

STANDARD FLEXIBLE PRINTED CIRCUIT (FPC) CONNECTORS - 0.25MM, 0.3MM, 0.5MM, 1.0MM & 1.25MM PITCH

Quick Reference Guide

As the demands for higher-density packaging of electronic equipment increase, the use of flexible printed circuits (FPC) to reduce size, weight and assembly costs has expanded.

As with our fine pitch FPC product, our larger pitch FPC connectors are also an ideal solution for routing signal through your device when standard wire-to-board products are too large or impractical. Set on larger centerline pitch, these FPC products are generally found in larger mobile devices such as hand-held scanners, cameras and GPS units; as well as in larger applications such as set-top boxes, business equipment and industrial controls.

FPC interconnects of this size are also commonly found on devices that have low-definition displays, touch panels or screens. This makes it very easy to identify potential FPC interconnect opportunities.

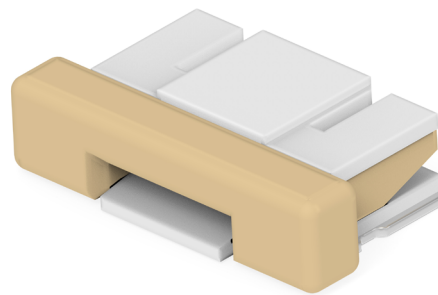
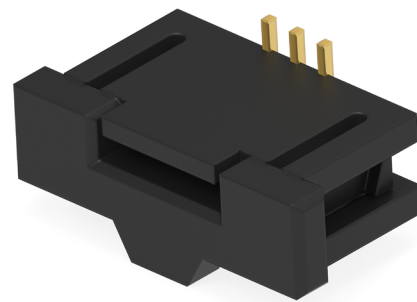
TE Connectivity's FPC solutions are available in 0.25mm, 0.3mm, 0.5mm, 1.0mm and 1.25mm centerline spacing.

FEATURES AND BENEFITS

- Multiple Centerline Spacing Options
- ZIF and non-ZIF Versions Available
- Top and Bottom Contact Options
- Requires No Application Tooling

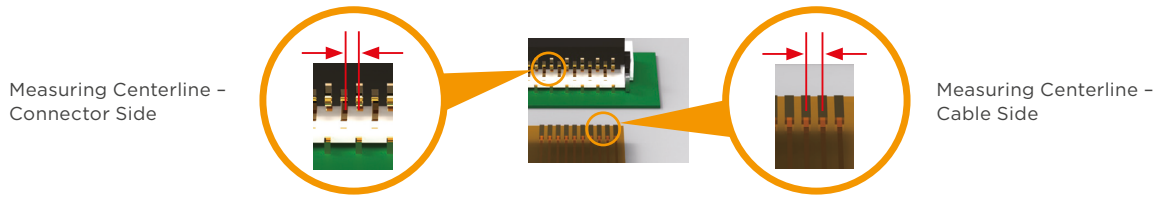
PRODUCT APPLICATIONS

- Consumer Electronics
 - Hand-Held Scanners
 - POS Devices / Payment
- Terminals
 - Set-Top Boxes
 - PCs
 - PC Peripherals
- Business Equipment
- Industrial Equipment
 - Industrial Controls
 - Gas Pumps
 - ATMs
 - Slot Machines
- Medical Equipment



BASIC INFORMATION

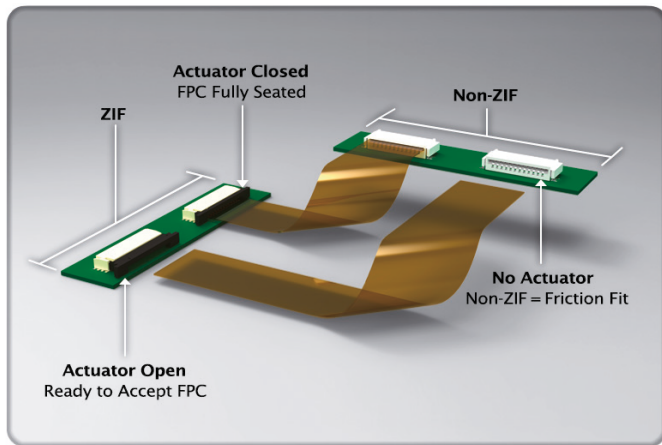
Multiple Centerlines



Centerline can be measured many different ways; however, in general, it is simply the spacing between the center of one contact and the center of its neighboring contact.

Here you can see an example of the centerline spacing on an FPC connector and the centerline spacing on a flexible printed circuit cable.

ZIF AND NON-ZIF



ZIF Connectors

- Use an actuator to secure the flex cable
- Less wear on contacts
- Increase mating cycle count
- Provide added retention
- Better for high vibration environments

Non-ZIF Connectors

- Use friction to secure the flex cable
- Lower mating cycle count
- Better for static applications
- Smaller and lighter weight than equivalent ZIF counterpart
- Take up less board real-estate
- Typically less expensive than equivalent ZIF counterpart

0.5MM PITCH (ZIF)

| ORIENTATION | CONTACT TYPE | PCB MOUNT | ACTUATOR STYLE | PLATING | FEATURES | IMAGE | BASE PN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | |
|-------------|--------------|-----------|----------------|--------------|---------------------|-------|-------------------------|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| | | | | | | | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | | |
| | | | | | | | | POSITION SIZE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIGHT ANGLE | TOP | SMT | STUFFER | "GOLD FLASH" | "NARROW BODY" | | 1734839 | | | | | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | | 23 | 24 | 25 | | 27 | | 29 | 30 | | |
| | | | | | | | | 31 | | | | | 36 | 37 | | | 40 | 41 | | | 43 | 44 | | 46 | 47 | 48 | 49 | 50 | | | | | | | | | | | |
| VERTICAL | N/A | SMT | STUFFER | GOLD FLASH | TYPE A LAYOUT* | | 1734741 | | | | | | | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | | |
| | | | | | | | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | | | | | | | | | | | | | | | | | | | | | | |
| VERTICAL | N/A | SMT | STUFFER | GOLD FLASH | TYPE B LAYOUT* | | 1734742 | | | | | | | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| | | | | | | | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | | | | | | | | | | | | | | | | | | | | | | |
| RIGHT ANGLE | BOTTOM | SMT | STUFFER | GOLD FLASH | N/A | | 1734592 | | | | | 5 | 6 | 7 | 8 | | 10 | 11 | 12 | 13 | 14 | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | 30 | | | |
| | | | | | | | | 31 | | 34 | | 36 | | 38 | 39 | 40 | 41 | | 43 | | | | 47 | | 49 | 50 | | | | | | | | | | | | | |
| RIGHT ANGLE | DUAL CONTACT | SMT | BACK FLIP-LOCK | GOLD FLASH | LOW PROFILE 2328702 | | 2328702 | | | | 4 | | 6 | | 8 | | 10 | | | | | | 16 | | | | | | | | | | | | | | | | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



1.0MM PITCH (ZIF)

| ORIENTATION | CONTACT TYPE | PCB MOUNT | ACTUATOR STYLE | PLATING | FEATURES | IMAGE | BASE PN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | |
|-------------|--------------|-----------|----------------|------------|----------|-------|-------------------------|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| | | | | | | | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | | |
| | | | | | | | | POSITION SIZE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERTICAL | N/A | SMT | STUFFER | GOLD FLASH | N/A | | 1734248 | | | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIGHT ANGLE | TOP | SMT | STUFFER | TIN | N/A | | 84953 | | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIGHT ANGLE | BOTTOM | SMT | STUFFER | TIN | N/A | | 84952 | | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIGHT ANGLE | BOTTOM | SMT | STUFFER | GOLD FLASH | N/A | | 1735265 | | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

1.0MM PITCH (NON ZIF)

| ORIENTATION | CONTACT TYPE | PCB MOUNT | ACTUATOR STYLE | PLATING | FEATURES | IMAGE | BASE PN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | |
|-------------|--------------|-----------|----------------|---------|------------|-------|-------------------------|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|
| | | | | | | | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | | |
| | | | | | | | | POSITION SIZE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERTICAL | N/A | SMT | N/A | TIN | N/A | | 84982 | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERTICAL | N/A | SMT | N/A | TIN | WITH MYLAR | | 1735042 | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERTICAL | N/A | T/H | N/A | TIN | N/A | | 84984 | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIGHT ANGLE | TOP | SMT | N/A | TIN | N/A | | 84981 | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIGHT ANGLE | TOP | T/H | N/A | TIN | N/A | | 84983 | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIGHT ANGLE | BOTTOM | SMT | N/A | TIN | N/A | | 1735360 | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | |
| | | | | | | | | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

1.25MM PITCH (NON-ZIF)

| ORIENTATION | CONTACT TYPE | PCB MOUNT | ACTUATOR STYLE | PLATING | FEATURES | IMAGE | BASE PN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
|-------------|--------------|-----------|----------------|---------|----------|---|---------|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| | | | | | | | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | |
| | | | | | | | | POSITION SIZE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VERTICAL | N/A | T/H | N/A | TIN | N/A |  | 84534 | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| | | | | | | | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | | | | | | | | | | | | | | | | | | | | | |
| RIGHT ANGLE | TOP | T/H | N/A | TIN | N/A |  | 84533 | | | | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | |
| | | | | | | | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | | | | | | | | | | | | | | | | | | | | | |

FREQUENTLY ASKED QUESTIONS

Question 1

Is there a pitch requirement for your interconnect need?

Answer 1

TE offers FPC products from 0.25mm to 1.25mm centerline spacing.

Question 2

Is your application in a high vibration environment?

Answer 2

ZIF version FPC interconnects have a greater retention force and are suitable for high vibration applications.

Question 3

Do you have a need for a higher number of mating cycles?

Answer 3

ZIF version FPC interconnects allow for a greater number of mating cycles via the use of an actuator.

Question 4

In your application, when the flex cable meets the board-mounted connectors, will the flex cable contact pads be face up or face down?

Answer 4

If face down, use bottom contact versions. If face up, use top contact versions.

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