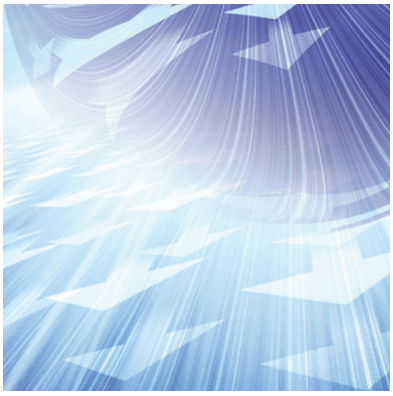
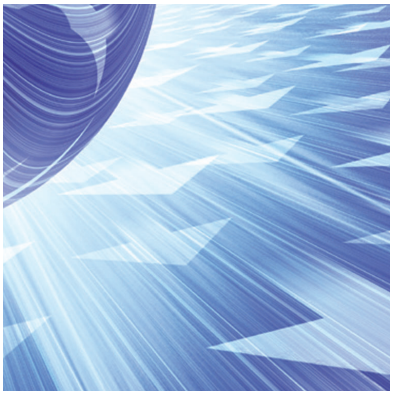
https://www.icrex.co.jp/

CATALOG

Full Custom Pin Headers





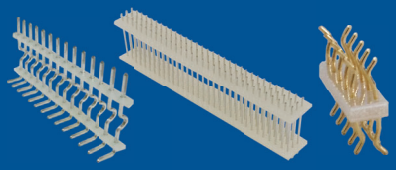
ICREX CO., LTD.

Full Custom Pin Headers

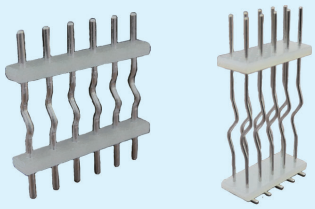
Proposal-Based Products Leading to Solutions for Board Connection Problems

Terminal manufacturing technology
Terminal insertion technology
Product development capability

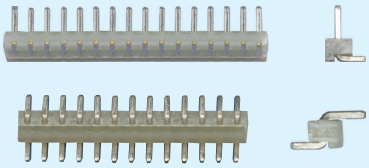
Full Custom Pin Headers



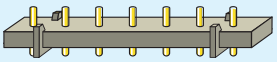
P2 Wave pin headers



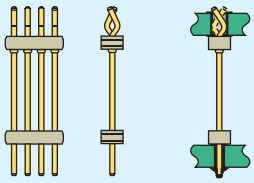
P3 SMT type



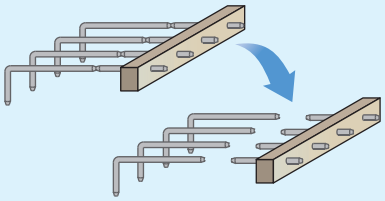
P3 Free standing



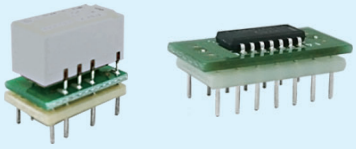
P4 Through hole contact pin headers



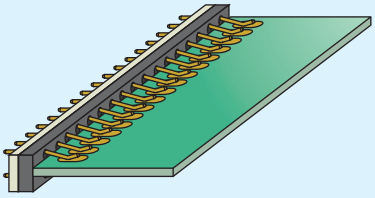
P4 Snap off



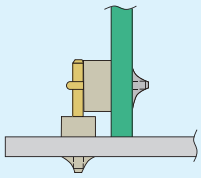
P5 Conversion adapter



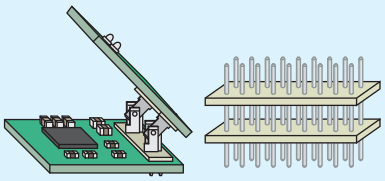
P6 Card edge



P6 Terminal hold contact

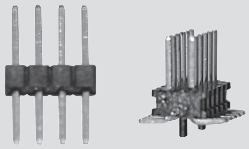


P7~8 Others

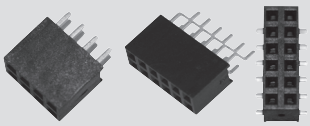


Catalog list

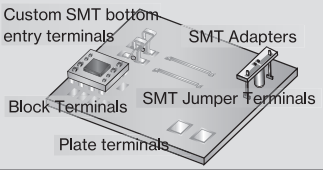
Semi-custom pin headers



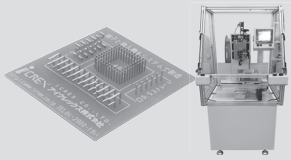
Female Headers



Custom SMT Parts & Components

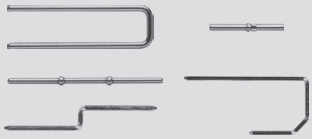


Chain Terminal Insert Systems

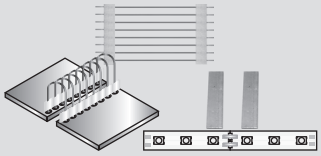


Crimping System

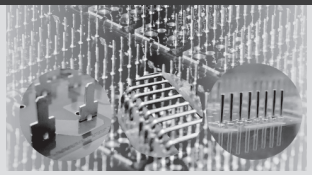
Pin Terminals, Lead-Pin



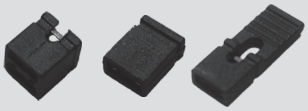
Flexible board connectors



PCB with terminals

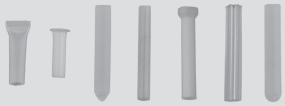


Mini Jumpers

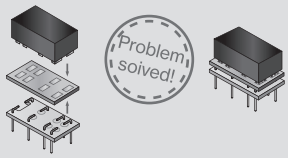


Assembly Services

Tube Caps



Problem resolution case studies

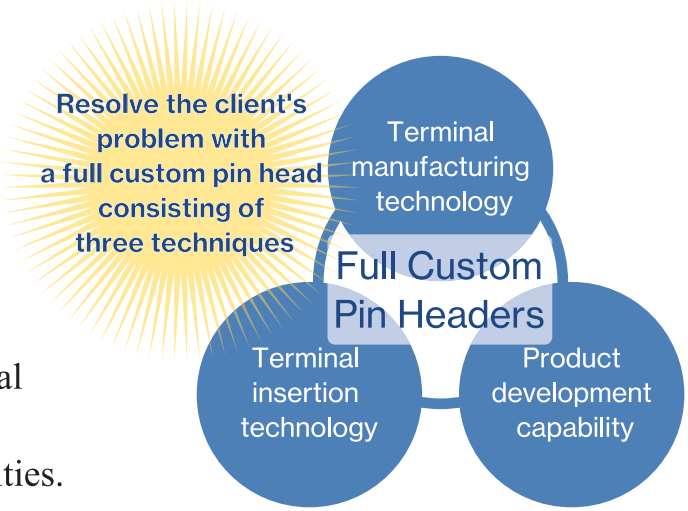


Proposal-Based Products Leading to Solutions for Board Connection Problems

Full Custom Pin Headers

Overview

This product solves the problem of "terminal thickness, length, shape, and pitch" or "it is difficult to use with standard pin headers manufactured by the manufacturer due to the specifications" or "it cannot be found with existing products in the beginning."
We propose to solve the problem with the full custom pin header realized by our terminal manufacturing technology, terminal insertion technology and product development capabilities.

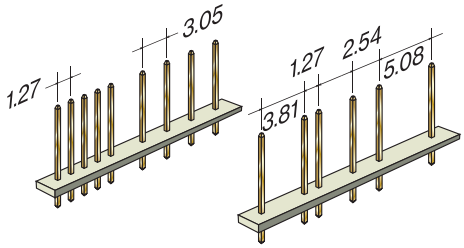


Features

◆ Base part is substrate material

■ Flexible terminal pitch

It can accommodate irregular pitch, thus improving flexibility in board design.

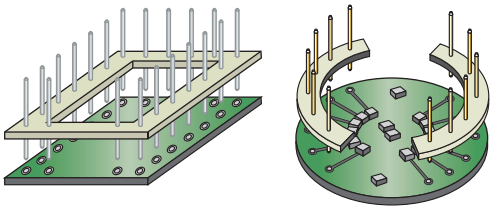


■ Reduction of initial costs

No expensive mold cost is required.

■ Flexible base shape

Space is saved with the base shape that matches the board module and case.



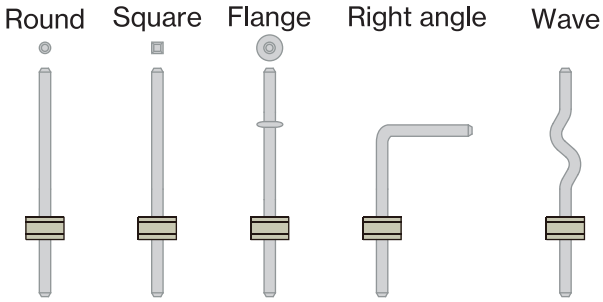
■ Be resistant to heat

Compared to the plastic base, it is more resistant to heat-induced solidity and deformation, and has the same coefficient of thermal expansion as the mating board, making it effective for stress relaxation.

◆ Variety of terminals

■ Various specifications

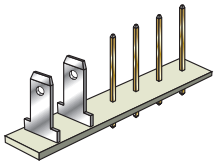
Available in a variety of sizes, lengths, shapes, etc.



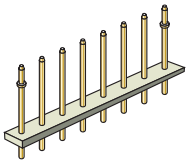
■ Combination of different terminals

Different terminals can be combined depending on the application.

Power supply and I/O



Stand-off and I/O



● All of our products are RoHS compliant.

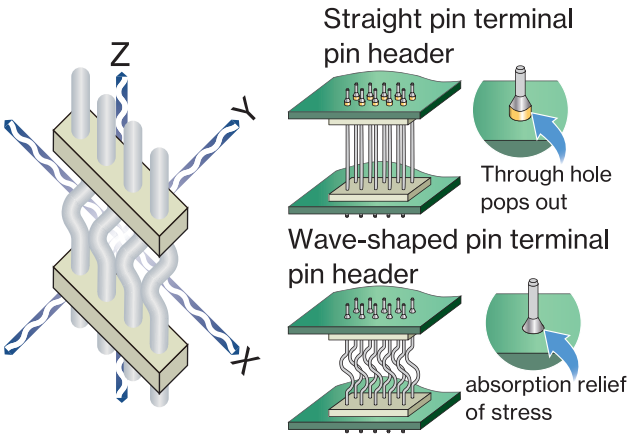
Product examples of full custom pin header

Here is an excerpt of products that have contributed to solving customers' problems.

Wave Pin Headers

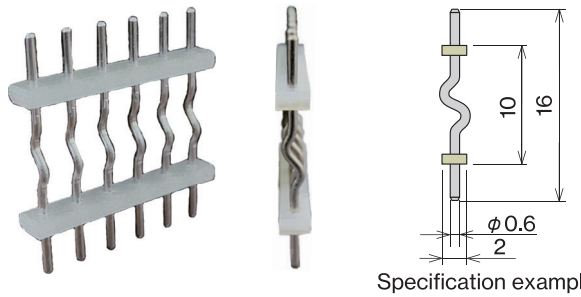
◆ Overview and Features

This pin header absorbs the stress on the solder joint caused by thermal stresses and temperature changes in the connection between boards by absorbing the stress on XYZ by the wave-shaped pin terminal. This function suppresses the omission of through holes in the printed circuit board caused by temperature changes.



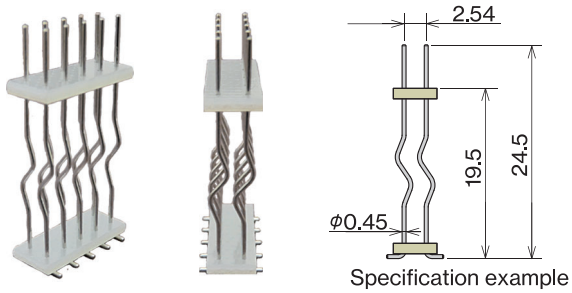
◆ Product examples

● Wave pin type Single line



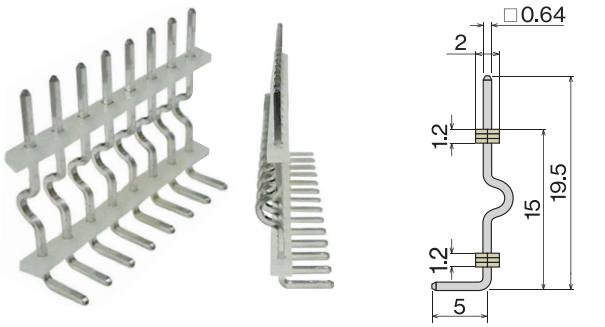
Specification example

● Wave pin type Double line



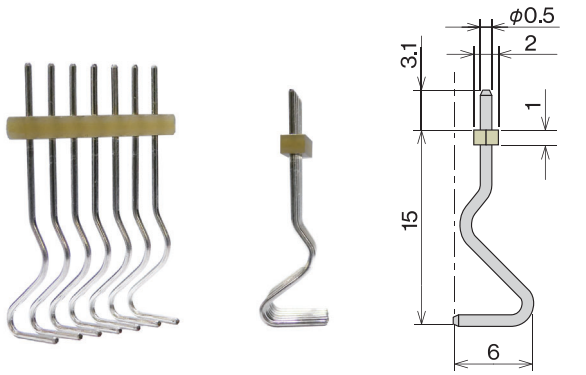
Specification example

● Omega pin type



Specification example

● Wave pin type Self-supporting single line



Specification example

◆ Specifications

● Pin terminals

Size	Square 0.4mm~0.8mm Round 0.45mm~0.8mm
Material	Brass (C2700W), phosphor bronze (C5191W), copper(C1100W)
Surface treatment	Sn, Au

● Base

Material	CEM-3, etc
Thickness	0.8mm~1.6mm
Pitch	1.27mm~

Noto) There is a limit depending on the terminal size.

Product examples of full custom pin header

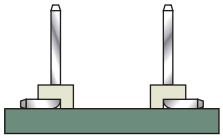
Here is an excerpt of products that have contributed to solving customers' problems.

SMT type

◆ Overview and Features

It can be used as an electrical connectivity component to SMT board modules.

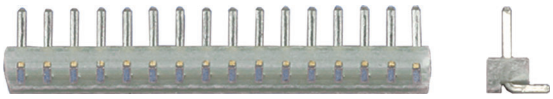
Single-sided SMT



Double-sided SMT

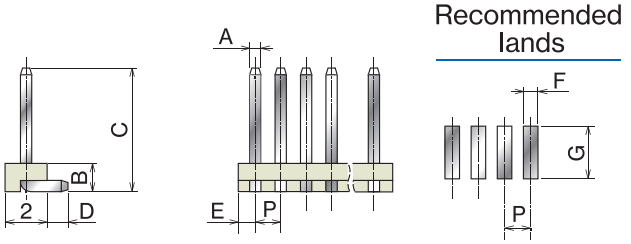
◆ Product examples

Single-sided SMT



Specifications

Base material	Terminal material	Surface treatment
CEM-3, etc	Brass (C2700W)	Sn



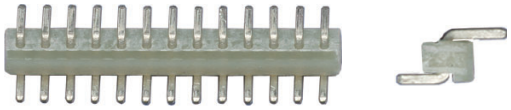
Specifications

Unit mm

A	B	C	D	E	F	G	P
□0.4	1.6	2.5~25	≥ 1.0	≥ 0.8	≥ 0.7	D + 1.5	≥ 1.27
□0.5	1.6	2.5~25	≥ 1.0	≥ 0.8	≥ 0.8	D + 1.5	≥ 1.27

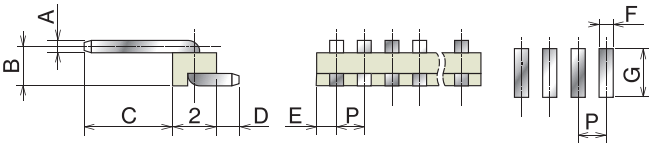
note) C + D ≤ 28

Double-sided SMT



Specifications

Base material	Terminal material	Surface treatment
CEM-3, etc	Brass (C2700W)	Sn



Specifications

Unit mm

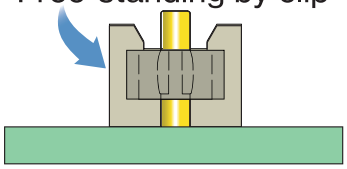
A	B	C	D	E	F	G	P
□0.4	2.0	2~15	1~3	≥ 0.8	≥ 0.7	D + 1.5	≥ 1.27
□0.5	2.1	2~15	1~3	≥ 0.8	≥ 0.8	D + 1.5	≥ 1.27

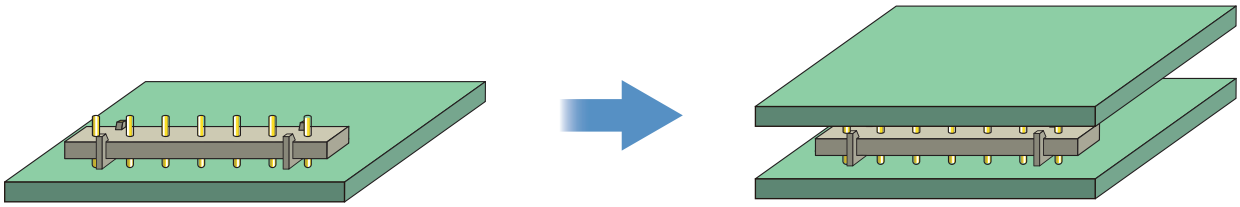
Free standing single line

◆ Overview and Features

Pin header that can stand free-standing even on a single line by snapping a clip into the base section.

Free-standing by clip





● All of our products are RoHS compliant.

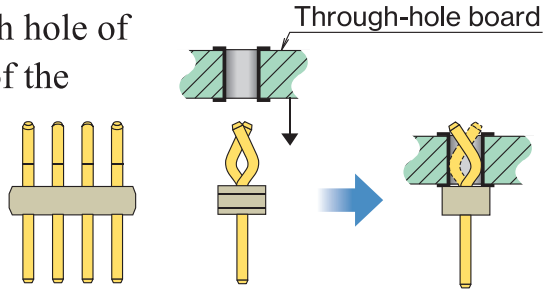
Product examples of full custom pin header

Here is an excerpt of products that have contributed to solving customers' problems.

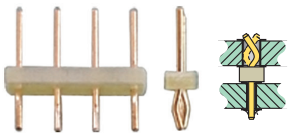
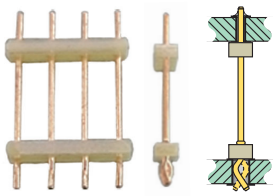
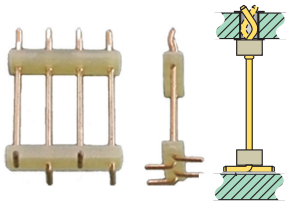
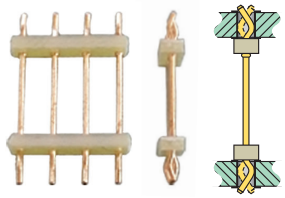
Through hole contact pin headers

◆Overview and Features

Pin header that can be connected to the through hole of the board without soldering. The mating part of the terminal is cranked and alternately oriented to butt together to retain the connection.
It is solderless and easy to replace.



◆Product examples

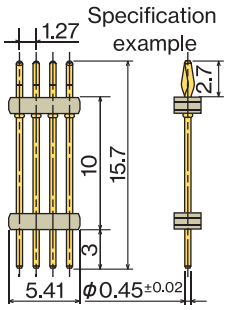
Single side contact			Double side contact
			

◆Specifications/Specification examples

Terminal	Size	ϕ0.45
	Material	phosphor bronze
	Surface treatment	Au
Base	Material	CEM-3, etc
No. of pins		4P~
Pitch		1.27mm, 2.54mm
Applicable through hole	Board thickness	1.2mm~1.6mm
	Au plating	≥0.05μm
	Finish diameter	ϕ0.8mm±0.05

No. of insertions		Max. 50
Insert strength (Noto 1)	Insert	Max. 3N
	Withdraw	≥0.4N
Rated current		1A
Insulation resistance		≥500 MΩ
Withstand voltage	1.27mm pitch	500V AC,DC /1 minute
	2.54mm pitch	1000V AC,DC /1 minute
Contact resistance		≤20mΩ

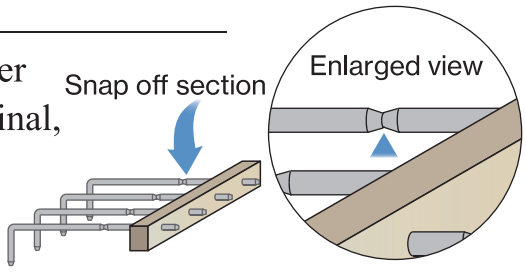
Noto 1) 4P, ϕ0.8 Au plating through hole



Snap off type

◆Overview and Features

Pin header that can be left only for the terminals after soldering. The folded part is unwrapped in the terminal, and the base part can be removed.Space saving and improved work efficiency can be achieved.



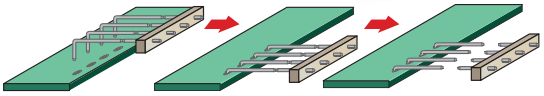
◆Product examples

Horizontal connection between boards

Soldering Snap off

Soldering Snap off

Lead terminal of the board



Soldering Snap off

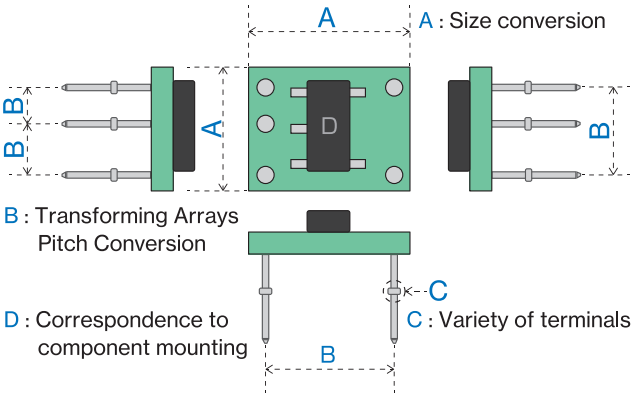
Product examples of full custom pin header

Here is an excerpt of products that have contributed to solving customers' problems.

Conversion adapter

◆ Overview and Features

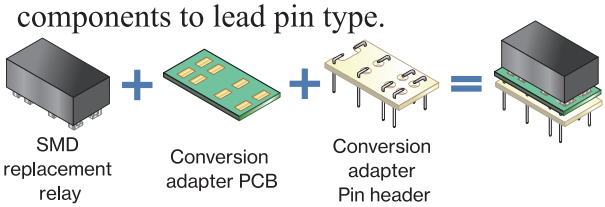
- We offer adapters that use terminals and printed circuit boards to convert pitches, array, SMD, and lead pins in electronic components.
- This is effective when the parts are discontinued and the arrangement or mounting method of the replacement parts has changed.
- Mounting of substitute parts is also available.
- Various pins can be used.



◆ Product examples

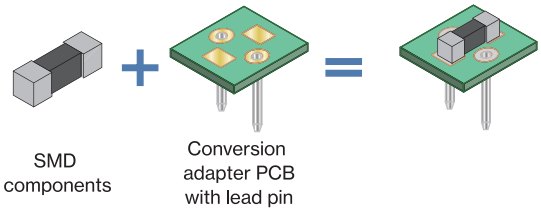
- Case 1

Convert component wiring to match that of existing patterns, and convert SMD components to lead pin type.



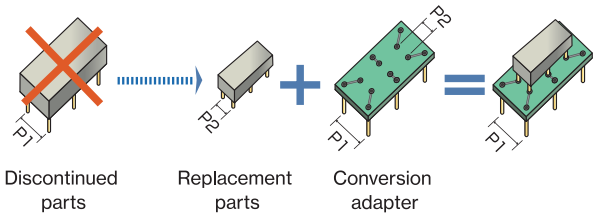
- Case 2

Convert SMD components to lead pin type.



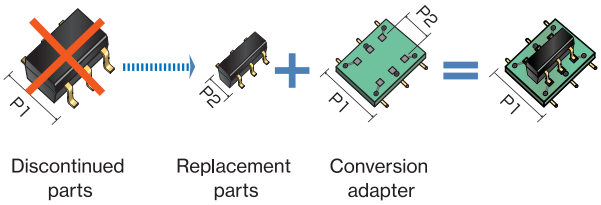
- Case 3 Dealing with discontinued parts

Discontinued parts and replacement parts are lead pin type, but the pitch is different.



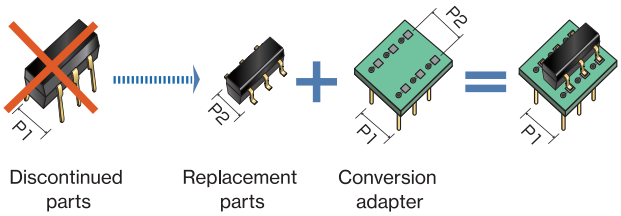
- Case 4 Dealing with discontinued parts

Discontinued parts and replacement parts are SMT type, but the pitch is different.



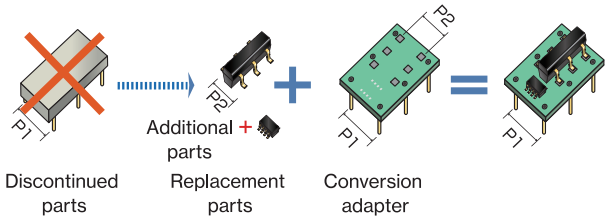
- Case 5 Dealing with discontinued parts

Converting from lead type parts to SMT type replacement parts



- Case 6 Dealing with discontinued parts

Additional parts are required after using replacement parts



- All of our products are RoHS compliant.

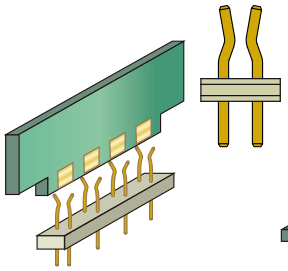
Product examples of full custom pin header

Here is an excerpt of products that have contributed to solving customers' problems.

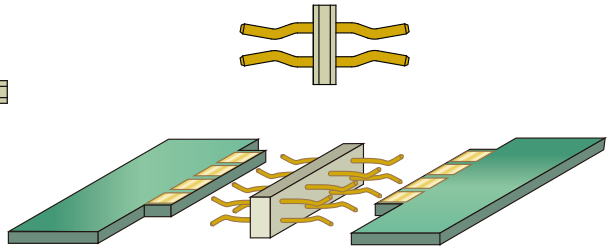
Pin Header for Card Edge (Edge Socket)

◆ Product examples

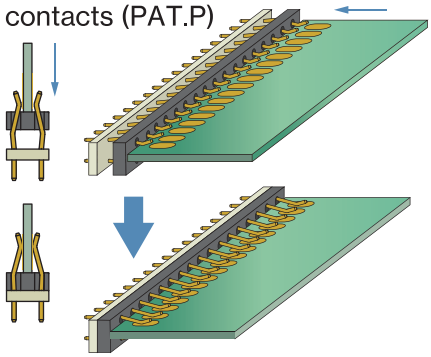
Vertical continuation



Horizontal connection



Slider method that does not damage the contacts (PAT.P)

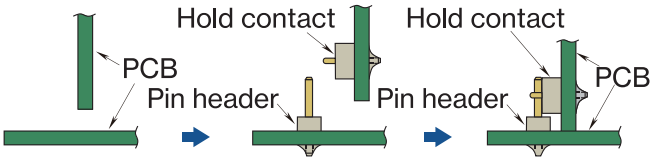


Through hole contact

◆ Overview and Features

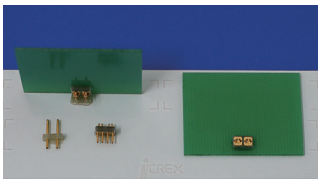
This is a hold-type pin header that enables horizontal and vertical connections between printed circuit boards.
You can simply connect boards together by combining the male pin header with the female hold contact.

◆ Product examples

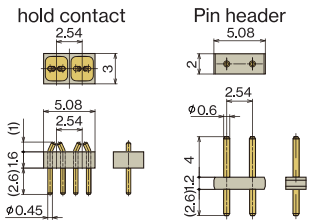


● For through-hole boards

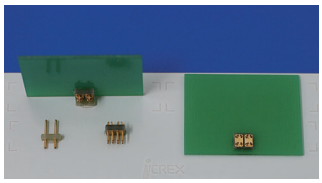
• Single contact



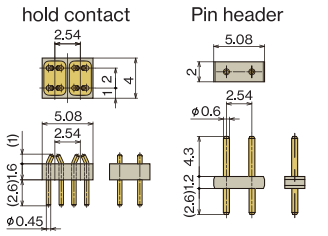
Specification example



• Double contact

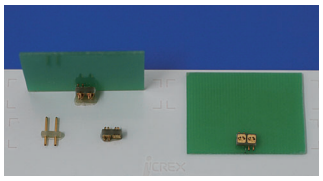


Specification example

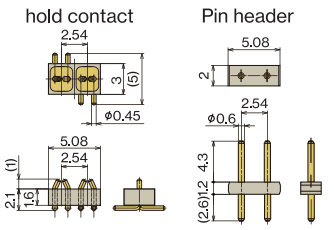


● For SMT boards

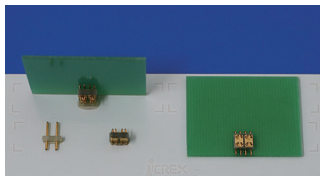
• Single contact



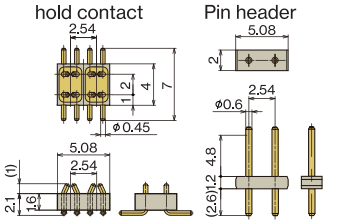
Specification example



• Double contact



Specification example



Specification

Both contact side and pin header side

Material	Pin terminals	phosphor bronze
	Base	CEM-3, etc
Surface treatment		Au

Minimum pitch : 2.54mm

● Please enquire for details of other specifications.

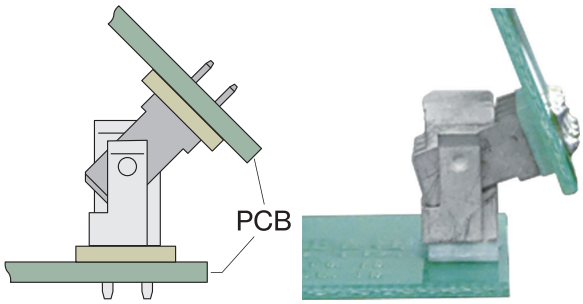
Performance

	With land		No land	
	Single contact	Double contact	Single contact	Double contact
Contact resistance	≤20mΩ	≤10mΩ	≤30mΩ	≤15mΩ
Permissible current	3A	3A	3A	3A
Insert	≤3N	≤5N	≤3N	≤5N
Withdraw	≥0.5N	≥0.7N	≥0.5N	≥0.7N
Repeated mating/ un-mating	MAX. 50	MAX. 50	MAX. 50	MAX. 50

Repeated mating/ un-mating assumes no twisting or similar force.

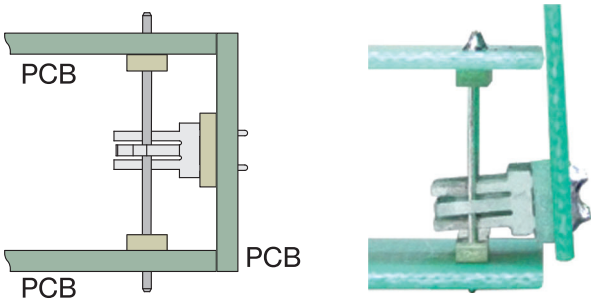
Other examples of full custom pin header products

Angle-free



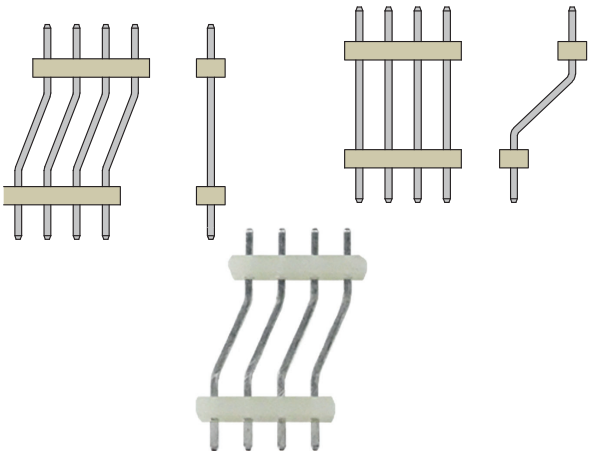
Pin header with adjustable angle after connection.

Side connection



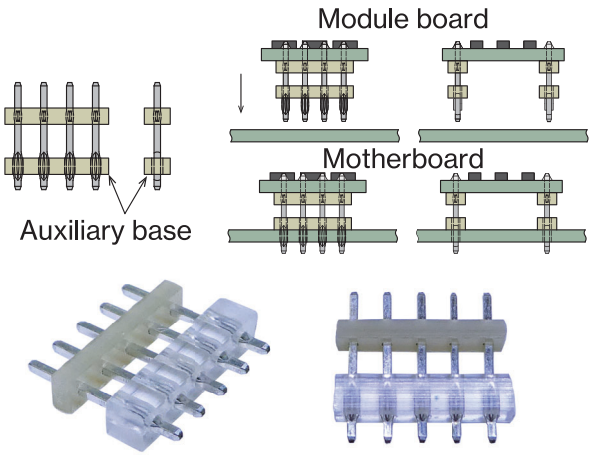
Horizontal connection is possible.

Offset



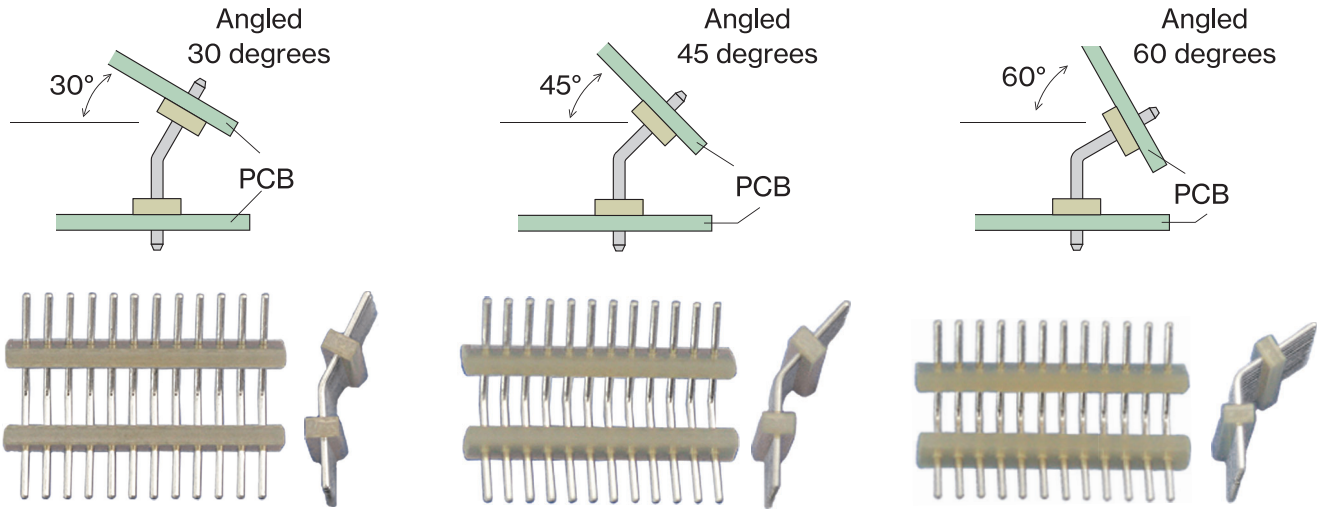
This pin header is used when the through-hole positions are different for the upper and lower substrates.

Press fit with auxiliary base



This is a press-fit pin header that adds an auxiliary base to reduce the stress that occurs in the through-hole of the mating board during installation.

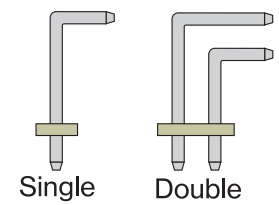
Angled

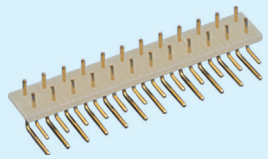


● All of our products are RoHS compliant.

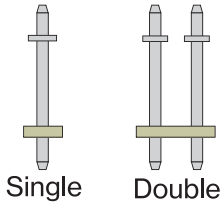
Other examples of full custom pin header products

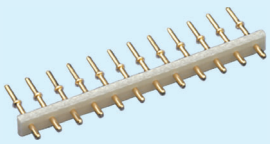
Right angled



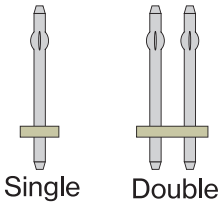


Stacking flange

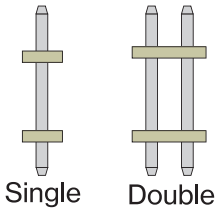


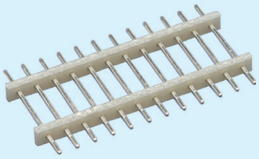


Stacking star

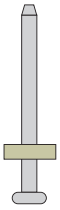


Stacking base

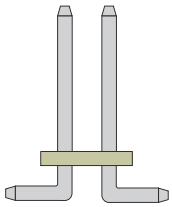


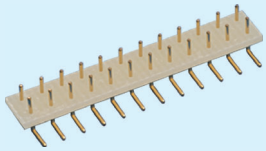


Nail pin

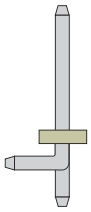


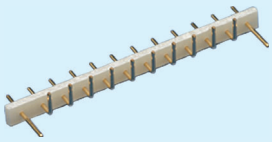
Double row



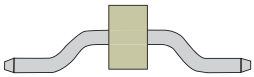


With positioning pin

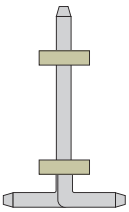


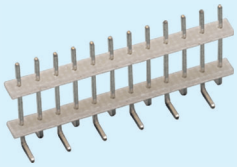


Wave

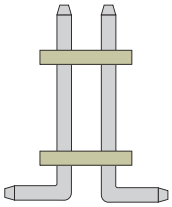


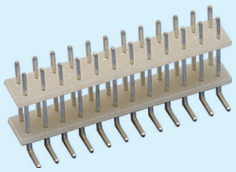
Stacking single



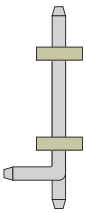


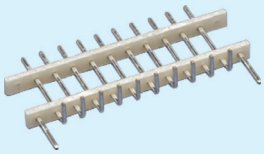
Stacking double



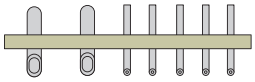


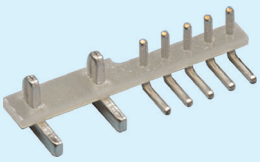
Stacking with positioning pin



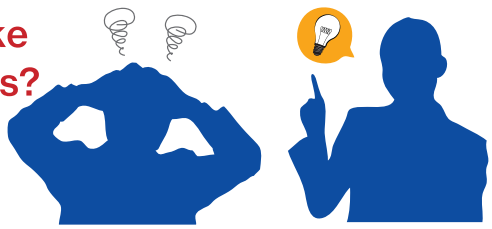


Combining terminals





Is it possible to make a pin header like this?



Please feel free to draw and write your sketches, designs and problems and send themto us.

We have the answer

Flow of realization of our products

Hearing	We accept requests and consultations. We will also ask about installation spaces, processes, and restrictions on usage environments.
Design	We propose a design that satisfies your requirements. (usually 1 to 2 weeks)
Estimate	Check the drawing and submit an estimate if there is no problem.
Production of the prototype	We will produce a prototype. (usually about three weeks to two months)
Verification	We will deliver a prototype. Evaluation is verified by the customer.
Product production	We accept production of products

● All of our products are RoHS compliant.

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