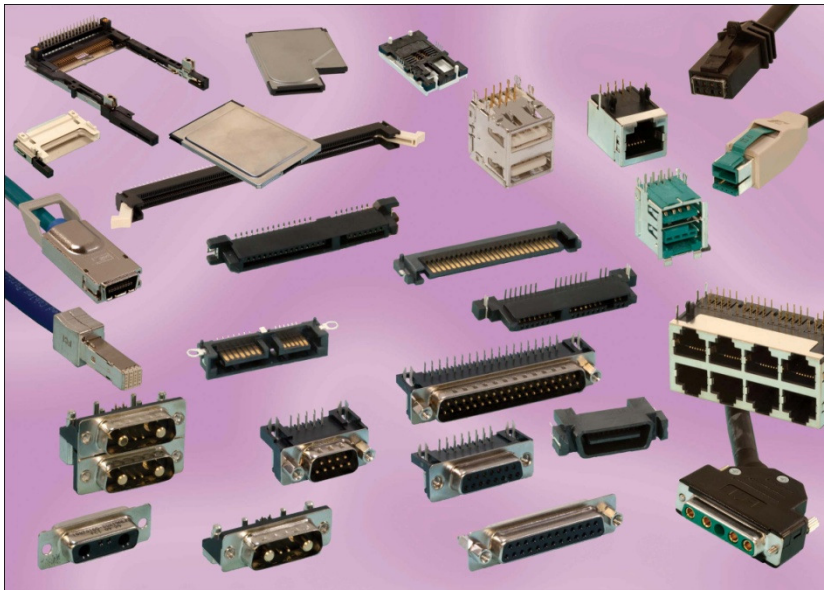




# USB Product Presentation

October 2011

# Where does IO-connections stand for?



- FCI's I/O connector solutions:
  - high-density
  - high-speed interfaces
- Applications:
  - networking, storage, and memory, power distribution, media card systems, etc
- Industry standards:
  - Ethernet, SFF, Infiniband, USB, PCMCIA™ or HDMI™, Compact Flash™, SAS, SATA, etc.
- Custom solutions:
  - Cable assemblies.

**CONNECTI/ONS**

# What products is IO Connections comprised of?



## Data & Multimedia I/O's



- ▶ HDMI™
- ▶ USB
- ▶ Modular Jacks
- ▶ Latch-N-Lok™

## High Speed I/O's



- ▶ DensiShield™ Systems
- ▶ Eyemax®
- ▶ Multilane SAS and SATA Connectors

## D-Sub



- ▶ Standard Density
- ▶ High Density
- ▶ Cable Connectors
- ▶ Power Connectors
- ▶ **see more**

## Cable Assemblies



- ▶ DensiShield™ I/O System
- ▶ Eyemax® - Infiniband Cable Assembly
- ▶ Fiber Optics
- ▶ Metral® Cable Assembly
- ▶ **see more...**

**CONNECTI/ONS**

## Memory & Media Card Systems



- ▶ Smartcard
- ▶ PCMCIA™
- ▶ ExpressCard™
- ▶ DDR Memory
- ▶ Flash memory products

## Storage Interface



- ▶ Serial Attached SCSI (SAS) Connectors
- ▶ Serial-ATA (SATA) Connectors
- ▶ eSATA Connectors
- ▶ iVDR Connectors
- ▶ **see more...**

More information can be found on a dedicated website at [www.fci.com/io](http://www.fci.com/io)

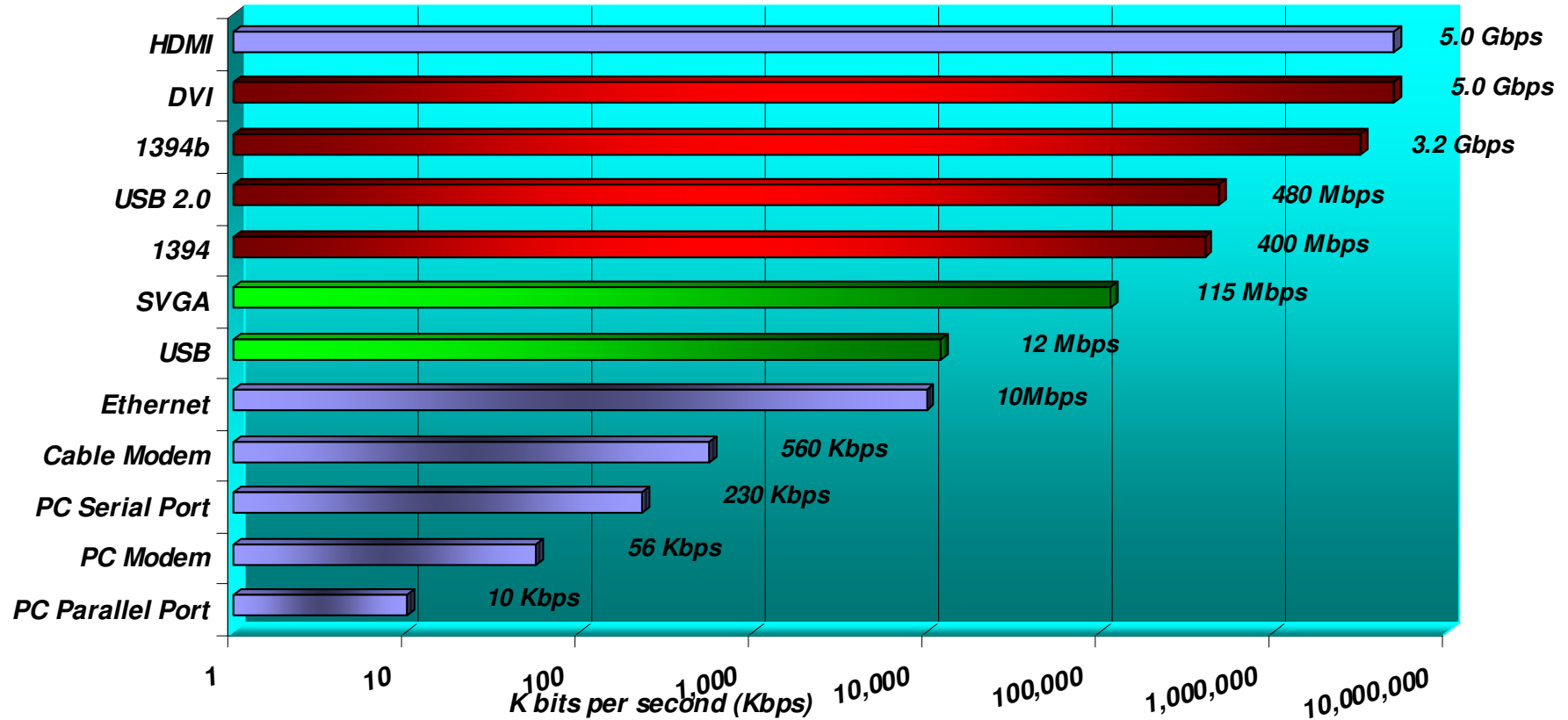
- ▶ Product selector tables;
- ▶ Data sheets;
- ▶ Product presentations;
- ▶ 3D view models & 2D drawings;
- ▶ Product specifications;
- ▶ Distributor inventory information;
- ▶ etc

# What is USB connector



- USB connectors are used with Universal Serial Bus standard port. It allows data to flow both ways between PC and peripherals;
- USB is an external bus standard that supports data transfer rate 480Mbps in its version of 2.0;
- USB supports Plug-and-Play installation and hot plugging, it makes adding peripheral devices so easy;
- Star Topology, a single USB port can be used to connect up to 127 peripherals devices including mice, modem and keyboards...
- USB replaces all the different kinds of series and parallel port connectors with one standardized plug and port combination;
- USB+Power can also distribute electrical power to many peripherals.

# USB data rate vs other I/O types



# USB Market Application



## Data

- Desktop PC
- Laptops
- Server, ISDN, Hub, printer, Memory storage...

## Consumer

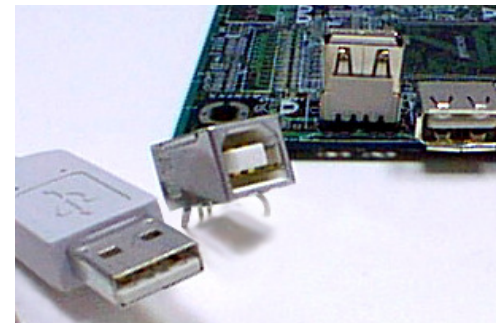
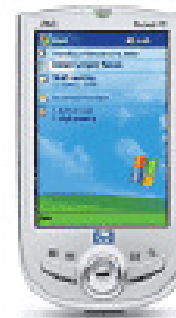
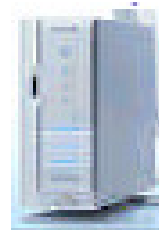
- Still Digital Camera
- Set Top Box
- MP3, PDA, Mobile Phone.....

## Communication

- PBX system
- Fax machine







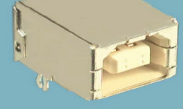
## Industrial & Instrument

- Point of sales
- Equipment controls
- Tester
- Automotive, Medical equipment...







# FCI USB Product Matrix—Type A and B



Type	Series Number	Product Type	Pin Orientation	Mount	Sensor	PCB Thickness	Back Shield	Picture
A	73725	S/D Receptacle	Side	PIP orT/H	Option	1.20mm	Yes	
	87520	S/D Receptacle	Standard	PIP orT/H	None	1.57mm	Option	
	72309	D/D Receptacle	Standard	PIP orT/H	None	1.57mm	Option	
	74552	S/D Receptacle	Reversed	PIP orT/H	None	1.57mm	Option	
	87583	S/D Receptacle	Standard	SMT	None	1.57mm	None	
	74626	S/D Receptacle	Reversed	SMT	Option	1.57mm	None	
B	61729	S/D Receptacle	Standard	PIP orT/H	Option	1.57mm	Yes	

# FCI USB Product Matrix – USB+Power

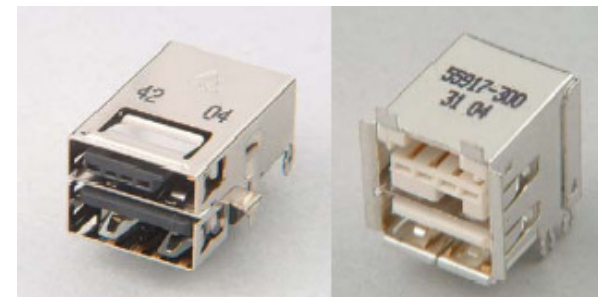
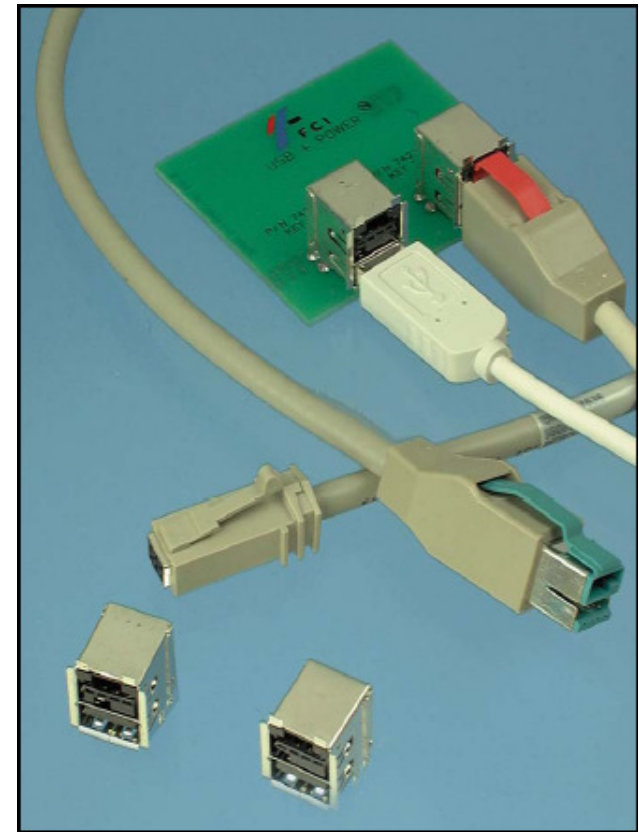


Type	Series Number	Product Type	Pin Orientation	Mount	Sensor	PCB Thickness	Back Shield	Picture
USB+ Power	55917	Receptacle	Standard	PIP or T/H	None	1.57mm	None	
	74233	Plug Kit	Standard		None		None	
	57489	Receptacle	Standard	PIP or T/H	None	1.57mm	None	
	57496	Plug Kit	Standard		None		None	

# USB+Power Connectors

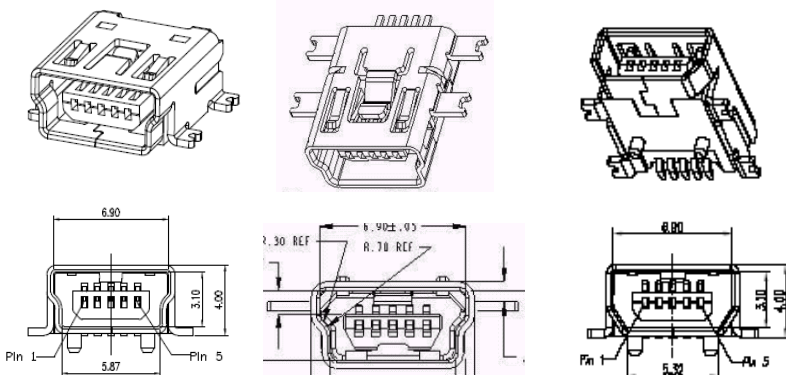


- Add 4 pins to USB for extra power or single needs:  
Max 5A at 5V, 12V, 24V vs Standard USB is 0.5A at 5V.
- USB+Power can eliminate the need for an independent power supply on some peripheral device.
- Allows standard use of USB port if extra power is not required.  
[FCI offers the below USB+Power connectors](#)  
Receptacles: 55917 & 57489 series.  
Plug kits: 74233 & 57496 series.
- 55917 series provides color and mechanical keying option for different voltage levels.  
Mating plug kits: 74233 series.
- 57489 series used as standard type.  
Mating plug kits: 57496 series.



- FCI takes leader in USB connector market, especially in USB + Power connector:
  - Popular range of the USB Receptacle
  - USB 2.0 compatible
  - USB+Power receptacle and plug offering
  - RoHS compatible:
    - All the P/Ns ending with “LF” are defined as lead-free products
  - Best performance with proper raw materials and plating spec:
    - For general application, can pass 1500 or 5000 cycles
    - For automotive application, can pass 9000 or 12000 cycles

# Mini USB



**Top Mount – B**  
**10033526**

**Mid Mount - B**  
**10057202**

**Top Mount - AB**  
**10033527**

## FCI Lead Free Part Numbers:

- ▶ **10033526-NxxxxLF:** Std B Type Mini USB Receptacle
- ▶ **10057202-RxxLF:** Mid Mount B Type Mini USB Receptacle
- ▶ **10033527-NxxxxLF:** Std AB Type Mini USB Receptacle

## Competitor X-Ref:

Prod Type	FCI P/N	Molex P/N	AMP P/N
Top Mount mini B	10033526	67503	440247
Mid Mount mini B	10057202	N/A	N/A

## Target Application:

Portable phone, disk

## Target Market:

Consumer Electronics

## Specification:

- Product Specification  
GS-12-174
- Packaging Specification:  
GS-14-873

## Features:

- USB 2.0 compatible
- Right angle SMT type (with/without posts)
- Tray & Tape-N-Reel Packaging Options
- Withstand 260C for 10 sec. under reflow soldering process
- Stainless Steel/SPCC shielding for mid mount type for higher strength



## **Target Application:**

Mobile phones, Music Players, Portable Devices, Digital cameras, Vehicle battery chargers.

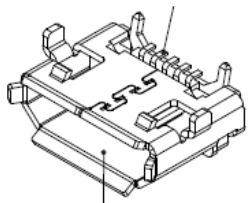
## **Target Market:**

Cell Phone, Multi-media, Power Charger

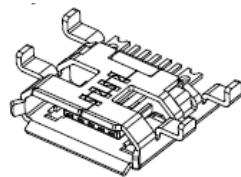
## **Features:**

- 5P USB product of USB Rev.2.0.
- Smaller size than Mini-USB
- Being a standard charger I/O for mobile phone in 2012.
- Release series products with 9 types.
- Rohs compliant and Halogen-free

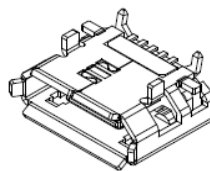
- Footprints of Micro USB B type are compatible to Hirose



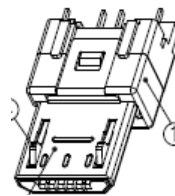
**B Type  
Rec, Rev**



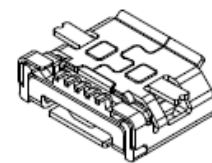
**B Type  
Rec, STD  
Mid-  
mount**



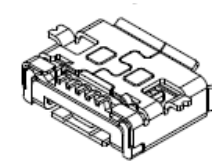
**B Type  
Rec, STD**



**B Type  
Rec, Plug**



**B Type  
Rec, STD**





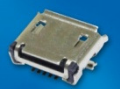






**AB Type  
Rec, STD**

- Across Hirose ZX series(ZX62-B-5P and ZX62D-B-5P etc.) and Molex Micro USB series(105017-0001,47642-0001 and 47346-0001 etc.)

# Micro USB



Part Number	Product Description	Picture
10103592-0001LF	Micro-USB B Rec, Reverse, DIP	
10103593-0001LF	Micro-USB B Rec, STD , Mid-mount	
10103594-0001LF	Micro-USB B Rec, STD, SMT+DIP	
10104109-0001LF	Micro-USB B Plug	
10104110-0001LF	Micro-USB B Rec, STD, SMT	
10104111-0001LF	Micro-USB A/B Rec, STD, SMT	
10118192-0001LF	Micro-USB B Rec, STD, SMT	
10118193-0001LF	Micro-USB B Rec, STD, 2 DIP Legs	
10118194-0001LF	Micro-USB B Rec, STD, 4 DIP Legs	

- Contact : Copper alloy.
- Contact area : 30u" Au over nickel
- Solder tail area : Au flash over nickel
- Shield : Stainless steel
- - Pure tin plating: 10104110, 10104111, 10103592, 10103594
- - Nickel plating: 10104109, 10103593
- Housing : LCP for Receptacle;PA6T for Plug. Rohs compliant and Halogen Free.
- - Black for B-type
- - Gray for AB-type
- UL94V-0
- TID No.60001790 for Receptacle 10103594;60001791 for Plug 10104109
- Packing:Tape and Reel



- **Sample delivery of standard products in 48 hours**
- **Customer drawing and technical specifications available in Acrobat files**
- **Product information available: [www.fci.com/usb](http://www.fci.com/usb)**
- **Competitive cross reference**
- **Global Pricing System**
- **Lead free & RoHS compliance**

*Thank You ...*

