



## Quick Reference Guide USB Interconnects

TE Connectivity (TE) is a standing member of the USB-IF (USB Implementers Forum) and offers a wide range of products to meet your interconnect needs. Our products accommodate the two differentially driven data wires that provide bi-directional, simultaneous signals for USB 2.0 (480 mbps) and USB 1 (1.5 & 12 mbps). TE has a wide variety of USB offerings including: standard (A & B), mini B, and micro A/B and B sizes. We also offer locking versions of its standard USB as well as latching versions of its standard and micro USB.

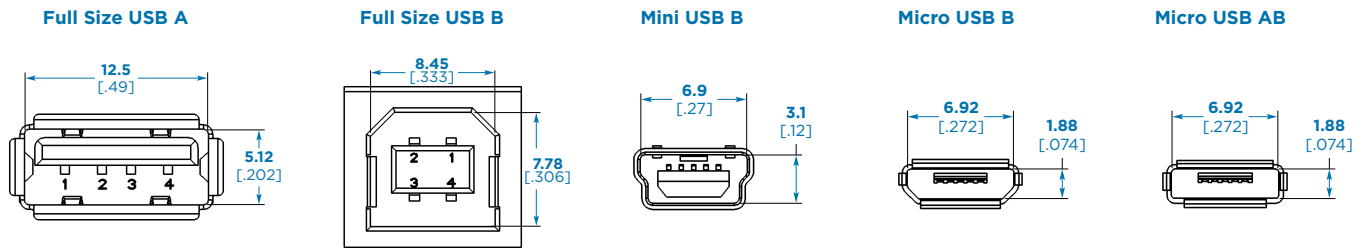
### FEATURES AND BENEFITS

- Complete family of board mount receptacles, including various orientations and PCB mounting styles
- Cable mount overmold plug kits for all USB sizes and types
- Consolidates serial parallel, keyboards, mice and game ports
- Compatible with asynchronous and isochronous data transfer methods
- Polarized for proper orientation
- Plug and Play capability
- Hot pluggable, permitting attaching or detaching peripherals without power down or reboot
- Allows for charging

### PRODUCT APPLICATIONS

- Desktop and laptop computers
- Keyboards/mice/joysticks
- Printers/scanners
- Game ports
- Digital audio
- Modems
- Portable storage devices.
- Cell phones
- GPS devices
- MP3 players

Product Sizes



FULL SIZE USB : Series A Receptacles

| Part Number | Orientation | Board Mount   | Housing Color | USB 2.0 Compliance | No. of Ports      | Description   |
|-------------|-------------|---------------|---------------|--------------------|-------------------|---|
| 292303-1    | Right Angle | Through Hole  | Black         |                    | 1                 | Solder tail length 2.84 mm/Kinked legs                                |
| 292303-2    | Right Angle | Through Hole  | Black         |                    | 1                 | Solder tail length 2.29 mm/Kinked legs                                |
| 292303-4    | Right Angle | Through Hole  | Black         |                    | 1                 | Solder tail length 2.84 mm/Kinked legs/ High temperature compatible   |
| 292303-5    | Right Angle | Through Hole  | White         |                    | 1                 | Solder tail length 2.84 mm/Kinked legs                                |
| 292303-6    | Right Angle | Through Hole  | Black         |                    | 1                 | Solder tail length 2.29 mm/Kinked legs/ High temperature compatible   |
| 1-1734081-3 | Right Angle | Through Hole  | Black         |                    | 1                 | Solder tail length 2.80 mm/Straight legs                              |
| 1734081-1   | Right Angle | Through Hole  | Black         |                    | 1                 | Solder tail length 2.80 mm/Kinked legs                                |
| 4-1734081-2 | Right Angle | Through Hole  | Grey          |                    | 1                 |   |
| 5353929-1   | Right Angle | Surface Mount | White         | 60000276           | 1                 |   |
| 292303-7    | Right Angle | Surface Mount | White         |                    | 1                 | T/H solder legs   |
| 292303-9    | Right Angle | Surface Mount | White         |                    | 1                 | High temperature surface mount hold down tab                          |
| 1734366-1   | Vertical    | Through Hole  | Black         | 60000042           | 1                 |   |
| 292336-1    | Flag        | Through Hole  | Black         | 60000047           | 1                 |   |
| 5787617-1   | Right Angle | Through Hole  | Black         | 60000044           | 2                 | Solder tail length 2.84 mm/Kinked legs                                |
| 5787617-4   | Right Angle | Through Hole  | Black         |                    | 2                 | Solder tail length 2.84 mm/Kinked legs                                |
| 5787745-1   | Right Angle | Through Hole  | Black         | 60000046           | 2                 | Solder tail length 2.84 mm/Kinked legs/ With panel ground             |
| 5787745-2   | Right Angle | Through Hole  | Black         |                    | 2                 | Solder tail length 2.29 mm/Kinked legs/ With panel ground             |
| 5787745-4   | Right Angle | Through Hole  | Black         |                    | 2                 | Solder tail length 2.84 mm/Kinked legs/ With panel ground             |
| 1674451-3   | Flag        | Through Hole  | White         | 60000713           | 3                 |   |
| 2-1734309-5 | Right Angle | Through Hole  | Black         |                    | 3                 | Solder tail length 2.84 mm/Straight and kinked legs/With panel ground |
| 6116151     | Right Angle | Through Hole  | Black         |                    | 2(USB)<br>1(RJ45) | -1 No LEDs, -2 With LEDs  |
| 1840029     | Right Angle | Through Hole  | Black         |                    | 2(USB)<br>1(RJ45) | -1 Yellow LEDs, -2 Green LEDs Both with integrated magnetics          |
| 1840024-1   | Right Angle | Through Hole  | Black         |                    | 1(USB)<br>1(RJ45) | With integrated magnetics   |
| 1840035-1   | Right Angle | Through Hole  | Black         |                    | 1(USB)<br>1(RJ45) | Without integrated magnetics  |

FULL SIZE USB : Series A Plug Kit

| Part Number | Orientation | Board Mount   | Housing Color | USB 2.0 Compliance | No. of Ports | Description |
|-------------|-------------|---------------|---------------|--------------------|--------------|-------------|
| 1734080-1   | Right Angle | Surface Mount | Black         |                    | 1            |             |
| 1734080-2   | Right Angle | Surface Mount | White         |                    | 1            |             |
| 1734372-1   | Vertical    | Solder Tabs   | Black         |                    | 1            |             |



**FULL SIZE USB : Locking**

| Part Number | Orientation | Board Mount  | Gender     | Housing Color | USB 2.0 Compliance | No. of Ports | Description |
|-------------|-------------|--------------|------------|---------------|--------------------|--------------|-------------|
| 1775690-2   | Vertical    | Through Hole | Receptacle | Black         |                    | 1            |             |
| 2041039-1   | Right Angle | Through Hole | Receptacle | Black         |                    | 1            |             |



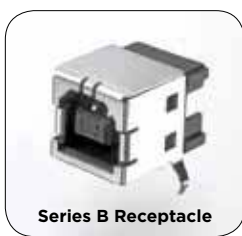
**FULL SIZE USB : Latching**

| Part Number | Orientation | Board Mount | Gender    | Housing Color | USB 2.0 Compliance | No. of Ports | Description        |
|-------------|-------------|-------------|-----------|---------------|--------------------|--------------|--------------------|
| 2040305-1   | Vertical    | Solder Tabs | Plug Kit  | Black         |                    | 1            | Integrated Latches |
| 2013798-1   | Vertical    | Solder Tabs | Plug Kits | Black         |                    | 1            | Mass Production    |



**FULL SIZE USB : Series B Receptacles**

| Part Number | Orientation | Board Mount   | Housing Color | USB 2.0 Compliance | No. of Ports | Description                                |
|-------------|-------------|---------------|---------------|--------------------|--------------|--|
| 292304-1    | Right Angle | Through Hole  | Black         | 60001134           | 1            | Shell plating : Bright tin over nickel     |
| 292304-2    | Right Angle | Through Hole  | White         |                    | 1            |  |
| 292317-4    | Right Angle | Through Hole  | Black         |                    | 1            | Shell plating : Nickel, matte tin on tails |
| 1734346-1   | Right Angle | Surface Mount | Black         |                    | 1            |  |
| 1734346-4   | Right Angle | Surface Mount | White         |                    | 1            |  |



|           |          |               |       |          |   |  |
|-----------|----------|---------------|-------|----------|---|--|
| 5787834-1 | Vertical | Through Hole  | Black | 60000281 | 1 |  |
| 5788336-1 | Vertical | Through Hole  | Black |          | 1 |  |
| 1734517-1 | Vertical | Surface Mount | Black |          | 1 |  |



**MINI USB**

| Part Number | Orientation | Board Mount   | Gender     | Housing Color | USB 2.0 Compliance | No. of Ports | Description   |
|-------------|-------------|---------------|------------|---------------|--------------------|--------------|---------------|
| 1734035-1   | Right Angle | Surface Mount | Receptacle | Black         | 62001202           | 1            | Tray          |
| 1734035-2   | Right Angle | Surface Mount | Receptacle | Black         | 60001202           | 1            | Tape and Reel |



|           |          |              |            |       |  |  |  |
|-----------|----------|--------------|------------|-------|--|--|--|
| 1734753-1 | Vertical | Through Hole | Receptacle | Black |  |  |  |
| 1734205-1 | Vertical | Solder Tabs  | Plug Kit   | Black |  |  |  |



**MICRO USB**

| Series | Part Number | Orientation | Board Mount   | Gender     | Housing Color | USB 2.0 Compliance | No. of Ports | Description               |
|--------|-------------|-------------|---------------|------------|---------------|--------------------|--------------|---------------------------|
| B      | 1981568-1   | Right Angle | Surface Mount | Receptacle | Black         |                    | 1            |                           |
|        | 1939054-1   | Vertical    | Solder Tabs   | Plug Kit   | Black         | 60001202           |              |                           |
|        | 2040099-1   | Right Angle | Surface Mount | Receptacle | Grey          | 60001611-1         |              | Integrated ESD protection |
|        | 2129033-1   | Vertical    | Solder Tabs   | Plug Kit   | Grey          |                    |              | 5+12 Hybrid               |
|        | 2129237-1   | Right Angle | Surface Mount | Receptacle | Grey          |                    |              | 5+12 Hybrid               |



|    |           |             |               |            |      |          |   |                           |
|----|-----------|-------------|---------------|------------|------|----------|---|---------------------------|
| AB | 1981584-1 | Right Angle | Surface Mount | Receptacle | Grey |          |   |                           |
|    | 2040100-1 | Right Angle | Surface Mount | Receptacle | Grey | 60001612 | 1 | Integrated ESD protection |

|   |           |          |             |          |         |  |  |  |
|---|-----------|----------|-------------|----------|---------|--|--|--|
| A | 1939053-1 | Vertical | Solder Tabs | Plug Kit | Natural |  |  |  |
|---|-----------|----------|-------------|----------|---------|--|--|--|

## Frequently asked questions

### How do I know if this part is USB 2.0 compliant?

VISIT : [www.usb.org/developers/compliance](http://www.usb.org/developers/compliance)

(Select integrators list, select integrators list again)

### How do I find the operating temperature range?

VISIT : [te.com/products/USB](http://te.com/products/USB)

(See performance characteristics section)

### How do I find the power rating for charging?

VISIT : [te.com/products/USB](http://te.com/products/USB)

(See performance characteristics section)

### Looking for an even faster and more efficient interconnect?

#### Something with speeds up to 5Gb/s?

Take a look at TE Connectivity's offering of USB 3.0

VISIT : [te.com/products/USB3](http://te.com/products/USB3)

OR see the USB 3.0 Quick Reference Guide (6-1773457-0)

### What are the advantages of the Micro USB connectors with integrated ESD protection?

- Enhanced reliability due to the fact that the ESD impact is diverted at the connector.
- Reduction of component count leads to board space saving, assembly cost, and also logistic cost of quality etc.
- Integrated ESD protection provides engineer unlimited design freedom to place the connector anywhere on the device.
- Reduced cross talk leads to optimized performance for USB 2.0 connectors (high speed beyond current 480 Mb/s).

## FOR MORE INFORMATION

### TE Technical Support Center

|                   |  |
|-------------------|--|
| internet          | <a href="http://te.com/help">te.com/help</a> |
| USA:              | +1 (800) 522-6752                            |
| Canada:           | +1 (905) 475-6222                            |
| Mexico            | +52 (0) 55-1106-0800                         |
| Latin/S. America: | +54 (0) 11-4733-2200                         |
| Germany:          | +49 (0) 6251-133-1999                        |
| UK:               | +44 (0) 800-267666                           |
| France:           | +33 (0) 1-3420-8686                          |
| Netherlands:      | +31 (0) 73-6246-999                          |
| China:            | +86 (0) 400-820-6015                         |

Part numbers in this brochure are RoHS Compliant\*, unless marked otherwise.

\*as defined [www.te.com/leadfree](http://www.te.com/leadfree)

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