MICRO-D High-Speed

Smallest and lightest aerospace-grade high-speed connector solution

Miniaturized Micro-D Connector / TwistPin contact solution with 10+ Gb/sec. performance per differential pair

High-speed datalink applications such as aircraft avionics and other high datarate and bandwidth equipment require both optimized data transmission performance as well as robust mechanical and EMC performance. Micro-D connector packaging with high-retention-force TwistPin contacts has a proven track record in standard signal and power applications. Now Glenair has developed a Micro-D solution—intermountable in existing Micro-D panel cutouts—that brings high-speed datalink performance to these mission-critical platforms. The High-Speed Micro-D is a 1 Amp pre-wired cable and PCB solution with 10+ Gb/sec. performance per differential pair. Auxiliary EMC ground springs on plug and integral contact separation architecture ensures data integrity and low attenuation performance.

High-Speed Micro-D connectors and cables are optimized for high-speed digital datalink protocols with machined-shell packaging, low attenuation contact spacing, and ultra low PPS dielectric insulators.

- **Pre-wired factory cordsets and PCB connectors**
- **Unique contact isolation and spacing for optimal high-speed performance**
- **Standard layouts support maximum #28 AWG wire**
- **Ultra-low dielectric material combined with optimized contact size and spacing**
- **Precision-machined shells with gold or nickel plating**
- **Hybrid contact solutions available with 3 amp and 1 amp TwistPin contacts (perfect for USB 3.0 SuperSpeed applications)**

HIGH-SPEED

Micro-D

The miniature high-speed connector with mil-spec pedigree connector and contact packaging

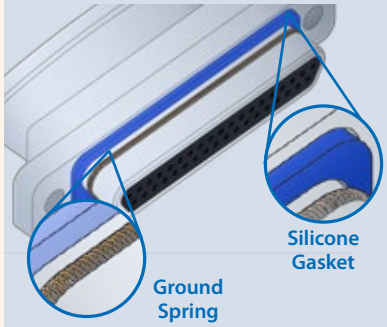
SUPPORTED HIGH-SPEED PROTOCOLS

Shell Sizes and contact arrangements optimized for today's popular high-speed protocols

21	21	25	21
Display Port 1.2	HDMI 2.0	DVI-D Dual	DVI-D Single
9	15	9	15
eSATA/SATA 3	USB 3.0	USB 2.0	Up To: Cat 6A (10GBASE-T)

Micro-D High-Speed configurations include wired assemblies and straight or 90° PCB-mount connectors. Insert arrangements feature 1 Amp Nanominiature TwistPin contacts. Hybrid 1Amp/ 3Amp arrangements for USB 3.0 SuperSpeed are also available. All designs have been tested for today's popular high-speed protocols.

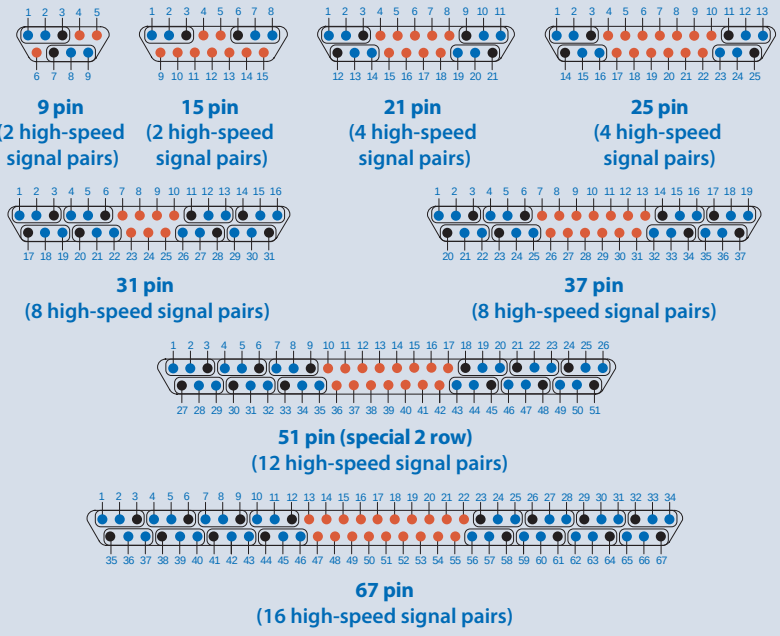
EMI SHIELDING AND ENVIRONMENTAL SEALING



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

High-Speed Micro-D contact arrangements face view pin connector

- high-speed signal pair
- signal-pair drain wire
- low-speed signal or power contacts



MATERIALS AND FINISHES

Connector Shell: Aluminum Alloy 6061
Insulator: 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
Hardware: 300 Series Stainless Steel, Passivated
Epoxy Resin Hysol EE4215 and Stycast 2850FT/Catalyst 11

PERFORMANCE SPECIFICATIONS

Current Rating: 1 Amp*
DWV: 600 VAC Sea Level
Insulation Resistance: 5000 Megohms Minimum (500 VDC)
Contact Resistance: 80 Milliohms Maximum
Operating Temperature: -55°C To 125°C
Mating Force: (7 Ounces) X (# of 1 Amp Contacts)**
Durability: 500 Mating Cycles

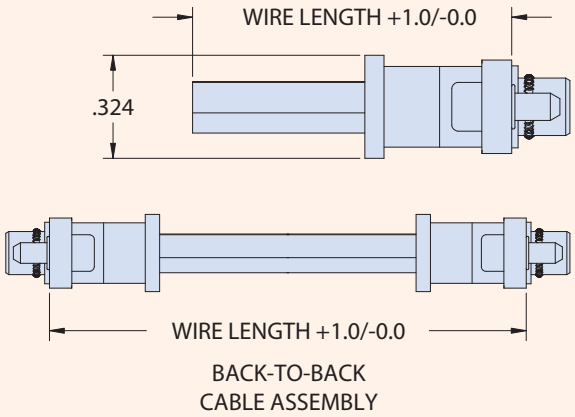
*Contact factory for custom configurations supporting up to 3 Amps.

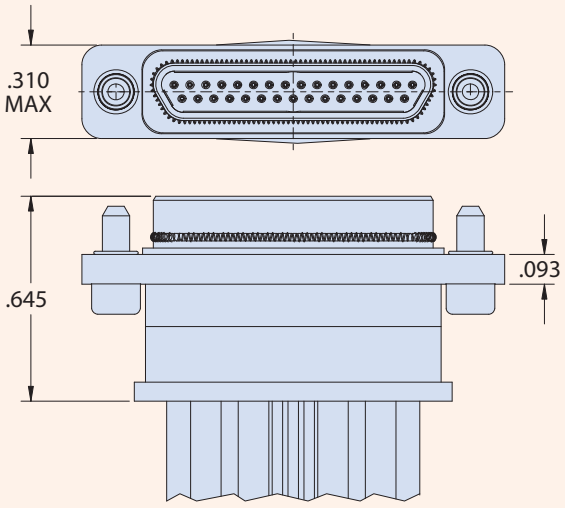
**Add (10 Ounces) X (# of 3 Amp Contacts) for mating force for configurations with 3 Amp contacts

How-to-order
GHSM Shielded Cable Assembly Connectors

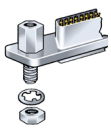
How To Order High-Speed Micro-D Wired Connectors													
Sample Part Number	**GHSM**	**2**	**R**	**-31**	**P**	**-A**	**8**	**J**	**1**	**-18**	**L**	**A**
Series	**GHSM** = Glenair High-Speed Micro-D												
Shell Finish	**2** = Nickel **5** = Gold												
Insulator Material	**R** = PPS												
Contact Layout	**9**, **15**, **21**, **25**, **31**, **37**, **51-2**, **67**												
Contact Type	**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												
High Speed Cable Type	**A** = Glenair Cable 963-128-28 (100 Ohm) **B** = Glenair Cable 963-130-28 (90 Ohm)												
Discrete Wire Gage (AWG)	**8** = #28 **0** = #30 (J Wire Type only)												
Discrete Wire Type	**K** = M22759/11 600 VRMS Teflon (TFE) **J** = M22759/33 600 VRMS Modified Cross-Linked Tefzel (ETFE)												
Discrete Wire Color	**1** = White **7** = Ten Color Repeating												
Wire Length	Wire Length in Inches, 6 Inch Minimum												
Mounting Hardware[1]	**L**, **M**, **P**, **S**, (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 - Hardware is always required to ensure connector pair is fully mated when installed

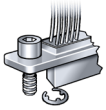




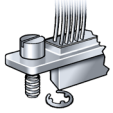
Mounting Hardware Designations



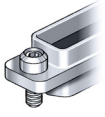
P
Jackpost



M
Hex Head Jackscrew



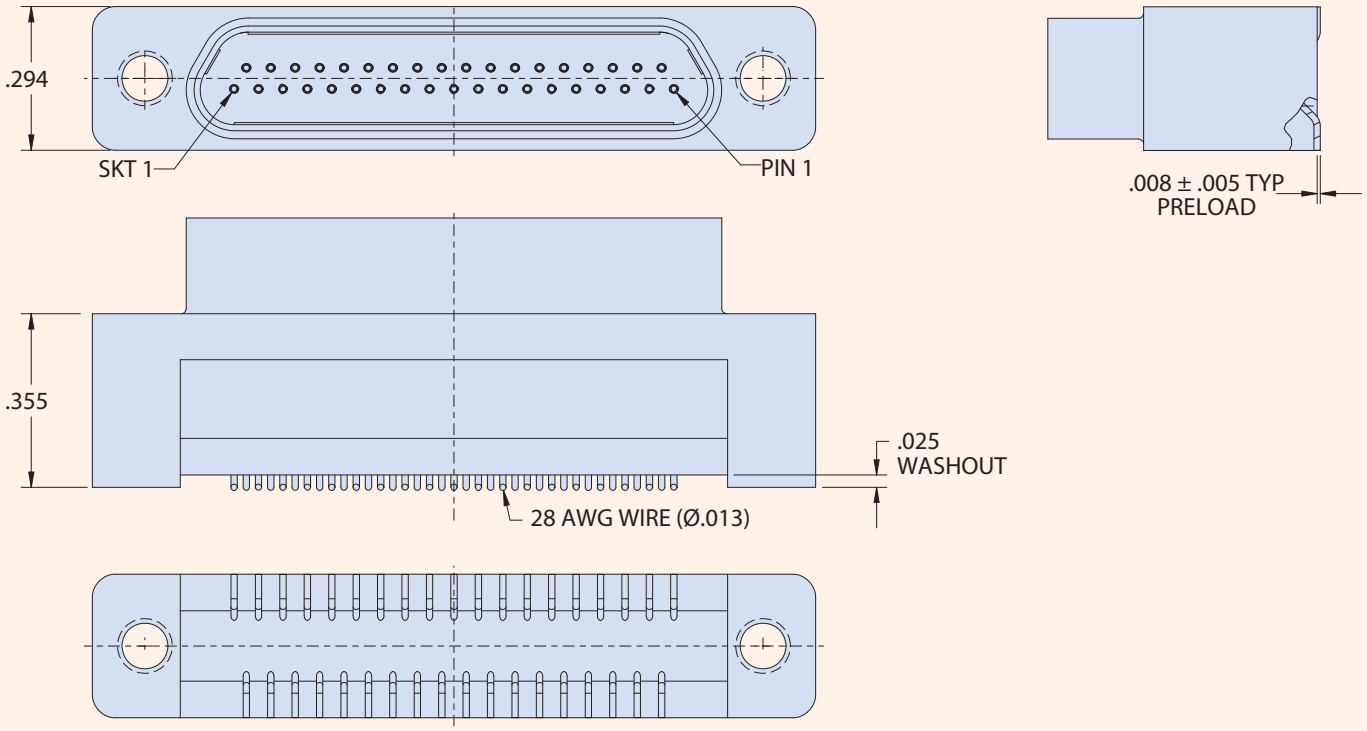
S
Slot Head Jackscrew



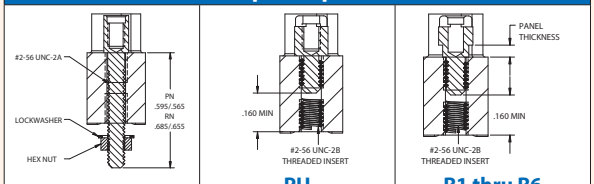
L
Hex Head Jackscrew, Non-Removable

How-to-order
GHSM-BSS Board Straight Surface Mount Connectors

How To Order High-Speed Micro-D Board Straight Surface Mount Connectors								
Sample Part Number		**GHSM**	**2**	**R**	**-25**	**S**	**BSS**	**PU**
Series	**GHSM** = Glenair High-Speed Micro-D							
Shell Finish	**2** = Nickel **5** = Gold							
Insulator Material	**R** = PPS							
Contact Layout	**9**, **15**, **21**, **25**, **31**, **37**, **51-2**, **67**							
Contact Type	**P** = Pin (Plug) **S** = Socket (Receptacle)							
Termination Type	**BSS** = Board Straight Surface Mount							
Jackpost Option (see table below)	**PN** = Extended Jackpost for .062" PCB **RN** = Extended Jackpost for .196" PCB **PU** = Short Jackpost and Threaded Insert	Rear Panel Jackpost with Threaded Insert **R1** = .032" Panel **R2** = .047" Panel **R3** = .062" Panel **R4** = .093" Panel **R5** = .125" Panel **R6** = .080" Panel						



Jackpost Options

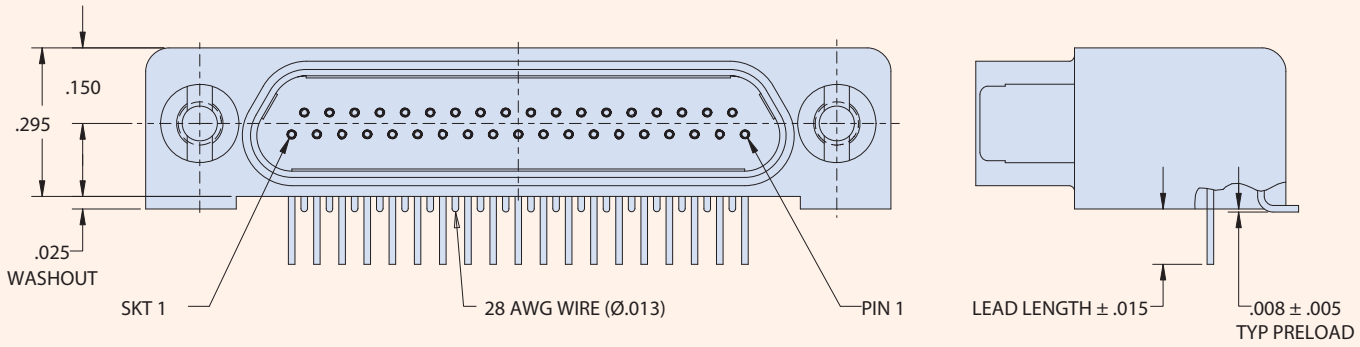


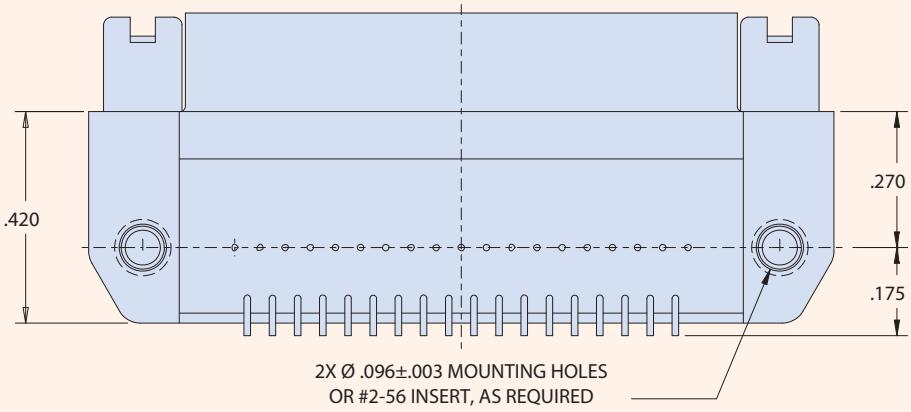
PN/RN	**PU**	**R1 thru R6**
Extended Jackpost	Short Jackpost with Threaded Insert	Rear Panel Jackpost with Threaded Insert

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

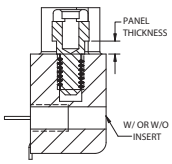
How-to-order
GHSM-HBR Hybrid Board Right-Angle connectors

How To Order High-Speed Micro-D Hybrid Board Right Angle Connectors										
Sample Part Number	**GHSM**	**2**	**R**	**-25**	**S**	**HBR**	**P**	**T**	**-.110**
Series	**GHSM** = Glenair High-Speed Micro-D								
Shell Finish	**2** = Nickel **5** = Gold								
Insulator Material	**R** = PPS								
Contact Layout	**9**, **15**, **21**, **25**, **31**, **37**, **51-2**, **67**								
Contact Type	**P** = Pin (Plug) **S** = Socket (Receptacle)								
Termination Type	**HBR** = Hybrid Board Right Angle								
Jackpost Option (see table below)	**P** = Jackpost **L** = Hex Head Jackscrew (non-removable) Jackposts for Rear Panel Mounting **R1** = .032" Panel **R2** = .047" Panel **R3** = .062" Panel **R4** = .093" Panel **R5** = .125" Panel **R6** = .080" Panel								
Threaded Insert Option	**T** = Threaded Insert in Board Mounting Hole **Omit** for Thru-Hole								
Right-Angle Lead Length	**-.080**, **-.110**, **-.140**, **-.172** (Length in Inches ±.015)								

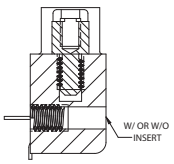




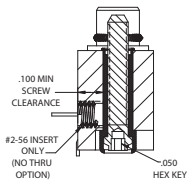
Mounting Hardware Designations



R1 thru R6
Jackposts for Rear Panel Mounting



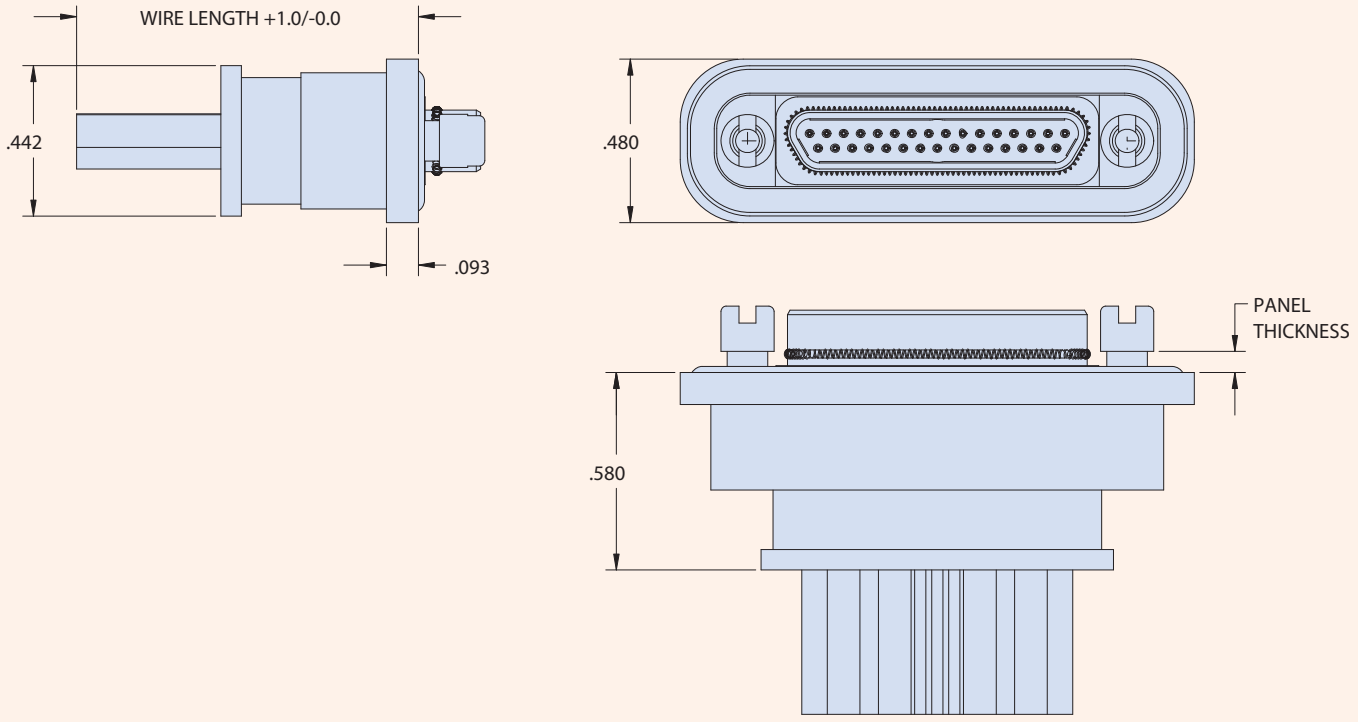
P
Jackpost



L
Hex Head Jackscrew (non-removable)

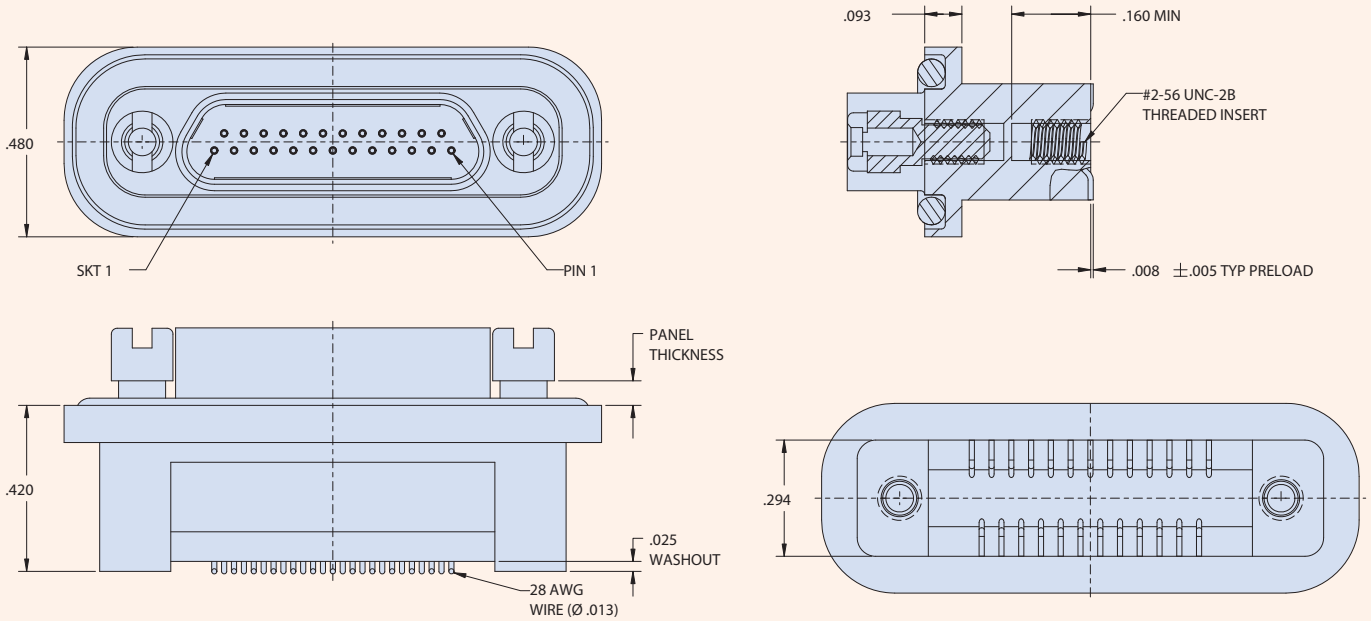
How-to-order
GHSRPM Rear-Panel Mount Cable Assembly Connectors

How To Order High-Speed Micro-D Wired Connectors													
Sample Part Number	**GHSRPM**	**2**	**R**	**-31**	**P**	**-A**	**8**	**J**	**1**	**-18**	**R3**	**N**
Series	**GHSRPM** = Glenair High-Speed Micro-D, Rear Panel Mount												
Shell Finish	**2** = Nickel **5** = Gold												
Insulator Material	**R** = PPS												
Contact Layout	**9**, **15**, **21**, **25**, **31**, **37**, **51-2**, **67**												
Contact Type	**P** = Pin (Plug) **S** = Socket (Receptacle)												
High Speed Cable Type	**A** = Glenair Cable 963-128-28 (100 Ohm) **B** = Glenair Cable 963-130-28 (90 Ohm)												
Discrete Wire Gage (AWG)	**8** = #28 **0** = #30 (J Wire Type only)												
Discrete Wire Type	**K** = M22759/11 600 VRMS Teflon (TFE) **J** = M22759/33 600 VRMS Modified Cross-Linked Tefzel (ETFE)												
Discrete Wire Color	**1** = White **7** = Ten Color Repeating												
Wire Length	Wire Length in Inches, 6 Inch Minimum												
Mounting Hardware	**R1** = .032" Panel **R2** = .047" Panel **R3** = .062" Panel **R4** = .093" Panel **R5** = .125" Panel **R6** = .080" Panel												
O-Ring Material	**C** = Conductive **N** = Non-Conductive (Nitrile)												



How-to-order
GHSRPM-BSS Rear-Panel Board Straight Surface Mount connectors

How To Order High-Speed Micro-D Board Straight Surface Mount Connectors									
Sample Part Number	**GHSRPM**	**2**	**R**	**-25**	**P**	**BSS**	**R3**	**N**
Series	**GHSRPM** = Glenair High-Speed Micro-D, Rear Panel Mount							
Shell Finish	**2** = Nickel **5** = Gold							
Insulator Material	**R** = PPS							
Contact Layout	**9**, **15**, **21**, **25**, **31**, **37**, **51-2**, **67**							
Contact Type	**P** = Pin (Plug) **S** = Socket (Receptacle)							
Termination Type	**BSS** = Board Straight Surface Mount							
Rear Panel Mount Hardware Option	**R2U** = .032" Panel **R3U** = .047" Panel **R4U** = .062" Panel **R5U** = .094" Panel **R6U** = .125" Panel **R7U** = .080" Panel							
O-Ring Material	**C** = Conductive **N** = Non-Conductive (Nitrile)							



How-to-order
GHSRPM-HBR Rear-Panel Hybrid Board Right-Angle Connectors

How To Order High-Speed Micro-D Hybrid Board Right Angle Connectors											
Sample Part Number	**GHSRPM**	**2**	**R**	**-25**	**P**	**HBR**	**R3**	**T**	**N**	**-.110**
Series	**GHSRPM** = Glenair High-Speed Rear-Panel Micro-D									
Shell Finish	**2** = Nickel **5** = Gold									
Insulator Material	**R** = PPS									
Contact Layout	**9**, **15**, **21**, **25**, **31**, **37**, **51-2**, **67**									
Contact Type	**P** = Pin (Plug) **S** = Socket (Receptacle)									
Termination Type	**HBR** = Hybrid Board Right Angle									
Rear Panel Mount Hardware Option	**R1** = .032″ Panel **R2** = .047″ Panel **R3** = .062″ Panel **R4** = .093″ Panel **R5** = .125″ Panel **R6** = .080″ Panel									
Threaded Insert Option	**T** = Threaded Insert in Board Mounting Hole **Omit** for Thru-Hole									
O-Ring Material	**C** = Conductive **N** = Non-Conductive (Nitrile)									
Right-Angle Lead Length	**-.080, -.110, -.140, -.172** (Length in Inches ±.015)