	2.0 mm
Mating force per pin		max. 0.9 N	max. 1.5 N
Separating force per pin		max. 0.6 N	min. 0.3 N
Electrical			
Operational current	IEC 60512-5-2:2002	max. 1.9 A	max. 1.7 A
Operating voltage		150 V	100 V
Contact resistance	IEC 60512-2-1:2002	< 20 mΩ	
Clearance and creepage		1.2 mm	min. 0.5 mm
Insulation resistance	IEC 60512-3-1:2002	> 10 ⁶ M Ω	
Processing			
Packaging		Tray	
Approval			
Flammability		UL (file: E130314)	
Environment		RoHS compliant	



Hole Specifications Press-fit

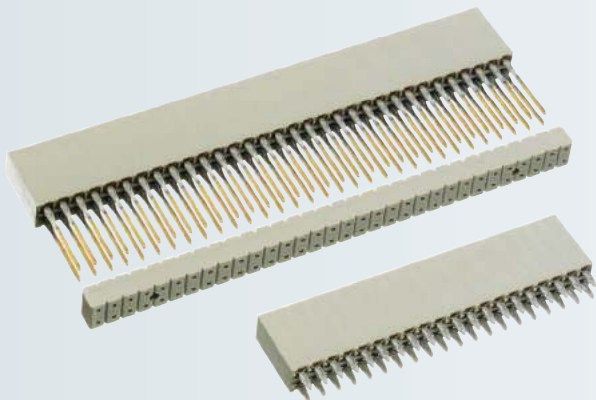
Plated through-hole according to IEC 60352-5

ept offers adapted press-fit zones for various new board surfaces.

		PC/104-Plus	PC/104
Nominal hole		Ø 0.85 mm	Ø 1.0 mm
imm. Sn printed circuit boards			
A	PCB thickness	min. 1.4 mm	min. 1.4 mm
B	Plated hole	Ø 0.85 + 0.10/- 0.05 mm	Ø 1 + 0.09/- 0.06 mm
C	Drill hole	1.0 ± 0.025 mm	1.15 ± 0.025 mm
D	Cu plating	min. 25 µm	min. 25 µm
E	imm. Sn plating	max. 1.5 µm	max. 1.5 µm
F	Annular ring	min. 0.1 mm	min. 0.1 mm
Ni, Au printed circuit boards			
A	PCB thickness	min. 1.4 mm	min. 1.4 mm
B	Plated hole	Ø 0.85 + 0.09/- 0.05 mm	Ø 1 + 0.09/- 0.06 mm
C	Drill hole	1.0 ± 0.025 mm	1.15 ± 0.025 mm
D	Cu plating	min 25 µm	min. 25 µm
E	Ni, Au plating	0.05 – 0.2 µm Au over 2.5 – 5 µm Ni	0.05 – 0.2 µm Au over 2.5 – 5 µm Ni
F	Annular ring	min 0.1 mm	min 0.1 mm
pure Cu printed circuit boards			
A	PCB thickness	min. 1.4 mm	min. 1.4 mm
B	Plated hole	Ø 0.85 + 0.10/- 0.05 mm	Ø 1 + 0.09/- 0.06 mm
C	Drill hole	1.0 ± 0.025 mm	1.15 ± 0.025 mm
D	Cu plating	min. 25 µm	min. 25 µm
E	OSP*	e. g. GLICOAT-SMD (F2) with 0.12 – 0.15 µm	e. g. GLICOAT-SMD (F2) with 0.12 – 0.15 µm
F	Annular ring	min. 0.1 mm	min. 0.1 mm
HAL Sn printed circuit boards			
A	PCB thickness	min. 1.4 mm	min. 1.4 mm
B	Plated hole	Ø 0.85 + 0.10/- 0.05 mm	Ø 1 + 0.09/- 0.06 mm
C	Drill hole	1.0 ± 0.025 mm	1.15 ± 0.025 mm
D	Cu plating	min. 25 µm	min. 25 µm
E	HAL Sn	5 – 15 µm	5 – 15 µm
F	Annular ring	min. 0.1 mm	min. 0.1 mm

* OSP = Organic Solderability Preservatives

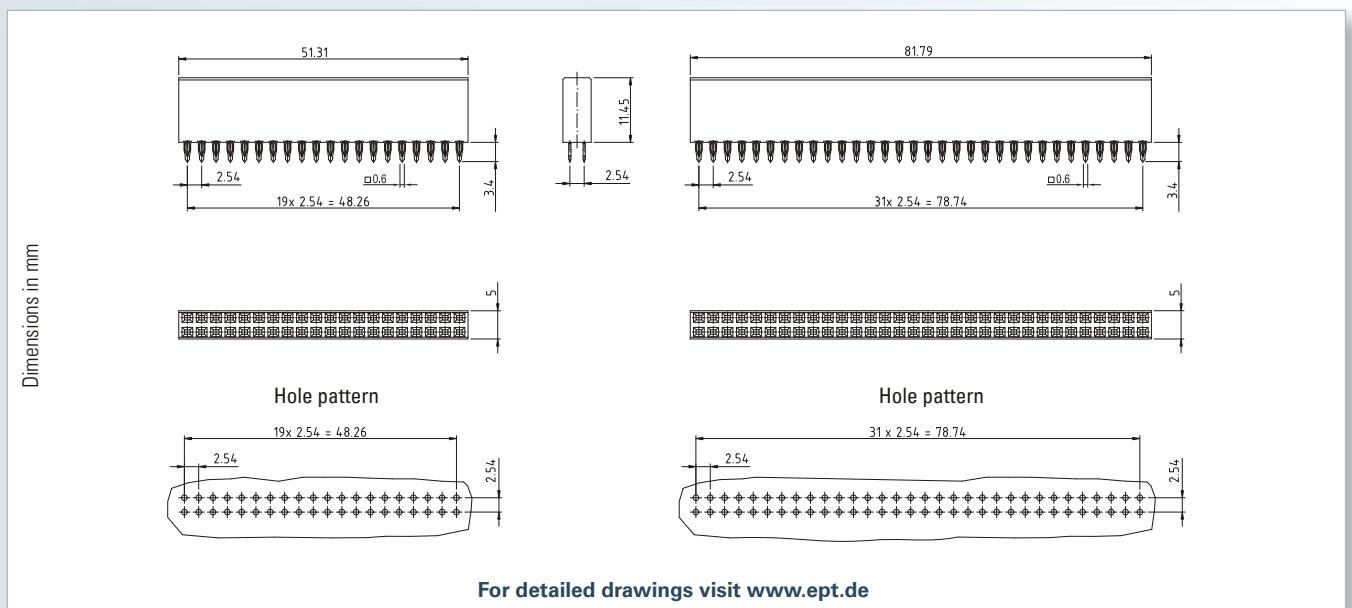
PC/104 Female Connector



Type: Female connector straight
Termination: Press-fit, solder
Number of contacts: 40, 64
Pitch: 2.54 mm
Operational current: 1.9 A
Packaging: Tray
Standard: PC/104



Technical Specifications on page 202



Accessories

- Processing tools p. 340

Note

At a contact length of 12.2 mm a guiding block is scope of delivery.


Mating connector / Application:



VarPol Straight pin header (p. 190)




Press-fit . . .

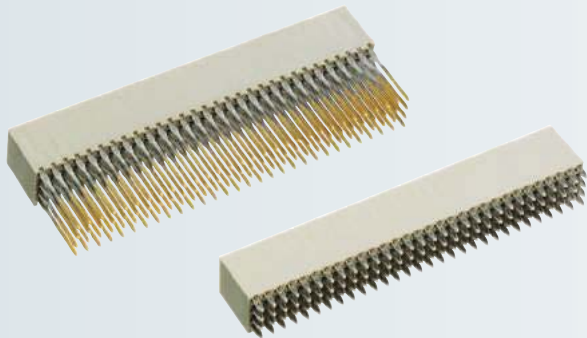
No. of contacts	Performance level	Termination length L 			
		3.4 mm		12.2 mm	
		Part number	PU (Tray)	Part number	PU (Tray)
40	II	962-60206-03	80/1120	962-60206-12	38/532
40	III	962-60202-03		962-60202-12	
64	II	962-60326-03	40/560	962-60326-12	
64	III	962-60322-03		962-60322-12	



Solder . . .

No. of contacts	Performance level	Termination length L 	
		3.4 mm	
		Part number	PU (Tray)
40	II	962-40206-03	80/1120
40	III	962-40202-03	
64	II	962-40326-03	40/560
64	III	962-40322-03	

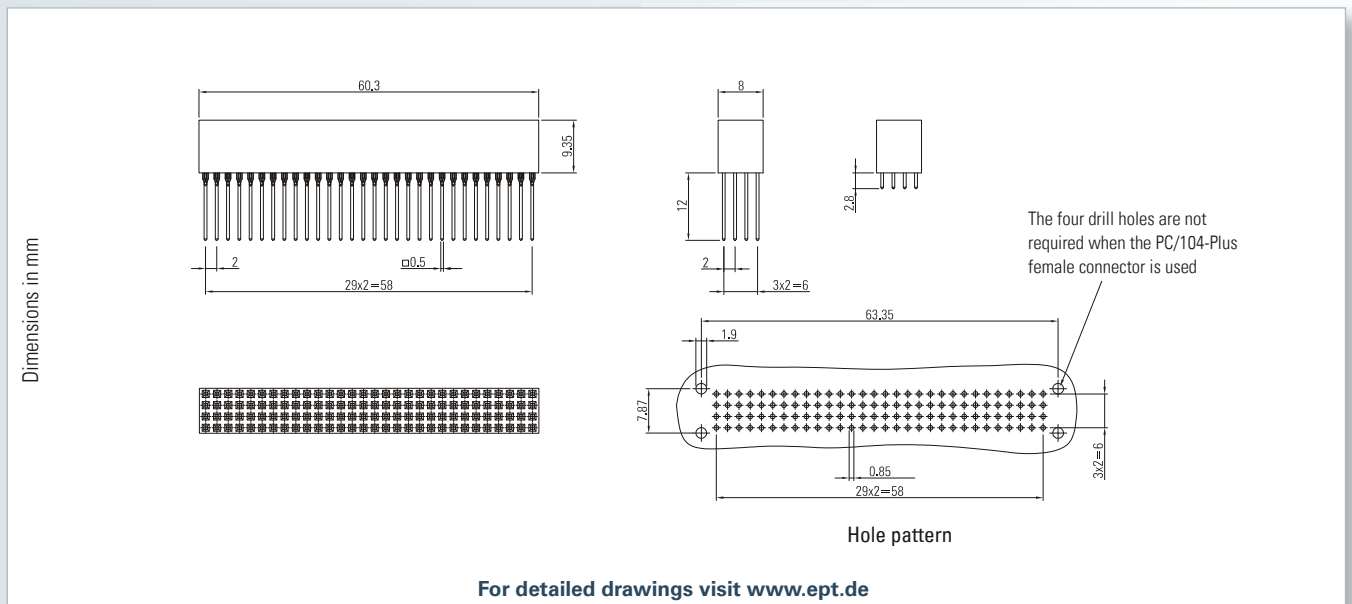
PC/104-Plus Female Connector



Type: Female connector straight
Termination: Press-fit, solder
Number of contacts: 120
Pitch: 2.0 mm
Operational current: 1.7 A
Packaging: Tray
Standard: PC/104-Plus



Technical Specifications on page 202



Press-fit

No. of contacts	Termination length L		PU (Tray)
	2.8 mm	12 mm	
Part number			45/450
120	264-60303-02	264-60303-12	



Solder

No. of contacts	Termination length L	
	2.8 mm	
Part number		PU (Tray)
120	264-40303-02	45/450

On request

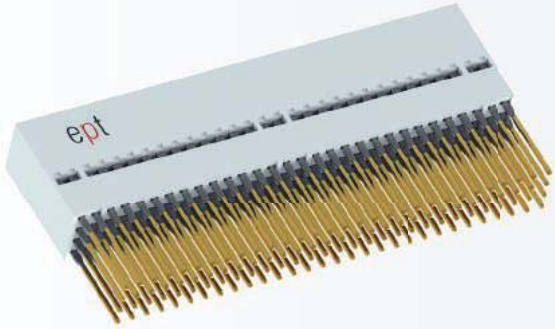
• other no. of contacts

Accessories

- Processing tools p. 340
- Shroud p. 209

Mating connector / Application:

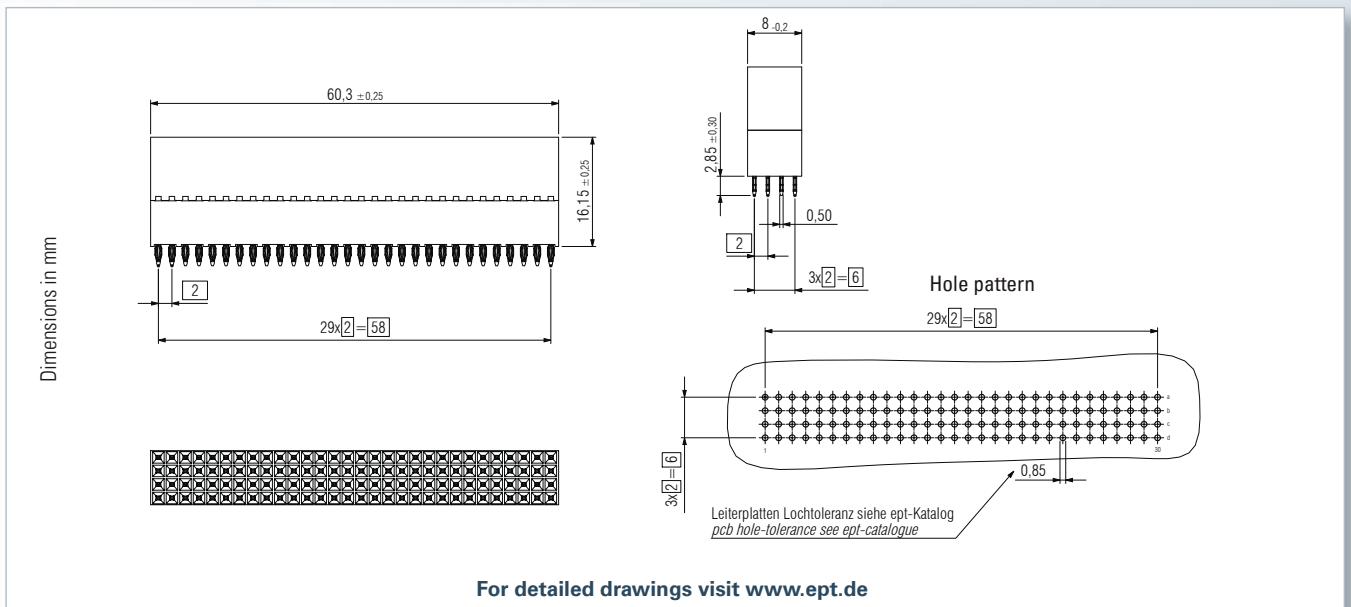
PC/104-Plus Pin header (p. 208)



- Type:** Female connector straight
- Termination:** Press-fit
- Number of contacts:** 120
- Pitch:** 2.0 mm
- Operational current:** 1.7 A
- Packaging:** Tray
- Standard:** PC/104-Plus



Technical Specifications on page 202



Press-fit

No. of contacts	Termination length L		PU (Tray)
Part number			
120	264-61303-02	264-61303-12	45/450

On request

- other no. of contacts

Accessories

- Processing tools p. 340
- Shroud p. 209

Mating connector / Application:



PC/104-Plus Pin header (p. 208)

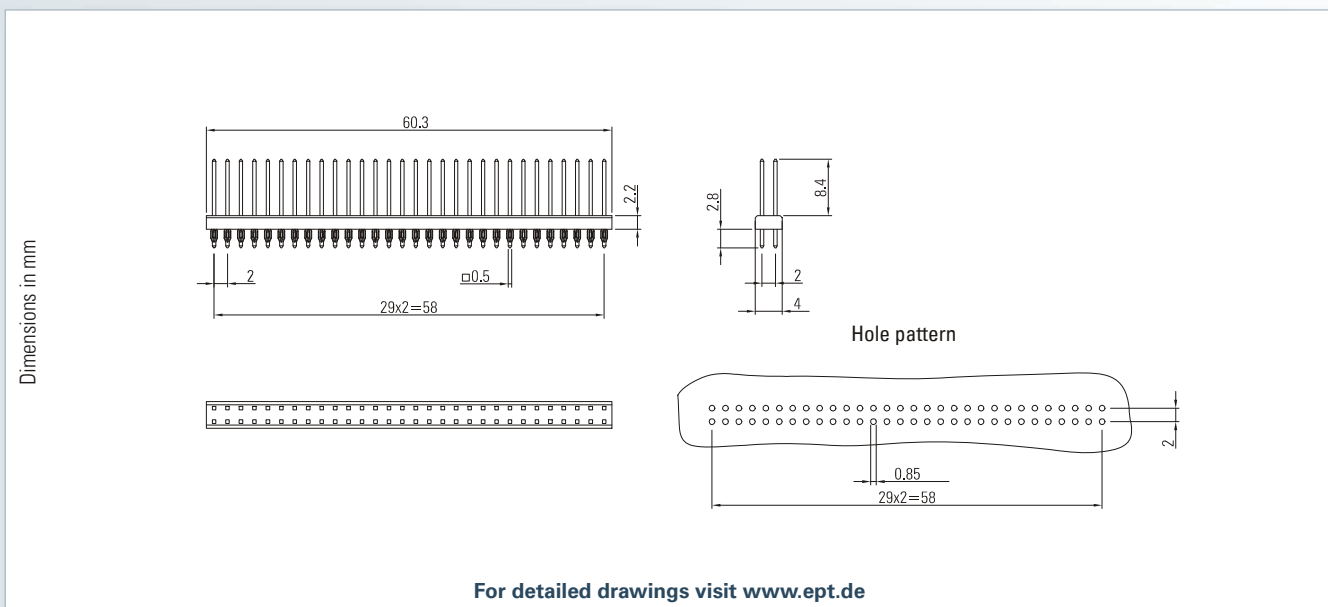
PC/104-Plus Pin Header



Type: Male connector straight
Termination: Press-fit
Number of contacts: 60
Pitch: 2.0 mm
Operational current: 1.7 A
Packaging: Tray
Standard: PC/104-Plus



Technical Specifications on page 202



Press-fit

No. of contacts	Termination length	
	Part number	PU (Tray)
60	272-30000-31	90/900

On request

- other lengths
- other contact numbers

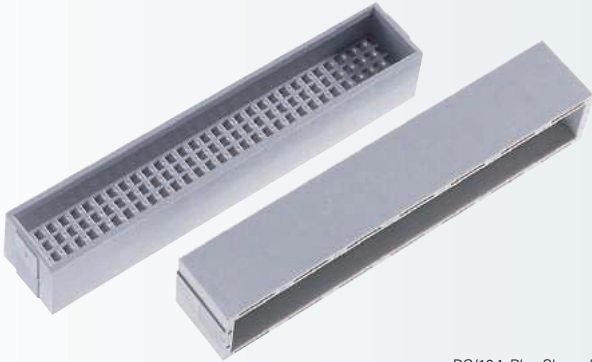
Accessories

- Processing tools p. 342

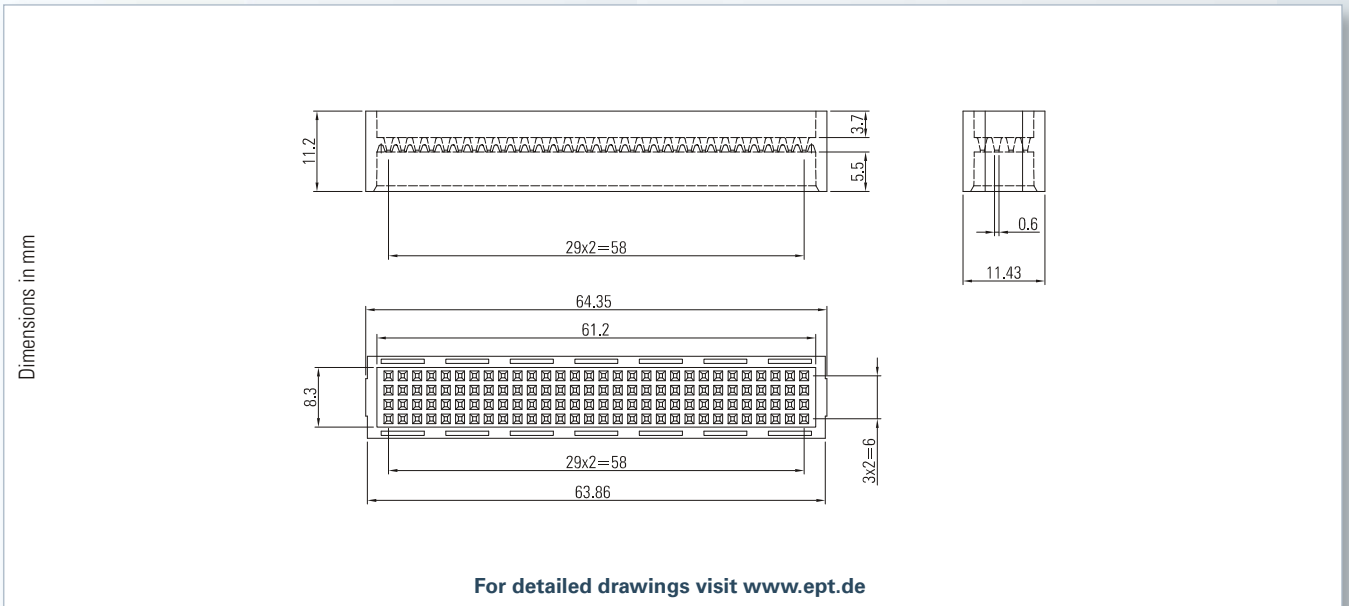
Mating connector / Application:

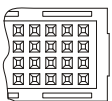
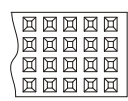


PC/104-Plus Female connector (p. 206)



PC/104-Plus Shroud



	PC/104-Plus		PU (Tray)
	Shroud	Spacer	
No. of contacts			
	Part number		
120	264-17302	264-16302	450

Couldn't find something suitable or having questions? We will be pleased to help you! Call us: +49 8861 / 25010.