052-101

7-Port Unmanaged Ethernet Switch
10/100/1000 BASE-T
With Series 805 Mighty Mouse Connector

REV	DESCRIPTION	DATE	APPROVED
A	Initial Release	8/11/2014	MF
B	Per DCN 52458	10/7/2014	RAS

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7-Port Unmanaged Ethernet Switch



Form 1 (Panel Mount)



Form 2 (Flange Mount)



Form 3 (Panel Mount with Heatsink)

The Glenair 052-101 unmanaged Ethernet switch is a seven port 10/100/1000Base- layer 2 switch with auto negotiation and auto MDI / MDIX circuitry that enables up to 6x port expansion with IEEE-802.3U 10/100/1000Base-T Ethernet ports. Developed for use in harsh environment applications, the electronics are incorporated into a panel-mountable housing that is sealed against liquid and solid contaminants, and designed for shock and vibration resistance. Connector interface is a high-performance size and weight-saving Glenair Series 805 Mighty Mouse jam nut receptacle connector. This switch is offered in both panel mount and flange mount configurations and also has the option for heatsink fins.

KEY FEATURES/BENEFITS

- 7 copper 10/100/1000BASE-T ports per IEEE 802.3:2005
- Non-Blocking switch fabric allows 1000 Mbps data rate on all 7 ports simultaneously
- Cable link distances up to 100 Meters (EIA/TIA Cat-5E)
- Operating temperature range from -40°C to +85°C
- Jumbo frame support in all speeds
- Full duplex flow control per IEEE Std 802.3X and half duplex back pressure, symmetric and asymmetric
- Shock, vibration and immersion resistant per MIL-STD-810 F test methods
- Many Plating Options available
- Strong, durable, lightweight aluminum connector shell
- Auto sensing of half or full duplex operation
- Unmanaged Ethernet switch - no configuration required
- Mighty Mouse Series 805 shell is water-tight to Mil-Std-810 test method when mated.
- Flange-mount and panel-mount options

APPLICATIONS

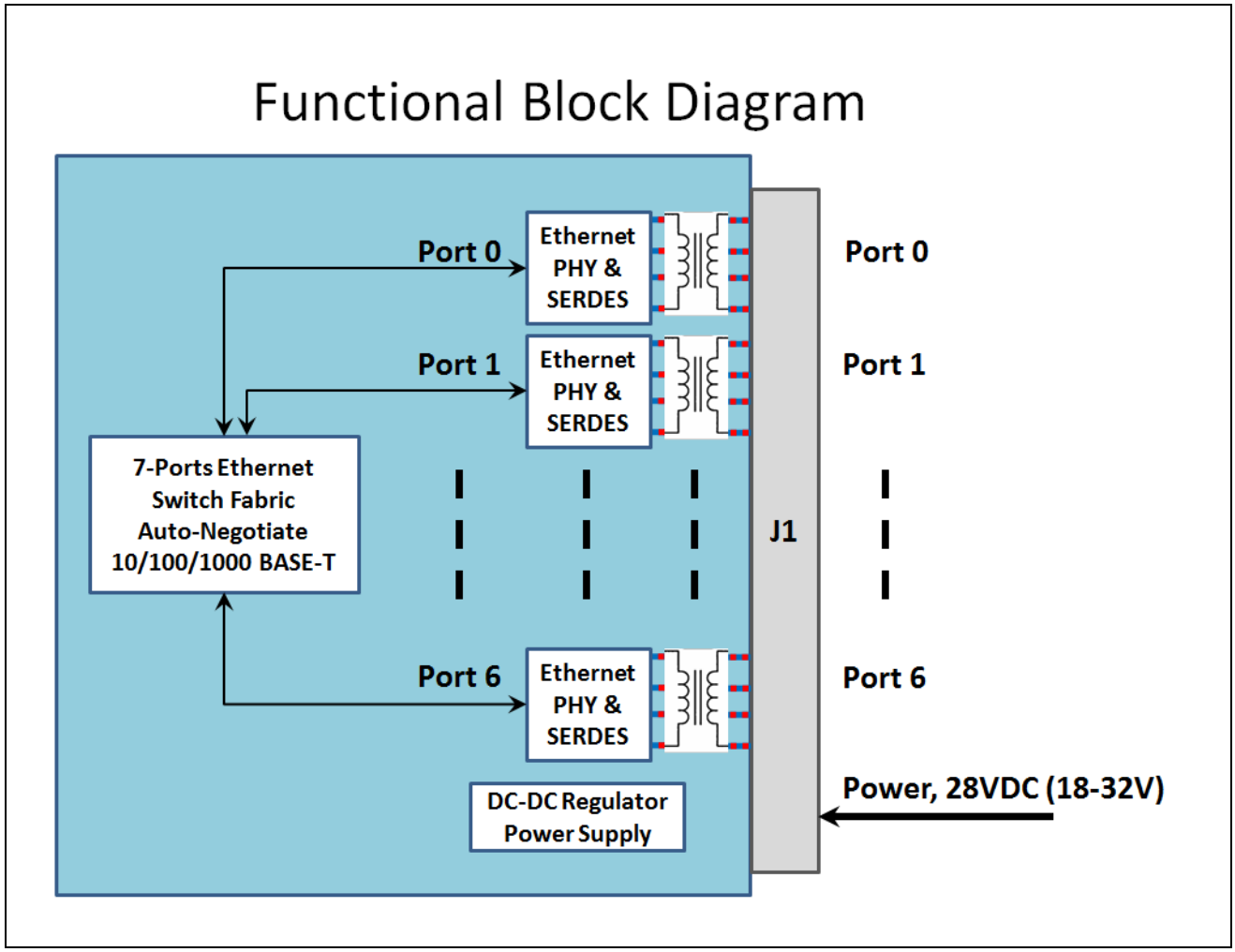
Glenair 052-101 10/100/1000Base-T Ethernet switch enables high speed network communications in harsh environments.

- Civil and military vehicle networking
- Plug and play operation - no configuration required
- Unmanaged Ethernet switch port multiplication

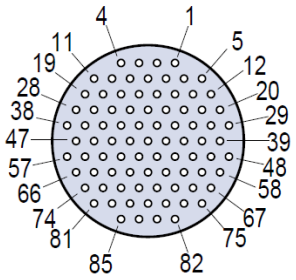
How To Order

Product Code		Form Factor		J1 Key Polarization A, B, C, D, E (Per Mighty Mouse)
052	101	- 1	MT	A
7-Port Ethernet Switch			Material/Finish M = Aluminum, Nickel MT = Aluminum, Nickel-PTFE NF = Aluminum, Cadmium Olive Drab Other finishes available	

Functional Block Diagram



Connectors

NAME	Insert Arrangement	Function	Media Converter	Mating PLUG Connector
J1	 **19-85** Series 805 Mighty Mouse Pin Connector	Electrical Signal,	Series 805, 19-85 85 PIN CONTACTS, #23	Series 805, Plug 805-001-16#19-85SA Or 805-002-16#19-85SA Refer to Glenair Mighty Mouse Catalog for further details 85 SOCKET CONTACTS, #23

Note: # = Environmental Class (Material/Finish)

Ratings and Specifications

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min	Typ	Max	Units	Notes
Storage Temperature	Ts	-55		+100	°C	
Supply Voltage	V_{cc}	-0.5		40	V	1 second maximum

OPERATING CONDITIONS

Parameter	Symbol	Min	Typ	Max	Units	Notes
Operating Temperature	T_{op}	-40		+85	°C	
Supply Voltage	V_{cc}	18	28	32	V	
Supply Current	Icc				mA	@28VDC
All Ports Connected – running 1Gbps			195	225		
No Ports Connected			55			
Typical per Current per Port Connected			20			
Power Supply Noise (Peak-Peak)	$V_{cc\ ripple}$			200	mV	
Operating Altitude	OA	Sea level		40,000		

Ratings and Specifications - (continued)

COMPLIANCE SPECIFICATIONS

CHARACTERISTIC	Standard	Condition	Notes
Mechanical Shock	MIL-STD-810	40g	6-9rms
Mechanical Vibration	MIL-STD-810F	Method 514.6	Procedure 1, Jet Aircraft, General exposure
Shock – Crash Hazard Flight	MIL-STD-810F	Method 514.6	40 G
ESD	MIL-STD-883	Class II	2200V HBM
Immersion	MIL-STD-810F	Method 512.5	1m 2 hours, Connector mated
Conducted Emissions, Power Leads, 30 Hz to 10 kHz	MIL-STD-461F	CE101	
Conducted Emissions, Power Leads, 10 kHz to 10 MHz	MIL-STD-461F	CE102	
Conducted Susceptibility, Power Leads, 30 Hz to 150KHz	MIL-STD-461F	CS101	
Conducted Susceptibility, Transients, Power Leads	MIL-STD-461F	CS106	
Conducted Susceptibility, Structure Current, 60 Hz to 100 kHz	MIL-STD-461F	CS109	
Conducted Susceptibility, Bulk Cable Injection, 10 kHz to 200 MHz	MIL-STD-461F	CS114	
Radiated Susceptibility, Magnetic Field, 30 Hz to 100 kHz	MIL-STD-461F	RS101	
Radiated Susceptibility, Electric Field, 2 MHz to 18 GHz	MIL-STD-461F	RS103	
Radiated Emissions, Magnetic Field, 30 Hz to 100 kHz	MIL-STD-461F	RE101	
Radiated Emissions, Electric Field, 10 kHz to 18 GHz	MIL-STD-461F	RE102	
Mating Durability	MIL-DTL-38999/20	500 Cycles	Mighty Mouse Connector
Flame Resistance	EIA364-104		30 seconds
Damp Heat	EIA364-321		240 hours
Aircraft Electrical Power Characteristics	MIL-STD-704F		28V DC Systems

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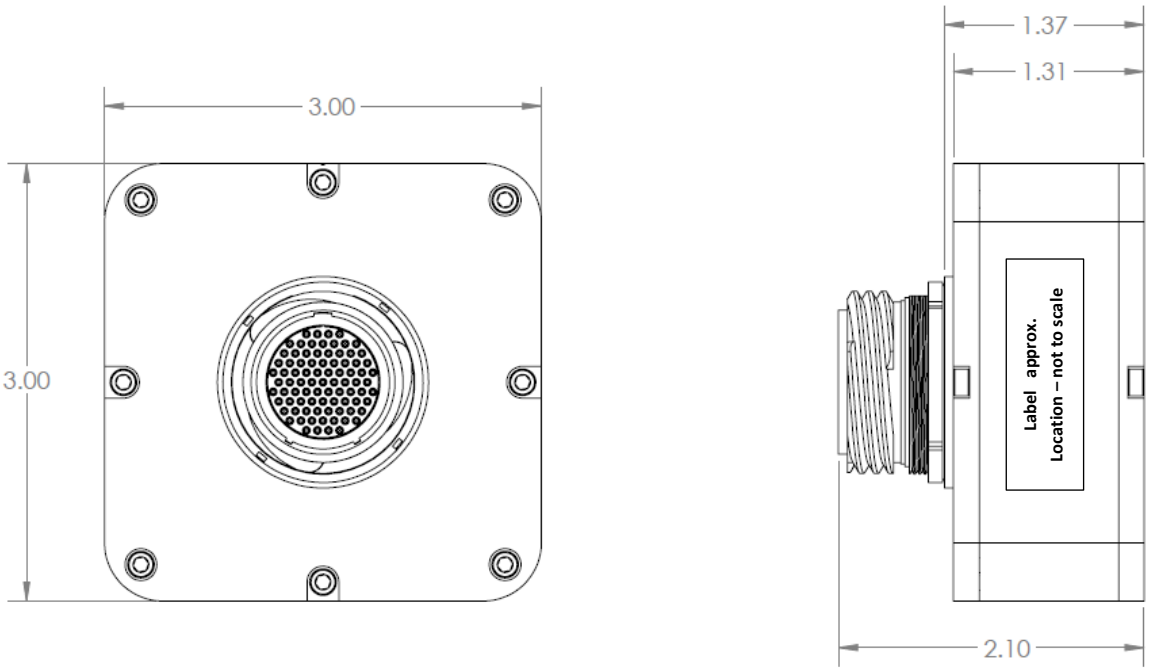
Material/Finish

Item	Material/Finish
052-101 Housing & Connector Shell	Aluminum
Plating Finish: M	Nickel
Plating Finish: MT	Nickel PTFE
Plating Finish: NF	Olive Drab Cadmium
Contacts	Copper alloy, 50 µInch gold plated
Insulators	Liquid crystal polymer (LCP)
Contact retention clip	Beryllium copper alloy
Seal, O-rings	Fluorosilicone rubber
Seal	Silicone elastomer
Spring	Nickel-plated beryllium copper
PC tail contacts	Copper alloy/gold plated
PCB flex	FR4 & Polyimide
Encapsulant	HYSOL EE4215
Solder type	RoHS compliant Sn95/Sb5 (232°C melting temp) & RoHS compliant Sn96.5/Ag3.0/Cu0.5 (217° melting)

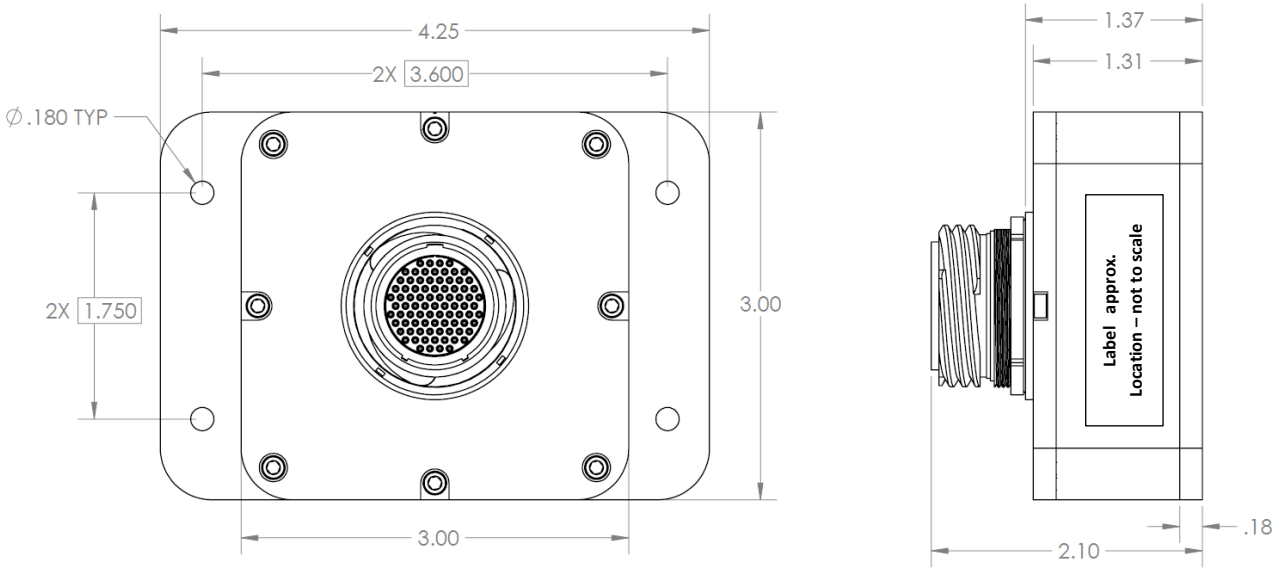
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OUTLINE DRAWING & PANEL CUT OUT

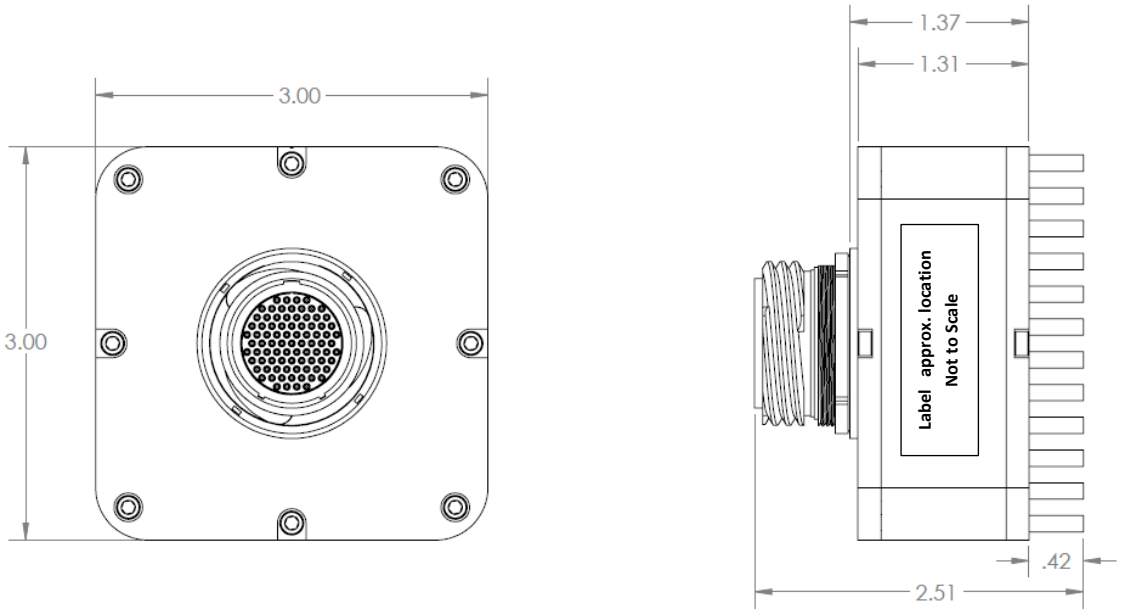
052-101-1
FORM 1 (PANEL MOUNT)



052-101-2
FORM 2 (FLANGE MOUNT)



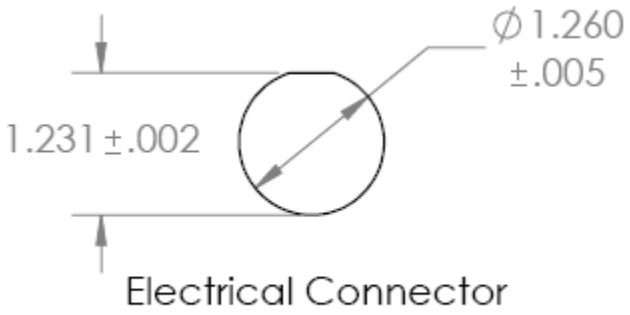
052-101-3
FORM 3 (PANEL MOUNT WITH HEATSINK)



Dimensional Tolerances Unless specified otherwise:
0.x ± 0.1
0.xx ± 0.03

Marking
Assembly is identified with Manufacture's Name, Cage Code, Part Number, Date Code and Serial Number in approximate location shown

PANEL CUT OUT

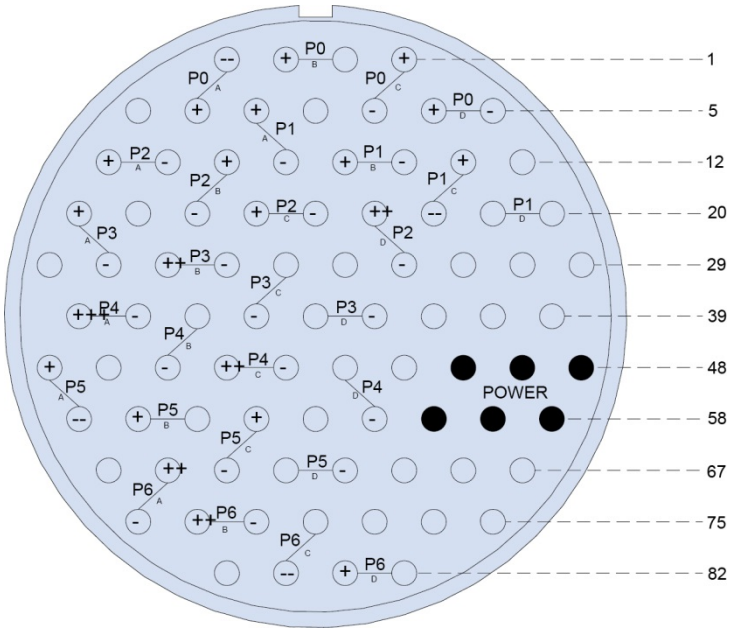


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Input/Output Definition

J1 – ELECTRICAL SIGNAL CONNECTOR PIN FUNCTIONS

PIN	Description	Port #	PIN	Description	Port #
1	P0_C+	0	44	P3_C-	3
2	P0_B-	0	45	P4_B+	4
3	P0_B+	0	46	P4_A-	4
4	P0_A-	0	47	P4_A+	4
5	P0_D-	0	48	RTN	GROUND
6	P0_D+	0	49	RTN	GROUND
7	P0_C-	0	50	RTN	GROUND
8	No Connect		51	No Connect	
9	P1_A+	1	52	P4_D+	4
10	P0_A+	0	53	P4_C-	4
11	No Connect		54	P4_C+	4
12	No Connect		55	P4_B-	4
13	P1_C+	1	56	No Connect	
14	P1_B-	1	57	P5_A+	5
15	P1_B+	1	58	VIN	POWER
16	P1_A-	1	59	VIN	POWER
17	P2_B+	2	60	VIN	POWER
18	P2_A-	2	61	P4_D-	4
19	P2_A+	2	62	No Connect	
20	P1_D-	1	63	P5_C+	5
21	P1_D+	1	64	P5_B-	5
22	P1_C-	1	65	P5_B+	5
23	P2_D+	2	66	P5_A-	5
24	P2_C-	2	67	No Connect	
25	P2_C+	2	68	No Connect	
26	P2_B-	2	69	No Connect	
27	No Connect		70	P5_D-	5
28	P3_A+	3	71	P5_D+	5
29	No Connect		72	P5_C-	5
30	No Connect		73	P6_A+	6
31	No Connect		74	No Connect	
32	P2_D-	2	75	No Connect	
33	No Connect		76	No Connect	
34	P3_C+	3	77	No Connect	
35	P3_B-	3	78	P6_C+	6
36	P3_B+	3	79	P6_B-	6
37	P3+A-	3	80	P6_B+	6
38	No Connect		81	P6_A-	6
39	No Connect		82	P6_D-	6
40	No Connect		83	P6_D+	6
41	No Connect		84	P6_C-	6
42	P3_D-	3	85	No Connect	
43	P3_D+	3			



19-85

Series 805 Mighty Mouse
Mating face for PIN shown
85X SIZE 23 Contacts

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