



## Micro-USB (USB 2.0) Connectors



Hirose Electric Co. Limited has completed the development of the next generation USB Micro interface. The connectors meet all requirements of the USB 2.0 standard. Hirose Electric's established expertise in the development and manufacturing of precision high-density connectors were recognized by approval of our proposal as a standard interface. Cooperative efforts by all members of USB group were led by HRS and culminated in the development of the standard. As compared with Mini-interface, the previous smallest standard, Micro, is smaller and thinner and has better electrical and mechanical performance.

**Material:** (Plug) • Insulator: Polyamide Type-A: White, Type-B: Black, UL94V-0 • Metal Shell: Stainless steel, Nickel plated • Contact: Copper alloy • Contact area: Gold plated over nickel under plating • Termination

area: Tin plated over nickel under plating • Lock metal: Stainless steel • Operating Temperature: -30°C - 85°C (Receptacle) • Insulator: LCP Type-B: Black, Type-AB: Gray, UL94V-0 • Contact: Copper alloy, Gold plated over nickel under plating • Metal shell: Stainless steel, Tin plated • Operating Temperature: 0°C - 50°C

**Performance Characteristics:** (Plug and Receptacle) • Rated Voltage: AC 30V • Current Capacity: (1) Signal line: 1A pin (No. 1 to 5); (2) 2-line for power: 1.8A pin (No. 1 and 5); 0.5A pin (No. 2 to 4) • Insulation Resistance: 100MΩ minimum at DC 500V • Contact Resistance: 30mΩ maximum at 100mA • Withstanding Voltage: AC 100V for 1 minute • Durability: 10,000 cycles

Dimensions in mm

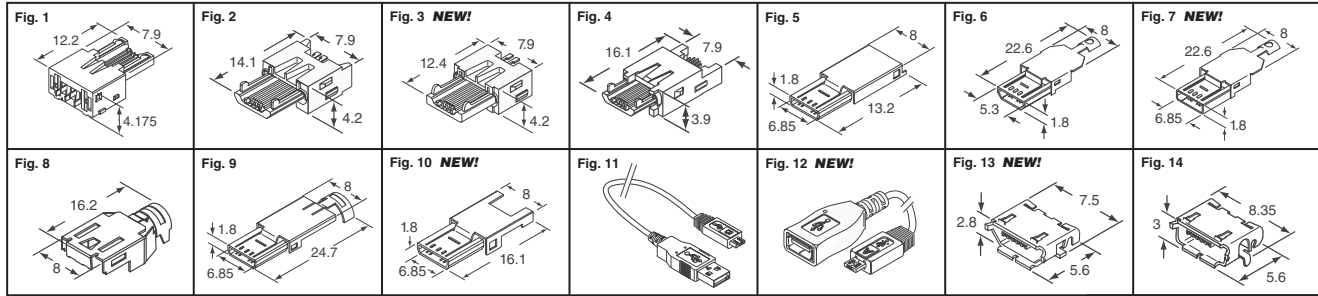
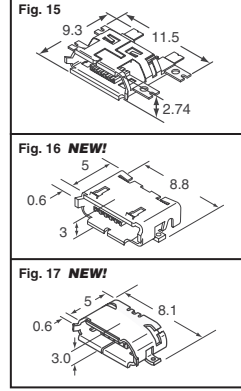


Fig.	Description	Digi-Key Part No.	Price Each			Tape and Reel		Hirose Part No.
			1	25	100	Qty.	Pricing	
1	Type 'B' Plug, PCB Assembly Type	H11497-ND	1.58	1.15	.94	—	—	ZX20-B-5S-UNIT
2	Type 'B' Plug, Hand-solder Assembly Type	H11502-ND	2.01	1.46	1.20	—	—	ZX40-B-5S-UNIT(01)
3	Type 'A' Plug, Hand-solder Assembly Type	H11571-ND <b>NEW!</b>	1.72	1.33	1.06	—	—	ZX40-A-5S-UNIT
4	Type 'B' Plug, PCB Assembly Type	H11499-ND	1.25	.91	.75	—	—	ZX64-B-5S-UNIT(12)
5	Shielding Plate for ZX20 Plug	H11496CT-ND†	.42	.21	.15	4,000	81.00/M	ZX20-B-SLDC
6	Shielding Plate Top for ZX40 Plug, Type B	H11500CT-ND†	.56	.27	.20	4,000	108.00/M	ZX40-B-SLDA
7	Shielding Plate Top for ZX40 Plug, Type A	H11572CT-ND† <b>NEW!</b>	.48	.23	.17	4,000	92.00/M	ZX40-A-SLDA
8	Shielding Plate Bottom for ZX40 Plugs	H11501CT-ND†	.49	.24	.18	4,000	945.00/M	ZX40-SLDB
8	Shielding Plate Bottom for ZX40 Plugs	H11573CT-ND† <b>NEW!</b>	.49	.24	.18	4,000	95.00/M	ZX40-SLDB(3,3)
9	Shielding Plate for ZX64 Plug	H11498CT-ND†	.37	.18	.14	4,000	72.00/M	ZX64-B-SLDA
10	Shielding Plate for ZX64 Plug	H11575CT-ND† <b>NEW!</b>	.42	.25	.20	4,000	110.00/M	ZX64-B-SLDC
11	Cable Micro 'B' to Standard 'A', 0.5 Meters	H11503-ND	14.67	13.42	12.09	—	—	ZX40-B-5S-500-STD
11	Cable Micro 'B' to Standard 'A', 1.0 Meters	H11489-ND	16.63	15.21	13.70	—	—	ZX40-B-5S-1000-STD
11	Cable Micro 'B' to Standard 'A', 1.5 Meters	H11504-ND	16.16	15.08	14.01	—	—	ZX40-B-5S-1500-STD
12	Cable Micro 'A' to Standard 'A', 0.075 Meters	H11576-ND <b>NEW!</b>	8.87	7.17	5.63	—	—	ZX40-A-5S-75-STD
13	Type 'B' SMD, Right Angle	H11579CT-ND† <b>NEW!</b>	1.29	.94	.77	2,000	442.00/M	ZX62-B-5PA
14	Type 'AB' SMD Right Angle, Through Hole Shell	H11494CT-ND†	1.22	.88	.72	2,000	416.00/M	ZX62D-AB-5P8
15	Type 'B' MID Mount	H11493CT-ND†	1.49	1.08	.88	2,000	508.00/M	ZX62M-B-5P
16	Type 'AB' SMD Right Angle	H11580CT-ND† <b>NEW!</b>	1.37	.99	.81	2,000	468.00/M	ZX62-AB-5PA
17	Micro 'B' Reverse Mount SMD	H11574CT-ND† <b>NEW!</b>	1.33	.97	.79	2,000	455.00/M	ZX62R-B-5P

† For Tape and Reel part number, change CT-ND to TR-ND. † Cut Tape



## USB 2.0 Cable Assemblies and Connectors

**Features:** • Tested and certified by USB Association approved laboratory the connectors will perform at transmission speeds up to 480Mbps. Thin design of the plug assembly and the overmold section allows use in small spaces. The plug also incorporates a built-in snap-lock feature, providing tactile verification of the full and secure mating of plug and receptacle. Plating is lead-free in order to protect environment.

**Applications:** • Personal and mobile computer peripheral equipment, data terminals, digital cameras, MP3 players, PDA's, GPS and other devices utilizing standard USB protocols.

**Specifications:** • Current Rating: 1A • Voltage Rating: 5VAC • Operating Temperature Range: -30°C - 75°C

• Contact Resistance: 50mΩ maximum • Insulation Resistance: 100MΩ minimum • Dielectric Withstanding Voltage: No Flashover or insulation break down; 100VAC/one minute. **Materials: Receptacles:** • Insulator: Synthetic resin • Finish Color: Black • Contacts: Copper alloy • Contact Area: Gold plating • Termination Area: Tin alloy plating • Metal Shield: Copper alloy • Finish: Tin alloy plating. **Plugs:** • Insulator: Synthetic resin • Finish Color: Black • Contacts: Copper Alloy • Finish Contact Area: Gold plating • Termination Area: Tin alloy plating • Metal Shield: Steel • Finish: Tin alloy plating • Over-mold compound: PVC • Finish: Black

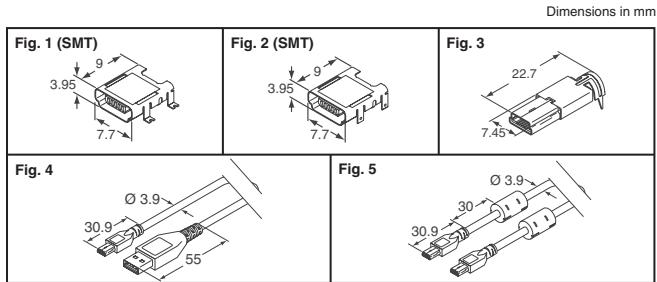


Fig.	Digi-Key Part No.	Price Each			Digi-Key Part No.	Tape & Reel Pricing 1,000	Hirose Part No.
		1	25	100			
<b>Right Angle Receptacle, SMT Metal Shield Type with Positioning Post</b>							
1	H2959CT-ND	1.18	.86	.70	H2959TR-ND	412.00	UX60-MB-5ST
<b>Right Angle Receptacle, DIP Metal Shield Type with Positioning Post</b>							
2	H2960CT-ND	1.18	.86	.70	H2960TR-ND	412.00	UX60-MB-5S8
<b>Right Angle Receptacle, SMT Metal Shield Type without Positioning Post</b>							
1	H2961CT-ND	1.18	.86	.70	H2961TR-ND	412.00	UX60A-MB-5ST
<b>Plug, Cable Mount Type</b>							
3	H2955-ND	1.18	.86	.70	—	—	UX40-MB-5P
	H2958-ND	1.18	.86	.70	—	—	UX40A-MB-5P

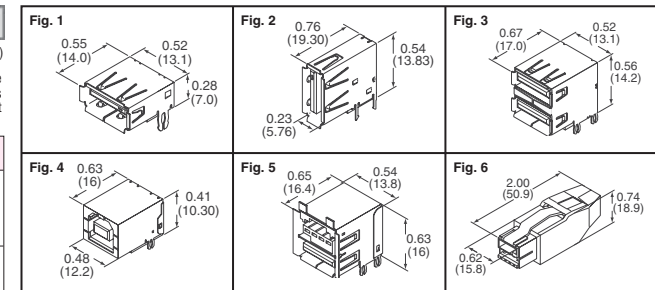
Fig.	Description	Length (mm)	Price Each			Hirose Part No.	
			1	25	100		
4	USB Type A to Mini-B	1,000	H2957-ND	5.89	4.57	3.66	UX40-MB-5PA-1000-2003
5	USB Mini-B to Mini-B	500	H2956-ND	16.71	15.60	14.49	UX40-MB-5PP-500-1002

## FCI USB Interconnect System

Dimensions in Inches (mm)

The USB interconnect system is designed to combine all personal computing interface ports into one connector. This system is plug-and-play, not pluggable and can handle data rates up to 12Mbps. **Specifications:** • Meets USB Standard • Durability: 1,500 Cycles • Withstanding Voltage: 30RMS • Current Rating: 1A Contact • Low Level Contact Resistance: 30mΩ maximum

Fig.	Description	Digi-Key Part No.	Price Each			FCI Part No.
			1	25	100	
1	Type 'A' Single, Right Angle	609-1045-ND	.88	.44	.38	87520-0010BLF
2	Type 'A' Single, Up-Right	609-1041-ND	.99	.52	.44	73725-0110BLF
3	Type 'A' Dual, Right Angle	609-1040-ND	1.34	.72	.62	72309-8034BLF
4	Type 'B' Single, Right Angle	609-1039-ND	1.03	.55	.47	61729-0010BLF
5	USB + Power Receptacle, Right Angle	609-1038-ND	5.38	3.43	3.13	55917-5011LF
6	USB + Power Plug, Cable OD= 5.80 mm	609-1042-ND	10.18	7.22	6.64	74233-100LF
	USB + Power Plug, Cable OD= 5.10 mm	609-1043-ND	10.18	7.22	6.64	74233-101LF
	USB + Power Plug, Cable OD= 6.60 mm	609-1044-ND	10.18	7.22	6.64	74233-102LF



Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

More Product Available Online: [www.digkey.com](http://www.digkey.com)

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