



# Quick Reference Guide: USB Interconnects

Tyco Electronics, a standing member of the USB-IF (USB Implementers Forum), offers a wide range of products to meet your interconnect needs. Tyco Electronics offers products that 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).

The wide variety of Tyco Electronics' USB offerings include: standard (A & B), mini B, and micro A/B and B sizes. Tyco Electronics also offers locking versions of its standard USB as well as latching versions of its standard and micro USB.

Tyco Electronics' USB system has applications in many I/O devices, including: desk and laptop computers; keyboards, mice and joysticks; printers and scanners; game ports, serial port devices, digital audio, modems and portable storage devices. Applications also include data exchange and charging capabilities for most handheld devices, such as: cell phones, GPS devices, and MP3 players.

Tyco Electronics' USB system consists of board mount receptacles and their mating cable mount, overmolded plugs. Board mount receptacles are available in numerous configurations, including: surface mount, through hole, flag, vertical, and multi-port, adding to the system's ability to meet USB applications.

## 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

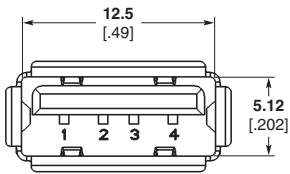
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<http://www.tycoelectronics.com>

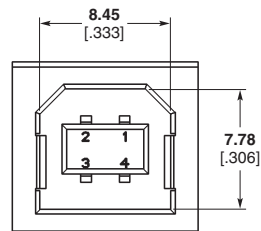
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## PRODUCT SIZES

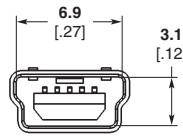
Full Size USB A



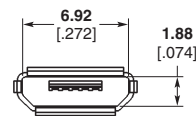
Full Size USB B



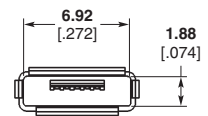
Mini USB B



Micro USB B



Micro USB AB



## 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	60001133	1	Solder Tail Length 2.84mm/ Kinked Legs
	292303-2	Right Angle	Through Hole	Black		1	Solder Tail Length 2.29mm / Kinked Legs
	292303-4	Right Angle	Through Hole	Black		1	Solder Tail Length 2.84mm / Kinked Legs / High Temperature Compatible
	292303-5	Right Angle	Through Hole	Natural		1	Solder Tail Length 2.84mm / Kinked Legs
	292303-6	Right Angle	Through Hole	Black		1	Solder Tail Length 2.29mm / Kinked Legs / High Temperature Compatible
	1-1734081-3	Right Angle	Through Hole	Black		1	Solder Tail Length 2.25mm / Straight Legs
	1734081-1	Right Angle	Through Hole	Black		1	Solder Tail Length 2.80mm / Kinked Legs
	4-1734081-2	Right Angle	Through Hole	Grey		1	Solder Tail Length 2.80mm / Kinked Legs
	5353929-1	Right Angle	Surface Mount	White	60000276	1	
	5787761-1	Right Angle	Through Hole	Black	60000277	1	Solder Tail Length 2.84mm / Kinked Legs / With Panel Ground
	292303-7	Right Angle	Surface Mount	Natural		1	T/H Solder Legs
	292303-9	Right Angle	Surface Mount	Natural		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 2.84mm / Kinked Legs
	5787617-4	Right Angle	Through Hole	Black		2	Solder Tail Length 2.84mm / Kinked Legs
	5787745-1	Right Angle	Through Hole	Black	60000046	2	Solder Tail Length 2.84mm / Kinked Legs / With Panel Ground
	5787745-2	Right Angle	Through Hole	Black		2	Solder Tail Length 2.29mm / Kinked Legs / With Panel Ground
	5787745-4	Right Angle	Through Hole	Black		2	Solder Tail Length 2.84mm / Kinked Legs / With Panel Ground
	1775066-1	Vertical	Through Hole	Black		2	
	1674451-3	Right Angle	Through Hole	Natural	60000713	3	
	1-1734383-2	Right Angle	Through Hole	Black		4	Solder Tail Length 2.36mm / Straight and Kinked Legs / With Panel Ground
	1-1775855-1	Right Angle	Through Hole	Black		1 (USB) 1 (RJ45)	RJ-45 Mod Jack Over Single USB
	611615-1	Right Angle	Through Hole	Black		2 (USB) 1 (RJ45)	RJ-45 Mod Jack Over Stacked USB
	1620000-1	Right Angle	Through Hole	Black		2 (USB) 1 (RJ45)	RJ-45 With Magjack Over Stacked USB

## FULL SIZE USB


### Series A Plug Kits

	Part Number	Orientation	Board Mount	Housing Color	USB 2.0 Compliance	No. of Ports	Description
	1734080-1	Right Angle	Surface Mount	Black		1	
	1734028-1	Right Angle	Surface Mount	Natural		1	
	1734080-2	Right Angle	Surface Mount	White		1	
	1734372-1	Vertical	Solder Tabs	Black		1	

# USB Interconnects


## 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	Rcpt.	Black		1	
	2041039-1	Right Angle	Through Hole	Rcpt.	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 Kit	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	Natural		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	Rcpt.	Black		1	Packaging
	1734035-2	Right Angle	Surface Mount	Rcpt.	Black	60001202	1	Packaging
	1734205-1	Vertical	Solder Tabs	Plug Kit	Black			
	1734753-1	Vertical	Through Hole	Rcpt.	Black		1	

## MICRO USB

	Part Number	Orientation	Board Mount	Gender	Housing Color	USB 2.0 Compliance	No. of Ports	Description
<b>Series B</b>								
	1981568-1	Right Angle	Surface Mount	Rcpt.	Black		1	
	1939054-1	Vertical	Solder Tabs	Plug Kit	Black	60001202		
<b>Series AB</b>								
	1981584-1	Right Angle	Surface Mount	Rcpt.	Grey		1	
	<b>Series A</b>							
	1939053-1	Vertical	Solder Tabs	Plug Kit	Natural			

# USB Interconnects

## QUESTIONS TO ASK AT DESIGN IN

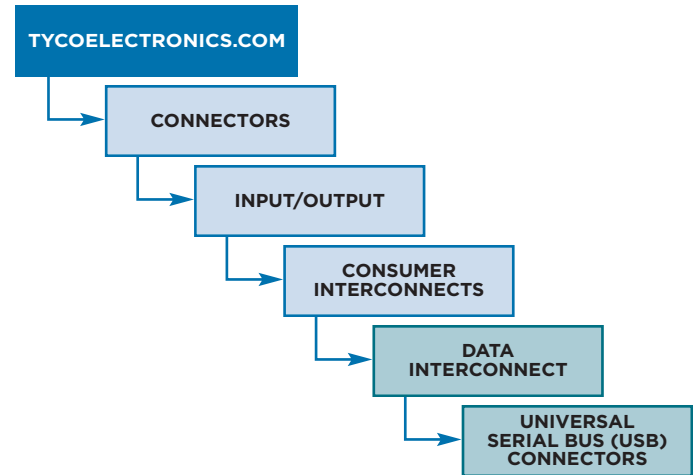
- How do I know if this part is USB 2.0 compliant?  
Visit: <http://www.usb.org/developers/compliance>  
Select integrators list, select integrators list again
- How do I find the operating temperature range?  
Visit: <http://www.tycoelectronics.com/products/USB>  
See performance characteristics section
- How do I find the power rating for charging?  
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See performance characteristics section

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