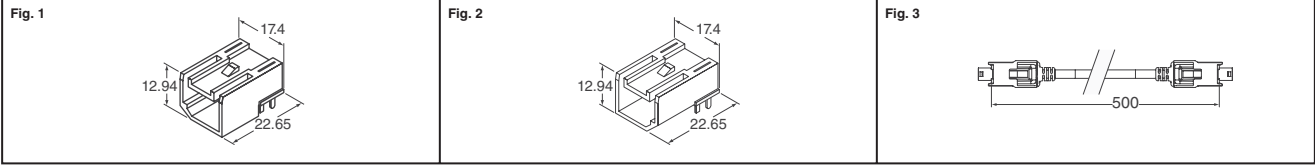


molex HS AutoLink Interconnect System (USCAR USB)



HSAutoLink (alternatively referenced as USCAR USB) is the emerging high-speed data bus for vehicles. The data bus encompasses technologies used in other markets such as Universal Serial Bus (USB 2.0), Low Voltage Differential Signaling (LVDS), IEEE1394b (Firewire™), FlexRay, eMOST and Ethernet. HSAutoLink connectors and cables will bring USB and other technologies into the information and entertainment systems in vehicles.



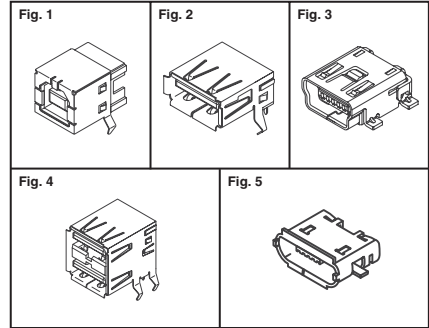
A

| Fig. | Description | Polarization | Digi-Key Part No. | 1 | 10 | 100 | Molex Part No. |
|------|---|--------------|-------------------|-------|-------|-------|----------------|
| 1 | Header USCAR Type USB A, Right Angle, Black | A | WM17535-ND | 3.57 | 3.22 | 2.86 | 49616-0711 |
| 2 | Header USCAR Type USB B, Right Angle, Gray | B | WM17536-ND | 3.57 | 3.22 | 2.86 | 49616-0715 |
| 3 | Cable USCAR Type USB B, Black, 500mm | B | WM17537-ND | 14.78 | 13.30 | 11.83 | 111014-5000 |
| | Cable USCAR Type USB B, Gray, 500mm | B | WM17538-ND | 14.78 | 13.30 | 11.83 | 111014-5001 |

Tyco Electronics AMP USB Connectors



Features: Fig. 1, Fig. 2 and Fig. 4: • Shell and Contacts: Copper Alloy • Housing: UL 94V-0 rated, thermoplastic • Contacts: 0.076 µm minimum Gold over 0.76 µm minimum Palladium-Nickel on mating area Fig. 3: • Housing: High temperature thermoplastic UL 94V-0 • Contacts: Phosphor Bronze, 30 µm minimum Gold plated in contact area • Shell: Phosphor Bronze Fig. 5: • Contact Pin: Copper alloy • Contact Plating: Selectively gold plated over Ni-Pd over nickel • Shell: Stainless steel, tin over nickel plated



| Fig. | Description | Color | Digi-Key Part No. | Price Each | | | Tape and Reel† | | AMP Part No. |
|------|--|---------|-------------------|------------|------|------|----------------|----------|--------------|
| | | | | 1 | 25 | 100 | Qty. | Pricing | |
| 1 | USB Receptacle Type B, Right Angle | Black | A31725-ND | 1.92 | 1.74 | 1.23 | — | — | 292304-1 |
| | USB Receptacle Type B, Right Angle | Natural | A98573-ND | 2.37 | 2.15 | 1.53 | — | — | 292304-2 |
| 2 | USB Receptacle Type A, Right Angle | Black | A31726-ND | 1.41 | 1.29 | .91 | — | — | 292303-1 |
| 3 | Mini USB Receptacle Type B, Right Angle SMD | Gold | A31727CT-ND‡ | 2.11 | — | 1.27 | 3,500 | 724.26/M | 1734035-2 |
| 4 | Receptacle, Type A, Right Angle, 4 over 4 Position | Black | A31728-ND | 3.59 | 3.26 | 2.31 | — | — | 5787617-1 |
| 5 | Micro USB Receptacle Type AB, Right Angle, SMD | Gray | A97799CT-ND‡ | .92 | .77 | .62 | 1,000 | 461.74 | 1981584-1 |
| | Micro USB Receptacle Type B, Right Angle, SMD | Black | A97800CT-ND‡ | .92 | .77 | .62 | 1,000 | 461.20 | 1981568-1 |

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

EDAC USB 2.0, USB 3.0 and Firewire Connectors

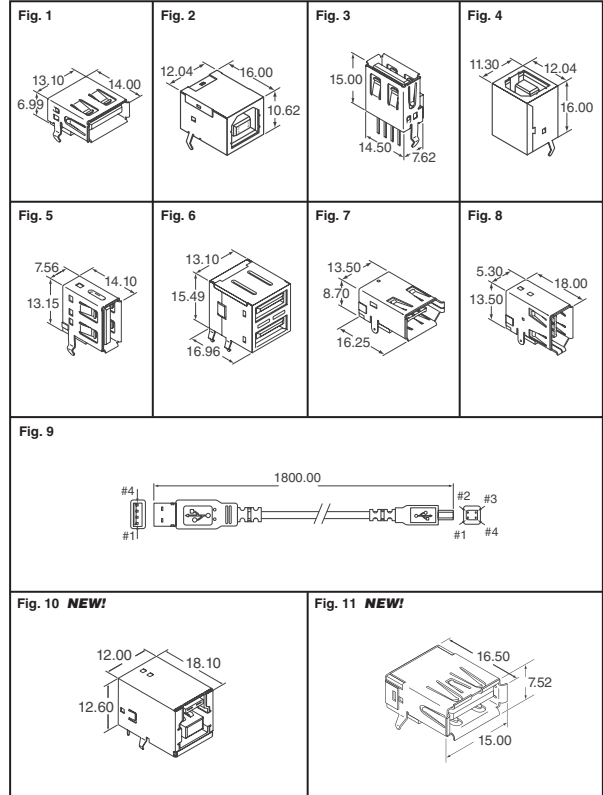


USB 2.0 and Firewire Connectors: EDAC Series 690 USB (Universal Serial Bus) and Series 693 (IEEE 1394) connectors are industry-standard data transfer devices used to interconnect computers to peripheral devices such as scanners and printers. A wide variety of unique right angle vertical that minimizes board space. USB products are compatible with asynchronous and isochronous data transfer methods up to 1.2 Mbps and utilize plug and play technology. EDAC manufactures both USB and IEEE 1394 connectors in through-hole or SMT board styles as well as molded cable assemblies for USB A, B, mini-USB and IEEE variations.

Specifications: • USB 1.1 or USB 2.0 available • Minimum Mating Cycles: 1500 per EIA 364-09 • Insulator Housing: UL 94V-0 thermoplastic • Contact Material: P Bronze (USB), Copper Alloy (1394) • Contact Plating: Gold Flash or Gold Plate over nickel • Contact Resistance: 30mΩ maximum • Insulation Resistance: 100MΩ minimum • Current Rating: 1A maximum under 30°C • Voltage Rating: 30VAC rms maximum • DW Voltage: 750VAC @ 0 at sea level (USB), DC500 (1394) • Shield Housing: Copper alloy • Mate/Unmate: 35/10 Newtons per EIA 364-13 • Temperature Range: -55°C - 85°C

USB 3.0 Connectors: EDAC Series 690 USB connectors with USB 3.0 compatibility. Series 690 USB 3.0 SuperSpeed connectors from EDAC, Inc. are fully compliant with the USB 2.0 and 3.0 specifications, providing a significant leap forward in transfer speeds (5 Gbps signaling rate) and a 10x performance increase over hi-speed USB capabilities while maintaining backwards compatibility with USB 2.0 devices. The USB 3.0 specification will accommodate next generation peripherals that require more power and improved interaction between devices and the host computer by providing more power when needed and less power when not needed.

Features: • USB Type A and B right angle receptacle • Metal shielding for EMI, RFI, and ESD protection • Super speed interface up to 5 Gbps data rate • Backward compatible with USB 2.0 • 230°C for 30 sec., 260°C for 10 sec. for SMT process • Friction lock grounding fingers • 94V-0 • High temperature material • USB 2.0 and 3.0 compliant • Through hole standard type



| Fig. | Description | Digi-Key Part No. | 1 | 10 | 100 | EDAC Part No. |
|---|---|-------------------|------|------------|------|-----------------|
| USB 2.0 Connectors | | | | | | |
| 30µ" Gold | | | | | | |
| 1 | Type "A" Single, Horizontal Right Angle | 151-1080-ND | 1.39 | 1.24 | .99 | 690-004-621-013 |
| 2 | Type "B" Single, Horizontal Right Angle | 151-1081-ND | 1.14 | 1.02 | .82 | 690-004-621-023 |
| 3 | Type "A" Single, Vertical Straight | 151-1082-ND | 1.39 | 1.24 | .99 | 690-004-660-013 |
| 4 | Type "B" Single, Vertical Straight | 151-1083-ND | 1.46 | 1.30 | 1.04 | 690-004-660-023 |
| 5 | Type "A" Single, Vertical Right Angle | 151-1084-ND | 1.49 | 1.33 | 1.07 | 690-004-661-013 |
| 6 | Type "A" Dual Stacked, Horizontal Right Angle | 151-1085-ND | 2.27 | 2.01 | 1.61 | 690-008-621-013 |
| Gold Flash | | | | | | |
| 1 | Type "A" Single, Horizontal Right Angle | 151-1123-ND | .88 | .78 | .62 | 690-004-221-013 |
| 2 | Type "B" Single, Horizontal Right Angle | 151-1121-ND | 1.04 | .93 | .75 | 690-004-221-023 |
| 3 | Type "A" Single, Vertical Straight | 151-1114-ND | .91 | .81 | .65 | 690-004-260-013 |
| 5 | Type "A" Single, Vertical Right Angle | 151-1116-ND | 1.39 | 1.24 | .99 | 690-004-261-013 |
| 6 | Type "A" Dual Stacked, Horizontal Right Angle | 151-1122-ND | 1.29 | 1.15 | .92 | 690-008-221-013 |
| USB Cable Assembly | | | | | | |
| 9 | USB Type 'A'/M to USB Type 'B'/M | 151-1079-ND | 5.96 | 5.30 | 4.24 | 628-000-943 |
| Firewire Connectors | | | | | | |
| 7 | IEEE 1394A Single, Horizontal Right Angle | 151-1086-ND | .66 | — | — | 693-006-620-003 |
| 8 | IEEE 1394A Single, Vertical Right Angle | 151-1087-ND | 1.71 | 1.52 | 1.21 | 693-006-621-003 |
| NEW! USB 3.0 Connectors — 90° Dip NEW! | | | | | | |
| 15µ" Gold | | | | | | |
| 10 | Type "B" Horizontal Right Angle | 151-1127-1-ND† | 4.87 | 4.32 | — | 690-009-521-900 |
| | Type "B" Horizontal Right Angle | 151-1127-2-ND‡ | — | 691.25/200 | — | 690-009-521-900 |
| 11 | Type "A" Horizontal Right Angle | 151-1128-1-ND† | 3.04 | 2.70 | — | 690-009-521-013 |
| | Type "A" Horizontal Right Angle | 151-1128-2-ND‡ | — | 754.33/350 | — | 690-009-521-013 |

† Cut Tape ‡ Tape and Reel

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.

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