

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.

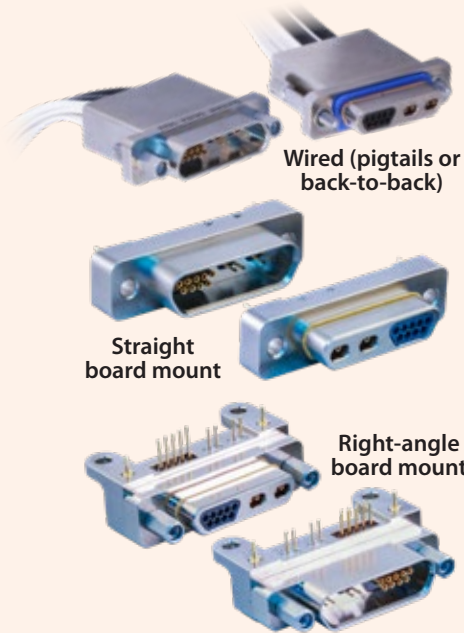
- VersaLink: shielded differential Twinax interconnect solution
- Signature Glenair design intermountable in standard Micro-D footprints
- Higher speed and density than mil-spec style Twinax solutions
- Individually shielded pairs result in virtually zero cross talk
- Hybrid arrangements with VersaLink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



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.

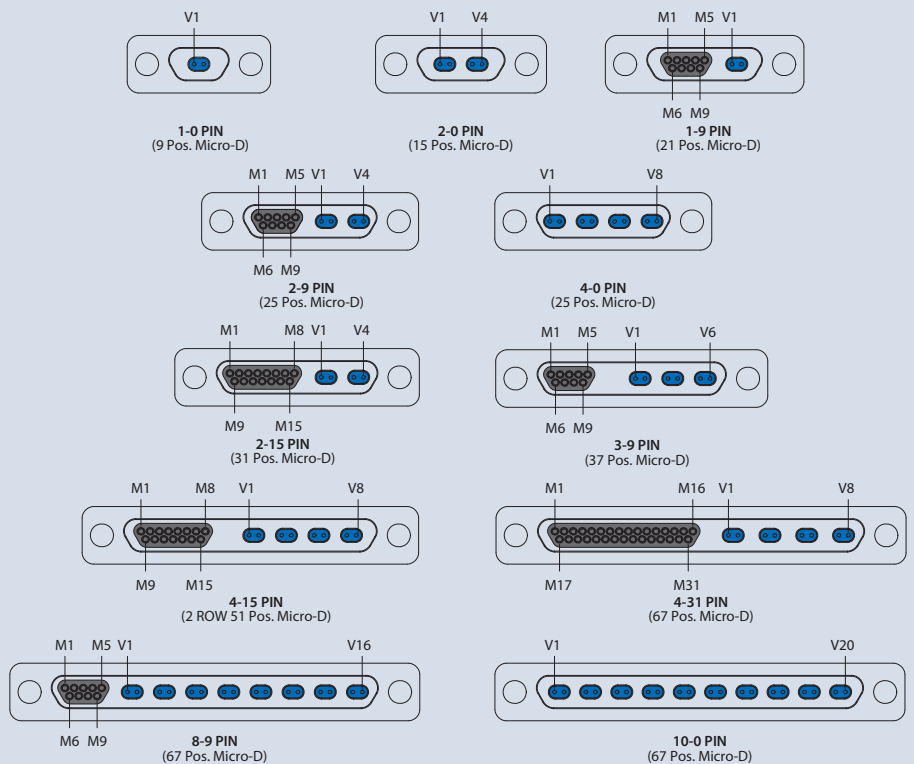
SUPPORTED HIGH-SPEED PROTOCOLS AND APPLICATIONS

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. GH54-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

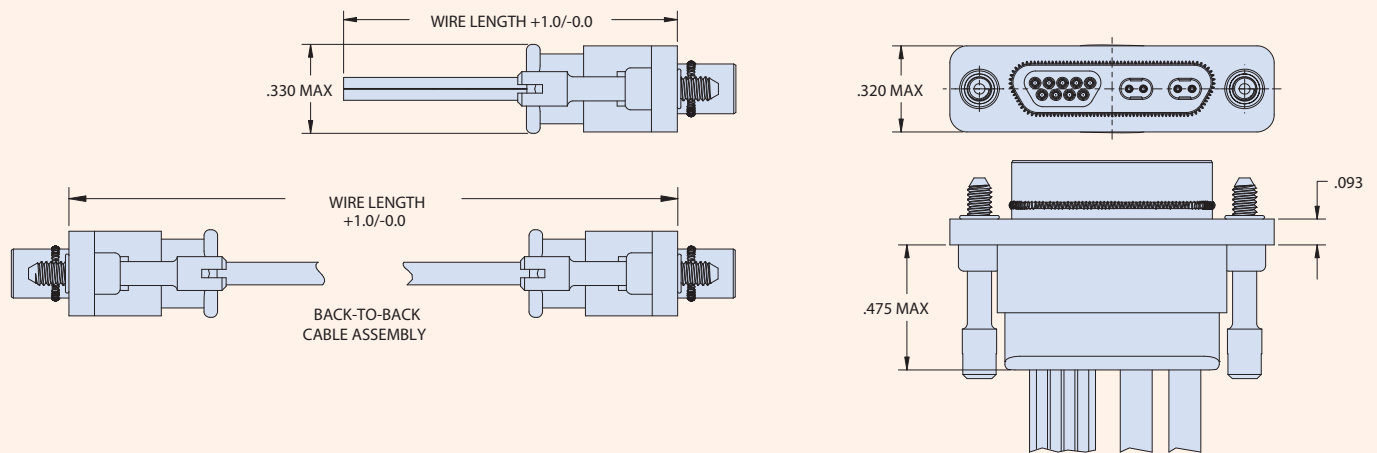
Current Rating: 3 Amp (Micro-D pins)
DWV (Contact M): 600 VAC Sea Level
Insulation Resistance (Contact M): 5000 Megohms Minimum
Contact Resistance (Contact M): 8 Milliohms Maximum
Low Level Contact Resistance: 32 Milliohms Maximum
Operating Temperature: -55°C To 125°C
Mating Force (Contact M): (10 Ounces)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

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, 3-9, 4-15, 4-31, 8-9, 10-0
Contact Type¹	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, +105°C Max)
Discrete Wire Gage (AWG)²	4 = #24 6 = #26 8 = #28 0 = #30 (J Wire Type Only)
Discrete Wire Type²	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 Color²	1 = White 5 = Color-Coded Stripes per MIL-STD-681 7 = Ten Color Repeating
Wire Length	Wire Length in Inches, 6 Inch Minimum
Hardware³	P, M, M1, S, S1, L, K (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)
<p>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.</p> <p>2 - Omit wire information for VersaLink-only contact layouts (1-0, 2-0, 4-0, 10-0)</p> <p>3 - Hardware is always required to ensure connector pair is fully mated when installed</p>	



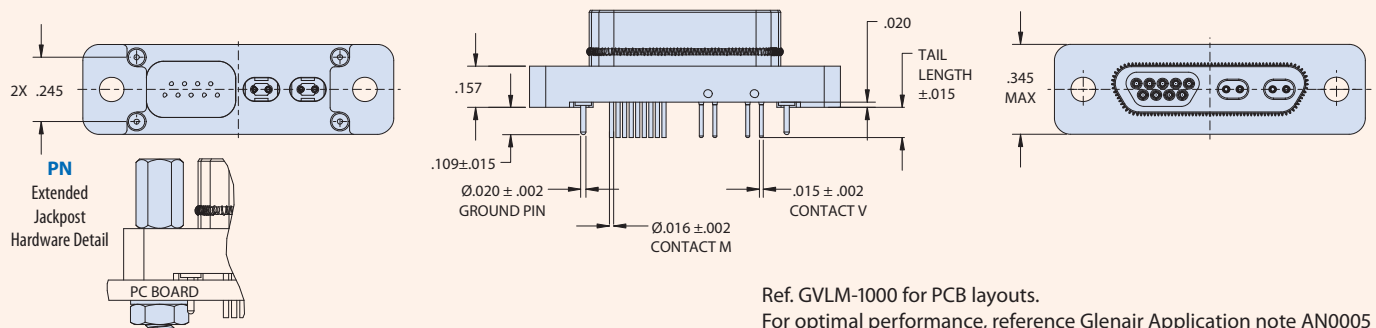
Mounting Hardware Designations						
P Jackpost	M Hex Head Jackscrew	M1 Hex Head Jackscrew, Extended	S Slot Head Jackscrew	S1 Slot Head Jackscrew, Extended	L Hex Head Jackscrew, Non- Removable	K Slot Head Jackscrew, Non- Removable Extended

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, 4-0, 2-15, 3-9, 4-15, 4-31, 8-9, 10-0							
Contact Type¹	P = Pin (Plug) S = Socket (Receptacle) [designation is for Micro-D contacts, see note 1 below]							
Termination Type	BS = Board Straight							
Hardware²	PN = Extended Jackpost with Hex Nut and Lockwasher							
PC Tail Length³	-.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



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, 3-9, 4-15, 4-31, 8-9, 10-0								
Contact Type¹	P = Pin (Plug) S = Socket (Receptacle) [designation is for Micro-D contacts, see note 1 below]								
Termination Type	BR = Board Right Angle								
Hardware²	P = Jackpost								
Threaded Insert Option	T = Threaded Insert in Board-Mount Hole Omit for Through-Hole								
PC Tail Length³	.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

