HIGH-SPEED
VERSALINK™
DIFFERENTIAL
TWINAX

Ultra Miniature Micro-D Connectors with High-Speed VersaLink Contact Technology

Innovative differential Twinax contact technology in ruggedized, high-density mil-spec connector packaging

High-speed serial data protocols (USB 3.1 Gen2, USB-C, SATA, PCIe, DisplayPort, and HDMI) all have transmission rates in the 10Gb/s+ range for each data pair. In order to provide truly high-speed signal integrity for these bandwidth-dependent protocols, Glenair has invented a new contact technology called VersaLink™ which delivers outstanding impedance matching and cross-talk isolation at both the cable-to-connector interface, as well as between connector and board. VersaLink is a highly-engineered differential Twinax contact module that may be packaged in a wide range of both circular and rectangular connector formats such as the MIL-DTL-83513 Micro-D. This high-density package solution provides mating reliability, ruggedness, signal integrity, and deployment simplicity.

Data-intensive servers, computers and peripheral devices in mission-critical applications require a new generation of shielded contact technology and tried-and-true connector package performance. Both are exquisitely realized in the VersaLink Micro-D.

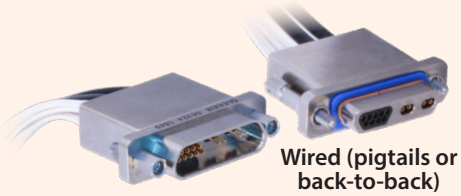
- **VersaLink: shielded differential Twinax interconnect solution**
- **Signature Glenair design intermountable in standard Micro-D footprints**
- **Higher speed and density than mil-spec style Twinax solutions**
- **Individually shielded pairs result in virtually zero cross talk**
- **Hybrid arrangements with VersaLink contact modules and standard Micro-D inserts for signal and power**

HIGH-SPEED

VersaLink™ Micro-D

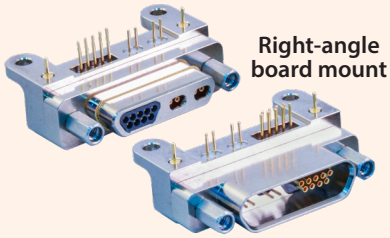
Military-standard Micro-D connectors with “zero crosstalk” VersaLink™ Twinax contact modules

CONNECTOR CONFIGURATIONS



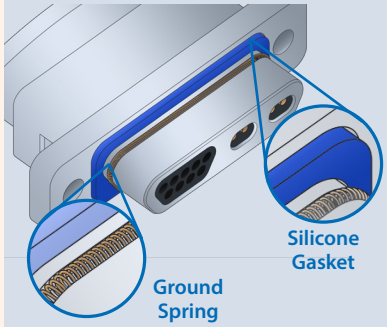
Wired (pigtails or back-to-back)

Straight board mount



Right-angle board mount

EMI SHIELDING AND ENVIRONMENTAL SEALING



Plug connectors feature a gold-plated stainless steel ground spring for EMI protection, and a silicone gasket for environmental sealing.

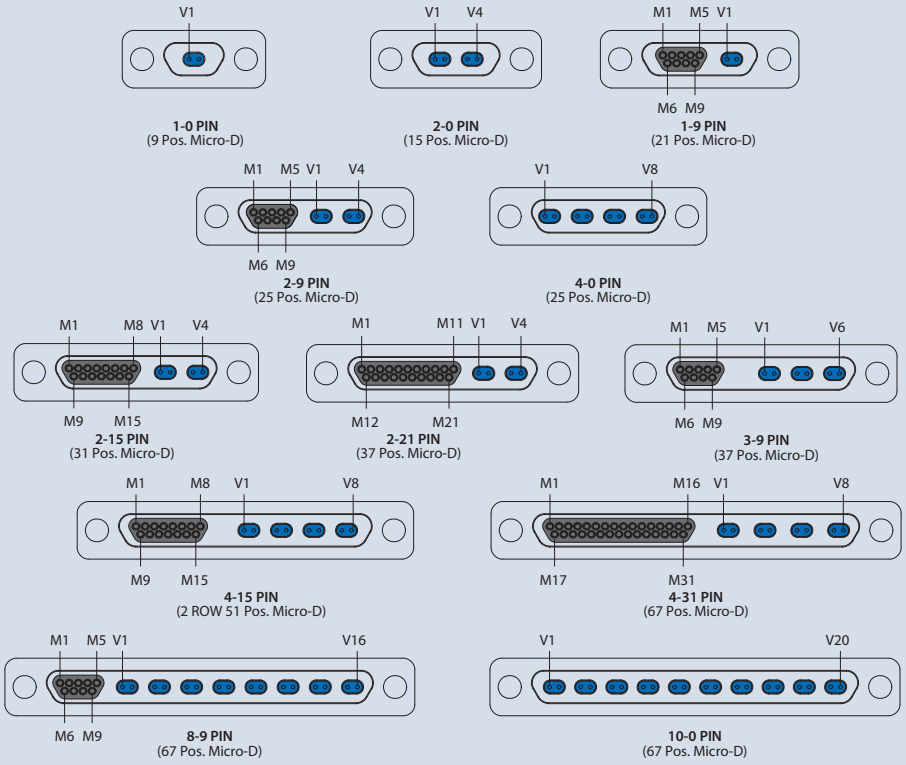
SUPPORTED HIGH-SPEED PROTOCOLS AND APPLICATIONS

Networking Protocols	Peripheral and Display Protocols	
10Gb Ethernet **40Gb Ethernet**	**DVI** (Digital Visual Interface) **HDMI 2.0** (High-Definition Multimedia Interface) **DisplayPort 1.2** **SATA 3** (Serial AT Attachment)	**USB 3.0** (Universal Serial Bus) **USB 3.1 Type C** (Universal Serial Bus) **USB 3.2** (Universal Serial Bus) **PCIe 3** (Peripheral Component Interconnect)

CONTACT ARRANGEMENTS

VersaLink Micro-D contact arrangements
face view pin connector (ref. GHS4-M-1000)

VersaLink module
Standard Micro-D



MATERIALS AND FINISHES

Connector Shell: Aluminum Alloy 6061
Insulator (V): Rigid Dielectric. Insulator (M): Liquid Crystal Polymer (LCP) or Polyphenylene Sulfide (PPS)
Flange Seal: Fluorosilicone Rubber, Blue
Pin Contact: Copper Alloy, Gold over Nickel Plating
Socket Contact: Copper Alloy, Gold over Nickel Plating
Ground Spring: Stainless Steel, Gold Plating
Ground Pin: Copper Alloy, Gold Over Nickel Plating
Hardware: 300 Series Stainless Steel, Passivated
Encapsulant: Epoxy Resin Hysol EE4215

PERFORMANCE SPECIFICATIONS

Current Rating: 3 Amp (Micro-D pins)
DWV (Contact M): 600 VAC Sea Level
Insulation Resistance (Contact M): 5000 Megohms Minimum
Contact Resistance (Contact M): 8 Milliohms Maximum
Low Level Contact Resistance: 32 Milliohms Maximum
Operating Temperature: -55°C To 125°C
Mating Force (Contact M): (10 Ounces) X (# Of Contacts)
Mating Force (Contact V): (5 Ounces) X (# Of Contacts)

Dimensions in Inches (millimeters) are subject to change without notice.

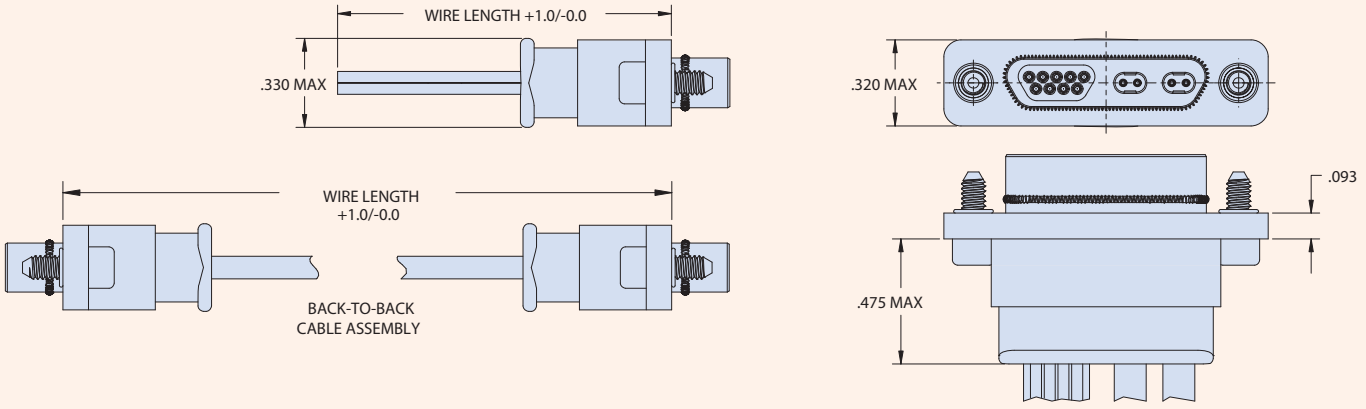
HIGH-SPEED

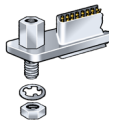
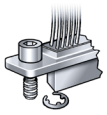
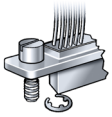
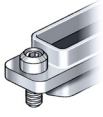
VersaLink™ Micro-D

How-to-order
Wired connectors

How To Order VersaLink Micro-D Wired Connectors													
Sample Part Number	**GHS4-M**	**2**	**L-**	**2-9**	**P**	**A**	**6**	**J**	**I**	**-18**	**K**	**N**
Series	**GHS4-M** = Glenair VersaLink Micro-D											
Shell Finish	**2** = Nickel **5** = Gold											
Insulator Material	**L** = LCP or PPS											
Contact Layout (V-M)	**1-0**, **2-0**, **1-9**, **2-9**, **4-0**, **2-15**, **2-21**, **3-9**, **4-15**, **4-31**, **8-9**, **10-0**											
Contact Type[1]	**P** = Pin (Single-End Plug) **S** = Socket (Single-End Receptacle) **GP** = Double-End Cable, Pin Connectors Both Ends **GS** = Double-End Cable, Socket Connectors Both Ends **CS** = Double-End Cable, Pin and Socket [designation is for Micro-D contacts, see note 1 below]											
VersaLink Cable Type	**A** = Glenair Cable 963-043-26 (100 Ohm) **B** = Glenair Cable 963-068-26 (100 Ohm) **C** = Glenair Cable 963-069-26 (100 Ohm)											
Discrete Wire Gage (AWG)[2]	**4** = #24 **6** = #26 **8** = #28 **0** = #30 (J Wire Type Only)											
Discrete Wire Type[2]	**K** = M22759/11 600 VRMS Teflon (TFE) **J** = M22759-33 600 VRMS Modified Cross-Linked Tefzel (ETFE) **E** = NEMA HP3-EB 600 VRMS Type E M16878/4 (TFE)											
Discrete Wire Color[2]	**1** = White **5** = Color-Coded Stripes per MIL-STD-681 **7** = Ten Color Repeating											
Wire Length	Wire Length in Inches, 6 Inch Minimum											
Hardware[3]	**P**, **M**, **S**, **L** (See Mounting Hardware Designations table below)											
Shield and Jacket Option	**X** - ArmorLite Braided Microfilament Stainless Steel shield with E-CTFE Halar "Expando" Jacket **W** - ArmorLite Braided Microfilament Stainless Steel shield **Z** - 75% Braided AmberStrand shield with E-CTFE Halar "Expando" Jacket **V** - 75% Braided AmberStrand shield **T** - 100% Braided AmberStrand shield with E-CTFE Halar "Expando" Jacket **S** - 100% Braided AmberStrand shield **C** - Braided shield (Nickel Over Copper) with E-CTFE Halar "Expando" Jacket **A** - Braided shield (Nickel over Copper) **N** - No Shield, No Jacket (customer to install)											

1 - Plug connector uses Pin Micro-D contacts and Socket VersaLink contacts. Receptacle uses Socket Micro-D contacts and Pin VersaLink contacts. GP and GS cable ends rotated 180° out of phase due to connector symmetry.
2 - Omit wire information for VersaLink-only contact layouts (1-0, 2-0, 4-0, 10-0)
3 - Hardware is always required to ensure connector pair is fully mated when installed

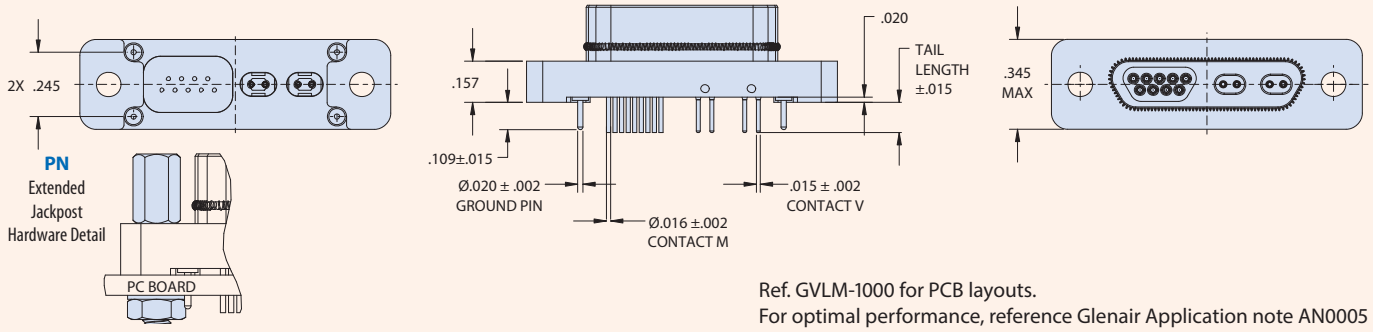


Mounting Hardware Designations			
			
P Jackpost	**M** Hex Head Jackscrew	**S** Slot Head Jackscrew	**L** Hex Head Jackscrew, Non-Removable

How-to-order
PCB connectors, straight and right-angle

How To Order VersaLink Micro- D Straight Board-Mount Connectors									
Sample Part Number	**GVLM**	**2**	**L-**	**2-9**	**P**	**BS**	**PN**	**-110**	
Series	**GVLM** = Glenair VersaLink Micro-D								
Shell Finish	**2** = Nickel **5** = Gold								
Insulator Material	**L** = LCP or PPS								
Contact Layout (V-M)	**1-0**, **2-0**, **1-9**, **2-9**, **2-21**, **4-0**, **2-15**, **3-9**, **4-15**, **4-31**, **8-9**, **10-0**								
Contact Type[1]	**P** = Pin (Plug) **S** = Socket (Receptacle) [designation is for Micro-D contacts, see note 1 below]								
Termination Type	**BS** = Board Straight								
Hardware[2]	**PN** = Extended Jackpost with Hex Nut and Lockwasher								
PC Tail Length[3]	**-.080**, **-.110**, **-.140** (Length in Inches ±.015)								

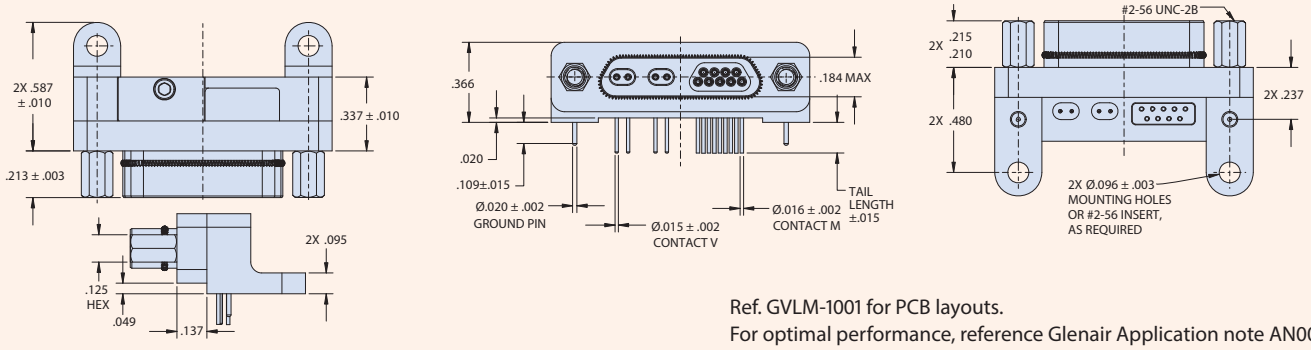
1 - Plug connector uses Pin Micro-D contacts and Socket VersaLink contacts. Receptacle uses Socket Micro-D contacts and Pin VersaLink contacts
2 - Hardware is always required to ensure connector pair is fully mated when installed 3 - PC Tails solder-dipped in 60/40 Tin-Lead solder



Ref. GVLM-1000 for PCB layouts.
For optimal performance, reference Glenair Application note AN0005

How To Order VersaLink Micro-D Right-Angle Board-Mount Connectors										
Sample Part Number	**GVLM**	**2**	**L-**	**2-9**	**P**	**BR**	**P**	**T**	**-110**	
Series	**GVLM** = Glenair VersaLink Micro-D									
Shell Finish	**2** = Nickel **5** = Gold									
Insulator Material	**L** = LCP or PPS									
Contact Layout (V-M)	**1-0**, **2-0**, **1-9**, **2-9**, **4-0**, **2-15**, **2-21**, **3-9**, **4-15**, **4-31**, **8-9**, **10-0**									
Contact Type[1]	**P** = Pin (Plug) **S** = Socket (Receptacle) [designation is for Micro-D contacts, see note 1 below]									
Termination Type	**BR** = Board Right Angle									
Hardware[2]	**P** = Jackpost									
Threaded Insert Option	**T** = Threaded Insert in Board-Mount Hole **Omit** for Through-Hole									
PC Tail Length[3]	**.080**, **.110**, **.140** (Length in Inches ±.015)									

1 - Plug connector uses Pin Micro-D contacts and Socket VersaLink contacts. Receptacle uses Socket Micro-D contacts and Pin VersaLink contacts
2 - Hardware is always required to ensure connector pair is fully mated when installed
3 - PC Tails solder-dipped in 60/40 Tin-Lead solder



Ref. GVLM-1001 for PCB layouts.
For optimal performance, reference Glenair Application note AN0005