

## MISSION-CRITICAL INTERCONNECT SOLUTIONS

#### Nett Warrior NWPAN-WP-20210223 APPROVED

INTEROPERABLE NATO STANAG 4695 Soldier Power Connectors





# Warfighter Hub and Interconnect Solutions

MULTIPORT USB HUBS · TACTICAL CONNECTORS AND CABLES

**DECEMBER 2024** 



# Warfighter Hub and Interconnect Solutions

MULTIPORT USB HUBS · TACTICAL CONNECTORS AND CABLES

Nett Warrior NWPAN-WP-20210223 APPROVED

INTEROPERABLE NATO STANAG 4695 Soldier Power Connectors



#### **STAR-PAN SOLDIER / VEHICLE POWER AND DATA HUBS**



STAR-PAN<sup>™</sup>+ baseline soldier power and data hub system

STAR-PAN<sup>™</sup> X walk-on walk-off vehicle power and data hub system STAR-PAN<sup>™</sup> NG advanced next-generation soldier power and data hub system

## JTAC-TOUGH<sup>™</sup> Warfighter Hub and Interconnect Solutions



Optimized for SWaP · Proven Battlefield Performance · Nett Warrior and NATO STANAG 4695 Interoperable and Approved · In-Stock / Short Lead Time Availability





Multiport USB hubs, cables, and peripheral device manager for soldier-worn power / data network applications

## JTAC-TOUGH<sup>™</sup>

# STAR-PAN<sup>™</sup>+

# Relentless, ongoing innovation in baseline warfighter power and connectivity solutions

The Glenair STAR-PAN<sup>™</sup>+ data hub and power distribution system has evolved as the baseline warfighter power and data hub of choice—particularly in Joint Terminal Attack Controller (JTAC) applications. STAR-PAN<sup>™</sup>+ represents over a decade of soldier power and data hub innovation improving situational awareness, surveillance, intelligence, and reconnaissance while optimizing power

monitoring, conditioning, and distribution performance. Importantly, all STAR-PAN™+ technologies are designed for optimal size, weight, power, and ruggedized mil-spec performance with battle-tested environmental and EMC sealing and shielding. STAR-PAN<sup>™</sup>+ MISSION MANAGER Plug-and-play EUD / USB peripheral data exchange device

- Versatile 2, 4, and 6-port high-speed hub configurations
- Compatible with USB 1.1, USB 2.0, and SMBus
- Embedded power charging/conditioning electronics in all designs
- Smart power monitoring for longer mission life
- Robust circuit protection
- Sealed IAW the MIL-STD-810 harshenvironment standard
- New MISSION MANAGER for on-the-fly device integration to soldier C4ISR networks

Glenair's Tactical Interconnect Solutions team is backed by six decades of proven, made-in-America interconnect industry performance in service of US and NATO armed forces.

DUCOR,

## JTAC-TOUGH<sup>™</sup> STAR-PAN<sup>™</sup>+ Scalable Soldier Networks



# Powering soldier connectivity and C4ISR mission success with the world's most widely deployed power and data hub system











Radios

Batteries

Targeting

Video

GPS

Host / EUD

© 2024 Glenair, Inc • Glenair Signature Warfighter Hub and Interconnect Solutions



Ten-port base station hub with universal device charging and data uplink capabilities

# STAR-PAN<sup>™</sup>X BASE STATION

## Warfighter walk-on, walk-off connectivity and charging device for vehicle and other transport platforms

Integration of soldier C4ISR capabilities on an existing fleet of land, air, and maritime platforms is proving to be a challenge for many NATO members. STAR-PAN<sup>™</sup> X 10-Port Base Station is a baseline multi-port data and power hub for platform-based soldier power and C4ISR integration. STAR-PAN X 10-port Base Station supports USB 3.2 Gen 1 high-speed data rates and 8 Amp power delivery. The unit allows soldiers to directly connect portable soldier power and data systems to the transportation platform's network for charging and data sharing—enabling soldiers to refresh critical battery power and access real-time BMS information during transport in a vehicle, helicopter, or vessel.

STAR-PAN X incorporates an embedded MISSION MANAGER with upgraded processing power enabling it to act as a tactical edge computing device running any Battlefield Management System (BMS). STAR-PAN X incorporates all STAR-PAN + standard features as well as select next-generation features including Universal Power Ports, an expanded capability Host / EUD port, and full support for USB 3.2 Gen 1 peripherals.

#### STAR-PAN + STANDARD FEATURES

- Compliance to both US and NATO STANAG 4695 connector interfaces
- Smart battery power management, built-in SMBus to USB conversion
- **BMA-agnostic hardware**
- Hot-swappable power sourcing, radio-supplied backup power support
- Water immersion IAW MIL-STD-810, IP67-rated dust/water resistant
- Intuitive equipment hookup and operation

### WARFIGHTER-TOUGH STAR-PAN X Base Station



## Portable base station unit for convenient vehicle-to-soldier data uplink and charging

#### SPECIFICATIONS

- PAN ports for up to ten soldier devices
- HDMI and Ethernet ports
- Integrated STAR-PAN MISSION MANAGER functionality
- Two USB 3.0 ports
- Three Universal Power Ports
- Glenair power port management
- Smart battery charging from auxiliary power
- Up to 5A battery power per port, 20A system total
- Up to 2A 5 Volt VBUS power per port, 10A across all ports
- Precision-machined construction, integrated connectors

#### STAR-PAN X BASE STATION APPLICATIONS

- Armored personnel carriers
- Land and air troop transports
- Landing craft and other naval vessels
- Command posts and shelters

#### **STAR-PAN X CABLE PART NUMBERS**

BB259 BATTERY CABLE ADAPTER	TS8-496
AC PWR SUPPLY CABLE ADAPTER	TS8-497
USB 3.0 CABLE ASSEMBLY	TS1-039
CAT 5E ETHERNET CABLE	TS1-040
HDMI TYPE A CABLE ASSEMBLY	TS1-041
USB 2.0 DONGLE	TS3-001
GENERAL-PURPOSE EXTENSION CABLE	TS1-069

#### OVERVIEW

STAR-PAN X 10-Port Base Station is a multi-port data and power hub for platform-based C4ISR integration. STAR-PAN X 10-port Base Station provides the same NATO standard interconnect interface as soldier-worn STAR-PAN systems, making it completely interoperable with the existing portfolio of cables and adapters and allowing easy soldier interconnection to the platform's data and power network. With STAR-PAN X, dismounted soldiers can connect to the vehicle power and data accessing on-board radios and sensors via a single cable connection and/or access data through the WiFi network when operating in the vicinity of the vehicle.



© 2024 Glenair, Inc • Glenair Signature Warfighter Hub and Interconnect Solutions



Next-generation USB-C warfighter power and data hub with fastcharging universal 8 Amp power ports

# WARFIGHTER-TOUGH STAR-PAN<sup>TM</sup> NG

### Next-Generation STAR-PAN Multiport USB Hub, Cable, and Power Management Systems

Glenair's next-generation power and data hub upgrade from the baseline STAR-PAN + series incorporates a broad range of new capabilities in direct response to requests from JTACs, special operations forces, mission commanders, and other military specialists. STAR-PAN NG innovations have resulted in higher currentcarrying capabilities, greater versatility in power input support, and real-time plug-and-play USB device integration. Other advanced features include:

- A new 8A per-pin power connector design in the same dimensional package as our original 5 amp series 807 NATO STANAG 4695 push-pull connector. The new connector design features a retractable pin number 7 for backward-compatibility to legacy devices.
- STAR-PAN + hubs utilize dedicated power ports for battery power, auxiliary power, and radio power. New STAR-PAN NG Universal Power Ports (UPP) may be used interchangeably for any format of input or output power. The Universal Power Port interface supports both higher voltage input power and managed 5V output power to charging devices.
- STAR-PAN NG now incorporates an advanced host port with native USB-C "negotiation" and power integration—meaning power pin assignments are in conformance with the new standard, are backward-compatible to previous USB iterations, and deliver higher overall power levels. Daisy chaining of multiple EUD devices for power input is also enabled via the new host port and circuit board.
- Ongoing support of evolving USB protocols requires keeping pace with higher data rates, such as the new USB 3.2 Gen 1 5Gbps standard. STAR-PAN X Base Station, our 10-port "walk-on, walk-off" vehicle / soldier hub features board upgrades and interconnect interfaces in accordance with this new data rate standard.

- Versatile 1, 2, 3, and 4 PAN port-equipped hub configurations
- Universal Power Ports with embedded power charging
- Integrated MISSION MANAGER for plug-andplay device integration
- Circuit board level USB-C power integration and delivery
- Precision-machined hub bodies, IAW MIL-STD-810 harsh-environment, IP67 dust/water resistant
- Support for 5Gb/s data transmission (STAR-PAN X Base Station only)
- Standard NG solutions and custom configurations

Export of STAR-PAN<sup>®</sup> outside of the U.S. is controlled by the U.S. Department of Commerce Export Administration. See individual product pages for details. Consult factory for technology / hardware licensing information.

### warfighter-tough STAR-PAN NG



# Next-generation multiport USB hub, cable, and power management systems with 8 amp power and USB-C integration

STAR-PAN NG SOLDIER HUB SELECTION GUIDE



**STAR-PAN NG 1/2 P/N TS2-011** Our smallest hub with one EUD port, one pan port and two universal power ports



STAR-PAN NG 2/2P/N TS2-012The next step up with one EUD port, two pan<br/>ports and two universal power ports



#### STAR-PAN NG 3/3 P/N TS2-013

Next-generation design with one EUD port, three pan ports and three universal power ports



#### STAR-PAN NG 4/4 P/N TS2-014

Next-generation design with one EUD port, four pan ports and four universal power ports

STAR-PAN NG HUB SELECTION GUIDE				
Part No.	Hub	Description		
TS2-011	STAR-PAN NG 1/2	1X HOST; 1X PAN; 2X UPP, no PPS on HOST		
TS2-012	STAR-PAN NG 2/2	1X HOST; 2X PAN; 2X UPP		
TS2-013	STAR-PAN NG 3/3	1X HOST; 3X PAN; 3X UPP; w/ Charging		
TS2-014	STAR-PAN NG 4/4	1X HOST; 4X PAN; 4X UPP; w/ Charging		
TS2-022	STAR-PAN NG 2/2 WITH MISSION MANAGER	PORTS 1X EUD;2X PAN; 2X UPP MM32		
TS2-023	STAR-PAN NG 3/3 WITH MISSION MANAGER	PORTS 1X EUD;3X PAN; 3X UPP MM64		
TS2-024	STAR-PAN NG 4/4 WITH MISSION MANAGER	PORTS 1X EUD;4X PAN; 4X UPP MM64		

© 2024 Glenair, Inc • Glenair Signature Warfighter Hub and Interconnect Solutions



## **Tactical Cable Assemblies** STAR-PAN<sup>™</sup>+, STAR-PAN<sup>™</sup> X, and STAR-PAN<sup>™</sup> NG compatible

#### GENERAL-PURPOSE STAR-PAN<sup>™</sup> SYSTEM CABLES



NETT Warrior (C1) extension cable

# 2-port hub expansion cable



Radio port-to-PAN port adapter cable

#### STAR-PAN<sup>™</sup> PERIPHERAL DEVICE CABLES



TacROVER-P SIR 2.5 video cable



DAGR GPS and micro DAGR-V cable



Radio adapter cable for STAR-PAN IV



TacROVER-P SIR 2.0 cable



PAN port to USB-A adapter cable



PLRF-15C/25C laser range finder cable

#### STAR-PAN<sup>™</sup> RADIO DATA / POWER CABLES AND ADAPTERS



© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324

# SMALL FORM-FACTOR Tactical Soldier Interconnect Cable Assemblies



## With Series 807 Mighty Mouse NW push-pull connectors NWPAN-WP-20210223 approved · NATO STANAG 4695 interoperable



HARSH ENVIRONMENT OVERMOLDED

#### ULTRAFLEXIBLE FABRIC OVERBRAID



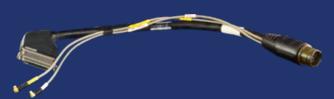
Overmolded breakout assembly featuring 100% Glenair content; Non-environmental aircraft cable with integrated circuit breakout a true turnkey solution box and Mighty Mouse 807 push-pull connectors



Multibranch cable assembly with Glenair Mighty Mouse, HiPer-D M24308 and customer-supplied power connector



Turnkey overmolded GPS cable assembly with integrated switch



Environmental cable with Glenair Series 804 Mighty Mouse, Series 79, and RF Coax terminations



Heads-up display (HUD) cable with custom Series 807 Mighty Mouse and low-profile cable routing



Military jet jumper cable with user-serviceable backshells and fabric overbraid for mechanical protection



Hybrid Mighty Mouse and Micro-D aircraft pilot helmet cable assembly



Series 807 Mighty Mouse NW micro miniature connectors for dismounted soldier battery charging, radio, and PAN applications, NSN stock-listed.

#### Nett Warrior NWPAN-WP-20210223 APPROVED

INTEROPERABLE NATO STANAG 4695 Soldier Power Connectors

## PUSH-PULL QDC Nett Warrior Qualified Power and Data Connectors

Today's warfighters demand quick battery charging and reliable radio operation. Glenair pioneered the original 6-pin Nett Warrior connector, as well as a second-generation 7-pin series with USB-C power integration and delivery. Now Glenair is introducing a signature 10 Amp Crown Ring contactequipped version for higher-current applications that easily integrates into US / NATO, Nett Warrior, and STAR-PAN+ hub and cable systems.

Glenair STAR-PAN NG hubs and cables—now equipped with 10 Amp Crown Ring contact receptacles—are smart devices capable of managing next-generation high-power equipment as well as lower-power legacy devices.



## SERIES 807 MIGHTY MOUSE NW CONNECTOR LINE

All designs backward-compatible with current and legacy Nett Warrior hardware

- Original 6-pin Nett Warrior plugs and receptacles
- Backward-compatible
   7-pin series with USB-C
   power integration and
   delivery
- New 10 Amp receptacles for higher-current soldier battery, radio, and PAN C4ISR equipment
- Glenair Signature Mighty Mouse 807 NW connectors are available in pigtail and point-to-point cables for all US/NATO soldier C4ISR devices

# US ARMY AND NATO QUALIFIED **Nett Warrior Connectors**



# For STAR-PAN hub systems, Nett Warrior C4ISR hardware, next-gen and legacy radios and batteries

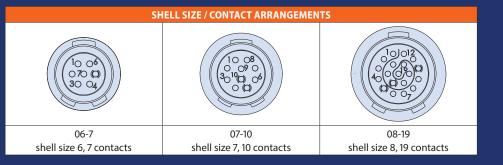
SERIES 807 MIGHTY MOUSE NW CONNECTOR LINE: HOW-TO-ORDER							
STAR-PAN	cable plug	Pane mour plug	nt 🕼		e cable eptacle	6	Panel- mount receptacle
QUALIFIED FOR USE WITH ALL STAR-PAN + AND STAR-PAN NG	Series 807 NW Plugs (6 pin)	Crimp	PC Tail	Solder Cup	In-Line	Rear Mount Jam Nut	Front Mount Jam Nut
POWER / DATA HUBS	8070-1676-06ZNU6-6PY NSN 5935-01-659-5575	х			х		
	807-871-06ZNU6-6PY	Х			Х		
THE COMPANY	807-309-06ZNU6-6PY			Х	Х		
WINC	8070-1153-07ZNU6-6EC			Х		Х	
	8070-1153-07ZNU6-6PC		Х			Х	
	8070-1153-00ZNU6-6EC			Х			Х
	8070-1153-00ZNU6-6PC		Х				Х
	Series 807 NW Receptacles (6 socket)	Crimp	PC Tail	Solder Cup	In-Line	Rear Mount Jam Nut	Front Mount Jam Nut
	8070-1675-01ZNU6-6SY NSN 5935-01-659-4090	х			х		
MATERIALS / FINISH	8070-1675-07ZNU6-6SY	Х				Х	
<ul> <li>Shell: Al alloy / ZNU plated</li> </ul>	8070-1675-00ZNU6-6SY	Х					Х
• Contacts: Cu alloy / Au plated	807-874-01ZNU6-6SY	Х			Х		
Insulators: Rigid dielectric	807-874-00ZNU6-6SY	Х					Х
• O-rings: Fluorosilicone	807-874-07ZNU6-6SY	Х				Х	
o migst horosmeene	807-348-01ZNU6-6SY			Х	Х		
	807-216-07ZNU6-6SY			Х		Х	
Series 807 NW Nett Warrior Connector Insert Arrangements	807-216-01ZNU6-6SY			Х	Х		
inserezziagenents	807-216-00ZNU6-6SY			Х			Х
	807-216-07ZNU6-6DY		Х			Х	
$-\frac{6}{2}$ $-\frac{1}{2}$ $-\frac{1}{2}$ $-\frac{1}{2}$	807-216-01ZNU6-6DY		Х		Х		
5-0-1-04	807-216-00ZNU6-6DY		Х				Х
Original NSN-Listed 6-Pin	Series 807 NW Plugs (7 pin)	Crimp	PC Tail	Solder Cup	In-Line	Rear Mount Jam Nut	Front Mount Jam Nut
(Nett Warrior Program /	8070-1676-06ZNU6-7PY	Х			Х		
NATO STANAG 4695 Approved)	807-871-06ZNU6-7PY	Х			Х		
	Series 807 NW Receptacles (7 socket)	Crimp	PC Tail	Solder Cup	In-Line	Rear Mount Jam Nut	Front Mount Jam Nut
54 44	8070-1675-01ZNU6-7SY	Х			Х		
	8070-1675-07ZNU6-7SY	Х				Х	
Backward-Compatible	8070-1675-00ZNU6-7SY	Х					Х
7-Pin USB-C Power Series	807-874-01ZNU6-7SY	Х			Х		
16 02 16 02	807-874-00ZNU6-7SY	Х					Х
	807-874-07ZNU6-7SY	Х				Х	
$- (e_{\Phi}$	8070-1299-ZNU6-7DY		Х				Х
	Series 807 NW Receptacles (10 Amp)	Pigtail Assembly	PC Tail	Solder Cup	In-Line	Rear Mount Jam Nut	Front Mount Jam Nut
10-Amp STAR-PAN NG Series	8071-6924	Х			Х		
6-6 and 6-7 Arrangements	8070-3151-07ZNU6-6SY		Х			Х	



Mighty Mouse SealTac™ Spring Contact Push-Pull Connectors and Jumpers



The Mighty Mouse Series 86 SealTac is a durable, environmentally-sealed push-pull connector with outstanding user ergonomics. Receptacle target-contact designs are fully sealed, easy to maintain and clean, and immersible to 30 PSI / IP68 in the unmated condition. Spring pin contacts (plug side) are rated to 2 Amps and can withstand virtually unlimited mating cycles.



- High-durability unlimited life-cycle performance
- 30 PSI open-face / IP68level sealing (box side)
- Ergonomic keyed pushpull mating
- High-density micro miniature form factor
- Maintenance-free spring contact inserts
- Integrated EMI/RFI ground spring and shield termination band porch
- High vibration and shock resistant
- Full qualification testing complete and available

© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324

## SERIES 86 SealTac Tactical Push-Pull Connectors



Spring-pin equipped Mighty Mouse harsh-environmental

#### SERIES 86 SEALTAC APPLICATIONS

**CONNECTOR SELECTION GUIDE** 

C4ISR soldier devices



Rugged computers and hand-helds



Power and data hubs



Tactical communications gear



Helmet quick-disconnects



SERIES 86 SEALTAC <sup>®</sup> PERFORMANCE SUMMARY				
	Performance	Specification		
DWV	500 Vac	EIA 364-20		
IR	5 GΩ, 200 Vdc	EIA 364-21		
Temperature Range	-55°C / +125°C			
Contact Ω	40 mΩ	EIA-364-23 (26 AWG wire included)		
Durability	2500 cycles min	EIA-364-09		
Mating Force	8 lbs (size 06) 12 lbs (size 08)	EIA-364-13		
Random Vibration		MIL-STD-810H, method 514.8, Annex E, figure 514.8E-1. One hour each axis, longitudinal and perpendicular axes		
Shock		Mil-Std-810, method 516, Procedure I (40 G's, 11ms). 3 shocks X 3 axes X 2 directions = 18 shocks		
Water Immersion	30 psi, 30 minutes, 100 M $\Omega$ min	EIA 364-21, mated and unmated (open face)		



Mighty Mouse micro miniature connector series for optimized SWaP

Mighty Mouse connectors: Reducing the size and weight of tactical interconnect systems for over 25 years. The most widely deployed mil-aero micro miniature circular in the world. Mighty Mouse vs. 38999: less than half the size and weight.

- 8 coupling styles and 67 contact arrangements from 1 – 130 contacts
- MIL-DTL-38999 caliber performance
- Size #23, #22, #20, #20HD, #16, #12, #8 signal, power, RF, and high-speed contacts
- Discrete connectors and turnkey cable assemblies

FULL RANGE OF SUPPORTED CONTACTS, 67 CONTACT ARRANGEMENTS



Signal





Power

High-Speed

RF / Microwave

Pneumatic



67 arrangements, from 1–130 contacts

© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324

## SERIES 80 MICRO MINIATURE **Mighty Mouse Connectors and Cables**



Awesome performance, itty-bitty package

#### **CHOOSE FROM 8 DIFFERENT COUPLING DESIGNS**



Series 800 **UN thread** 



Series 801 double-start ACME thread



Series 802 AquaMouse UNEF thread



Series 805 Triple-start thread, size #23 contact layouts



Series 803 bayonet coupling



Series 806 Modified triple-start, size #22HD and #20HD layouts





Series 824 Locking quick-disconnect





**IP67** Environmental



**Bulkhead feed-thrus and** penetrators



**AVAILABLE MIGHTY MOUSE CONNECTOR CLASSES** 

**Glass-to-metal seal** hermetic



Sav-Con<sup>®</sup> connector savers



CODE RED Lightweight hermetic



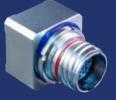
**High-frequency** RF / Microwave



EMI/RFI Filter



High-speed Ethernet



**EMP Transient Voltage** Suppression



Single- and multimode fiber optic



© 2024 Glenair, Inc • Glenair Signature Warfighter Hub and Interconnect Solutions



Series 806 Mil-Aero: Advanced performance, reduced size and weight

Innovative design meets key performance benchmarks for harsh vibration, shock, and environmental settings—as well as highaltitude, unpressurized aircraft zones with aggressive voltage ratings and altitude immersion standards.

SIZE AND WEIGHT SAVING SOLUTIONS: CATALOG OR CUSTOM



High-availability catalog solutions plus custom designs such as this unique Quadrax implementation Two mating styles available: Triple-start stub ACME and bayonet-lock

> Next-generation small form factor aerospacegrade circular connector

-603

- Designed for harsh application environments including SWAMP-zone sensors, flight navigation electronics, and flight deck avionics
- Integrated antidecoupling technology
- High density 20HD, 22HD, RF, power, and high-speed contact arrangements
- Hermetic and filter versions
- +200°C temperature rating

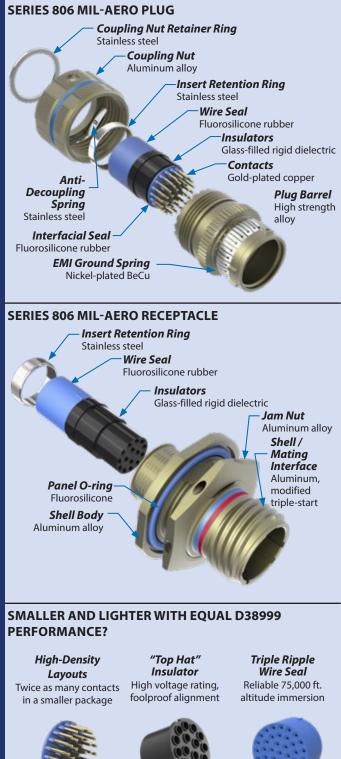
## Series 806 Mil-Aero **Ultraminiature Circular Connectors**



### For harsh mil-aero applications IAW MIL-DTL-38999

VAC

SERIES 806 MIL-AERO: FEATURES / SPECIFICATIONS Supported wire sizes: **#20HD contacts** 20-24 AWG **#22HD contacts** 22-28AWG **Dielectric** withstanding voltage **#20HD layouts:** 1800 VAC #22HD layouts: 1300 Reduced pitch triple-start modified anti-decoupling stub ACME mating threads "Triple ripple" wire sealing grommet (75,000 ft. rated) **Integral Nano-Band shield termination** platform EMI shielding effectiveness per D38999M para. 4.5.28 (65 dB min. leakage attenuation @ 10GHz) 10,000 amp indirect lightning strike MIL-S-901 Grade A high impact shock AVAILABLE LIGHTWEIGHT ALUMINUM **"CODE RED" HERMETICS** CODE RED is a lightweight encapsulant sealing and assembly process with 50% package-weight savings compared to glass-to-metal seal Kovar/stainless steel solutions. Non-outgassing CODE RED (IAW NASA/ ESA) provides durable hermetic sealing with 1X10<sup>-7</sup> leak rate performance. Gold-plated copper contacts deliver outstanding lowresistance current carrying capacity.





The ultimate nano miniature tactical connector



Mighty Mouse not small enough? Meet the toughest, smallest, and highest-speed connector we've got—ideal for soldier-wearable C4ISR equipment.

- Push-pull version with high / low force release option
- Threaded version for secure mating
- Hybrid contact system
- First mate / last break power contacts
- Layouts and contact spacing optimized for high-speed

#### PRINTED CIRCUIT BOARD PLUG AND RECEPTACLES QUICK-DISCONNECT THREADED **Right Angle**, Vertical, Rear Vertical, Rear Right Angle, Vertical Plug, **Right Angle**, **Rear Panel** Vertical, Rear Panel Mount, Vertical, Rear **Rear Panel** Panel Mount, **Rear Panel Rear Panel** Mount, PCB **Panel Mount** PCB Mounting **Panel Mount** Mount Ground Pins Mount Mount Holes **Mounting Holes**

## SERIES 88 SuperFly<sup>®</sup> Nano miniature Soldier System Connectors and Cordsets



Tactical nano miniature connectors and cables

#### NANO MINIATURE SUPERFLY® CORDSETS AND PIGTAILS



Overmolded threaded plug and receptacle



Quick-disconnect overmolded cordset

- IP67 immersion rated
- High-reliability contacts: 5 Amp, 3 Amp, and 1 Amp
- High shock and vibration
- Robust EMI shielding

#### CONTACT ARRANGEMENTS

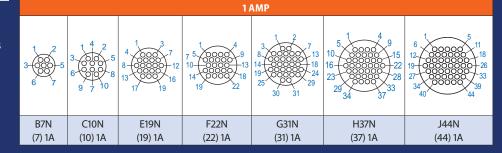
Series 88 SuperFly connectors are available in 27 contact arrangements with 1 Amp, 3 Amp, 5 Amp contacts, and mixed-contact hybrid arrangements Designed for high speed data applications

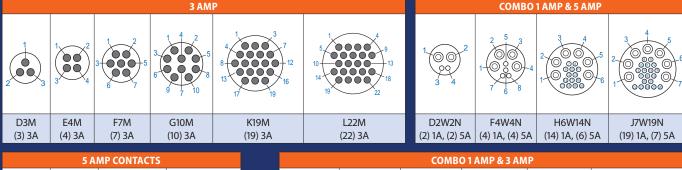
- Pre-wired, epoxy-sealed cordsets
- Straight and 90° PC tail receptacles

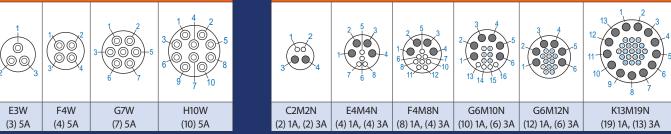
Threaded pigtail plug and receptacle

Quick-disconnect pigtail plug and jam nut receptacle

- 27 Contact arrangements
- Front or rear panel mounting
- Aluminum or stainless steel
- Accepts #22 to #32 AWG wire







© 2024 Glenair, Inc • Glenair Signature Warfighter Hub and Interconnect Solutions



The Nano miniature Shielded Octaxial Interconnect for High-Speed Datalink Protocols



High speed, harsh environment SuperFly® Datalink connectors—shielded for 10Gb Ethernet, SuperSpeed USB, HDMI, SATA, and DisplayPort protocols—deliver outstanding signal integrity and save significant size and weight compared to Quadrax solutions.

#### PANEL MOUNT CONNECTOR



Panel mount SuperFly Datalink receptacles feature straight or right angle printed circuit board terminals. SuperFly Datalink board mount jacks are epoxy-sealed and are compatible with conformal coatings.



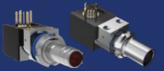
Quick Disconnect



Threaded Coupling







**Right Angle PC Tails** 

© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324

## SERIES 882 SuperFly<sup>®</sup> Datalink



## The high-speed nano miniature connector for harsh environment defense applications



and the construction of the formation of the

## nano miniature

Glenair Signature MIL-DTL-32139 type Nano miniature circular connectors

Glenair Nano Circular—the smallest and lightest harsh-environment connector in the business. From left to right: D38999 Series III, Mighty Mouse Series 805, Glenair SuperFly, and Nanominiature Series 89 Nano Circular all with similar pin count

The M32139 Nano circular is the smallest and lightest harsh-environment connector in the business. 1 Amp contacts are set on .025" centers and terminated to 30 AWG wire or PCB tails. Glenair supplies both breakaway and threaded mating configurations with optimal size and weight reduction (SWaP).

- Push-pull and threaded mating
- Metal shell: aluminum or stainless steel
- High vibration and shock gold alloy TwistPin contact system
- Prewired pigtails and PCB thru-hole
- Straight and right-angle thru-hole PCB versions

#### THE NANO TWISTPIN ADVANTAGE



Transverse cross-section of a TwistPin contact crimped to solid wire



- Gas-tight crimp joint
- Better shock and vibration performance
- Corrosion proof contact alloy

Optimal SWaP for tactical warfighter applications

© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324

## SERIES 89 Nano Miniature Circular Connectors



### High density nano · signature TwistPin contacts · cable and PCB

#### **PRODUCT SELECTION GUIDE AND PERFORMANCE SPECIFICATIONS**

Pre-wired and PCB thru-hole mount circular nano plug and receptacle connectors with threaded or breakaway interfaces. Available receptacle mounting configurations include front panel mount, rear panel mount, and inline.



SERIES 89 NANO MINIATURE CIRCULAR CONNECTOR PERFORMANCE				
Contact Spacing	.025" (0.64mm) Contact Centers	Contact Resistance	71 Millivolt Drop Maximum	
Wire Accommodation	#30-#32 AWG	Shock, Vibration	100g′s, 20 g′s	
Current Rating	1 AMP Max	Durability	200 Mating Cycles	
DWV	250 VAC RMS Sea Level	Corrosion Resistance	48 Hours Salt Spray	
Insulation Resistance	5000 Megohms Minimum	Mating Force	5 Ounce Max, 0.4 Ounce Min	
Operating Temperature	-55° C. to +125° C.			

## AFFPET 55116 QPL and high-performance MCOTS 55116 Audio / Radio Connector Technology



# Series 152 HiPer 55116 connectors offer significant performance advantages for modern soldier communication systems

Integrated banding porch/shrink boot groove

<10 mΩ contact resistance



1000 hour+ salt spray corrosion-resistant

- Integrated EMI ground spring
- Fully intermateable and interoperable with MIL-DTL-55116 connectors

- Intermateable and interoperable with standard MIL-DTL-55116 connectors
- Low contact resistance: Less than 10 milliohms
- Integrated EMI ground spring provides improved 2.5 milliohm shell-to-shell conductivity performance
- IP68 rated sealing in mated and unmated condition, prevents water ingress into radio equipment
- 1,000 hour+ salt spray corrosion resistance
- Integrated cable shield termination band porch
- Superior 100 pound cable pull test rating

#### GLENAIR DLA QUALIFIED SERIES 151 STANDARD MIL-DTL-55116 AUDIO CONNECTORS

151-001 MIL-DTL-55116 QPL audio plug with wire strain relief



151-002 MIL-DTL-55116 QPL audio plug/overmold adapter



151-003 MIL-DTL-55116 QPL radio-mount jam nut receptacle

151-004 MIL-DTL-55116 QPL in-line receptacle, strain relief

© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201 • 818-247-6000 • www.glenair.com • U.S. CAGE code 06324

## SERIES 152 INTERMATEABLE HiPer 55116 Radio Connectors and Cables



Superior environmental, EMC, and durability performance

#### SERIES 152 HIPER 55116 CONNECTOR SELECTION GUIDE



Audio plug, field serviceable, with wire strain relief and rigid contacts, crimp and solder cup



Overmolded audio plug cordset with wire strain relief



Audio plug with shield termination porch, overmolding adapter and rigid contacts, crimp and solder cup



Overmolded audio plug cordset



In-line receptacle with shield termination porch, overmolding adapter, and non-rigid spring contacts, crimp and solder cup



Overmolded in-line audio receptacle cordset



Radio-mount jam nut audio receptacle with non-rigid spring contacts or PC tails and optional ground pins



Filtered radio-mount jam nut audio receptacle with non-rigid spring contacts, solder cup, or PC tails



Special adapter configurations and protective covers



SuperSeal RJ45 and USB field connectors. Now available for USB SuperSpeed 3.0



Military-grade, ruggedized field connectors that deliver improved environmental sealing, EMI/RFI grounding, and a broader range of wire termination options for RJ45 and USB – now available for USB SuperSpeed 3.0

Available ruggedized memory stick 32GB, 64GB, and 128GB versions

- New SuperSpeed USB 3.0 protocol support
- Superior sealing—IP67 unmated—for complete system protection against water, sand and dust
- Highly durable SuperSeal<sup>™</sup> insert design, provides enhanced operating temperature, increased life-cycle, and rugged vibration and shock performance
- Crimp, solder-cup, PC tail and cable assemblies

## SuperSpeed USB 3.0 Ruggedized connectors and cables



MIL-DTL-38999 Series III USB / RJ45 field connectors

#### **NEW SUPERSPEED USB 3.0 RUGGEDIZED FIELD CONNECTORS**



Cable plug

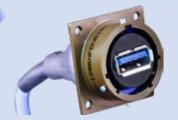


re

Wall mount receptacle with metric clinch nuts



Wall mount receptacle with slotted holes



Wall mount receptacle with round holes



Jam nut mount receptacle

#### **TURNKEY SUPERSPEED USB 3.0 CABLE ASSEMBLIES AND JUMPERS**



© 2024 Glenair, Inc • Glenair Signature Warfighter Hub and Interconnect Solutions

# Glenair Mil-Spec Interconnect Technologies



**Qualified Products:** Glenair is a Mil-Aero connector supplier. Our product quality begins in engineering (the largest team in the high-performance interconnect business) and is realized in our "made in the USA" vertically-integrated manufacturing cells. One of the key ways we ensure both areas are functioning smoothly is to submit designs and manufactured specimens into the military QPL process administered by NAVSEA and the Defense Logistic Agency of the US government. These certification exercises are multi-year activities that test every aspect of an interconnect component's performance.





MIL-DTL-55116 Radio / Audio Connectors



807 NW Nett Warrior Qualified Tactical Connectors



STAR-PAN Power / Data Hubs and Tactical Cordsets



M85049 (AS85049) Backshells and Connector Accessories



MIL-DTL-83723 Backshells and Connector Accessories



M81511 (AS81511) Protective Covers and Connector Accessories



M85049/140 TACOM-Approved and Navy-Qualified 5617649 Shrink Boots



MIL-PRF-24758 NAVSEA-Qualified Conduit and Fittings



M85049 Composite Backshells and Covers for MIL-DTL-38999

#### **GLENAIR'S COMMITMENT TO QUALITY**

Glenair is proud of the quality and reliability we build into our broad range of mission-critical interconnect solutions—from discrete connectors to complex cable assemblies and embedded systems. Glenair is the biggest "made in the USA" interconnect supplier in the high-reliability industry, but we also operate factories in the UK, Italy, and Germany to serve the unique requirements of those markets. Glenair's Worldwide Quality System is ISO 9001 and AS9100 certified and registered. We also hold many discrete product and operations certifications for specialty, high-performance markets including space, nuclear power, and rail. In addition to world-class quality, we are laser-focused on customer service and committed to being the easiest manufacturer in our industry to do business with. Here are just some of our key customer service principles:



- Lightning-fast turnarounds on quotes and special orders
- Worldwide sales and technical support in every major market
- Full-spectrum, "no gap" product lines
- No dollar or quantity minimums

- ISO 9001 and AS9100 certified
- Huge same-day shipment inventory
- Generous NRE, RMA, and sample request policies
- Abundant engineering and technical support
- No attitudinal constraints when it comes to customer convenience and service

### **GLENAIR GLENDALE:**

Complete vertical integration of manufacturing resources at home in Southern California since 1956

> Glenair operates the largest high-reliability interconnect manufacturing operation in the United States, allowing us to fully support our broad range of land, sea, air, and space customers.

Rapido





Glenair SoCal's most important asset: highly technical staff, fully empowered with all the right facilities and operation resources.





SAME-DAY SHIPMENT STOCKING

Immediate availability for highdemand connectors and tooling.



HARNESS ASSEMBLIES For Micro-D, Nanominiature, and fiber optic connectors and cable assemblies.



#### **IN-HOUSE TESTING CAPABILITIES**

Glenair UK operates an independently accredited BS9000:CECC:IECQ test lab for internal and third-party product development / design verification and connector qualification including pure air standards.

Glenair UK complex integrated system for an exoatmospheric application with custom machined connectors and complex cabling



## **GLENAIR UK:**

Mission-critical connectors and assemblies for UK and European markets with a special focus on micro and Nanominiature flexi assemblies

Gl

GLENAIR ITALIA: Manufacturing harshenvironment military, nuclear, and aerospace interconnect technologies for power, highspeed Ethernet, and hermetic seal applications.



HIGH-CAPACITY CNC MACHINING CENTERS Allow Glenair BLQ to provide lightning-fast turnaround on small and custom orders as well as large production runs, all with superior surface finishes and better part quality.



C

#### ADVANCED HERMETIC SEAL AND CONNECTOR PLATING CAPABILITIES

Space-compliant gold and nickel plating performed in-house. Hermetic seal connector fabrication with performance levels to 1 X 10<sup>-7</sup> helium leak rates.





**TOTAL VERTICAL INTEGRATION** Includes In-house rubber and thermoplastic injection molding.



IN-HOUSE TEST LAB With capabilities for both high-voltage as well as high-speed signal product qualification. Credentials include ISO 17025 and others.

### **GLENAIR SALEM:**

lenair

Our space systems business unit in Salem, Germany, includes ample production space for precision machining and assembly, 300 m<sup>2</sup> ISO 8 and ISO 6 clean rooms, an ISO 5 flow chamber (certified to ESD Standard 61340-5-1), with accommodation for large mock-up and integration projects.

© 2024 Glenair, Inc • 1211 Air Way, Glendale, CA 91201





With both environmental filtering and electrostatic discharge protection.



SPACE-GRADE HARNESS FABRICATION AND INTEGRATION In-house or at customer facility.







## MISSION-CRITICAL INTERCONNECT SOLUTIONS

#### Glenair, Inc.

1211 Air Way • Glendale, California • 91201-2497 Telephone: 818-247-6000 • Fax: 818-500-9912 sales@glenair.com • www.glenair.com

<b>Glenair East</b> 20 Sterling Drive Wallingford, CT 06492	Telephone: 203-741-1115 Fax: 203-741-0053 sales@glenair.com
<b>Glenair Microway Systems</b>	Telephone:
7000 North Lawndale Avenue	847-679-8833
Lincolnwood, IL	Fax:
60712	847-679-8849
<b>Glenair GmbH</b> Schaberweg 28 61348 Bad Homburg Germany	Telephone: 06172 / 68 16 0 Fax: 06172 / 68 16 90 info@glenair.de
<b>Glenair Italia S.p.A.</b>	Telephone:
Via Del Lavoro, 7	+39-051-782811
40057 Quarto Inferiore –	Fax:
Granarolo dell'Emilia	+39-051-782259
Bologna, Italy	info@glenair.it
<b>Glenair Korea</b>	Telephone:
6-21Tapsil-ro 58beon-gil	+82-07-5067-2437
Giheung-gu, Yongin-si	Fax:
Gyeonggi-do	+82-504-375-4549
Republic of Korea	sales@glenair.kr
© 2024 Glenair, Inc.	Printed in U.S.A.

**Glenair UK Ltd** 40 Lower Oakham Way Oakham Business Park Mansfield, Notts NG18 5BY England Telephone: +44-1623-638100 sales@glenair.co.uk

**Glenair Nordic AB** Gustav III:s Boulevard 42 SE-169 27 Solna Sweden Telephone: +46-8-50550000 sales@glenair.se

**Glenair Iberica S.L.** Av. De Manoteras, 24 – 2° 28050 Madrid Telephone: +34 915 562 687 sales@glenair.es

#### **Glenair France SARL**

Spain

7, Avenue Parmentier Immeuble Central Parc #2 31200 Toulouse France Telephone: +33-5-34-40-97-40 Fax: +33-5-61-47-86-10 sales@glenair.fr

### **Glenair Japan**

40F, Nagoya Lucent Tower, 6-1, Ushijima-cho, Nishi-ku, Nagoya, 451-6040 Japan Telephone: +81-52-569-2521 Fax: +81-52-569-2523 sales@glenair.jp