

Preliminary
TECHNICAL DATASHEET #TDAX140720
4 Port Gigabit Ethernet Switch
3 Gigabit Ethernet Ports (10/100/1000 Mbps)
1 Standard Ethernet Port (10/100 Mbps)
P/N: AX140720

Features:

- 12V, 24Vdc input power (nominal) for connection to a battery
- 3 Gigabit Ethernet ports (10/100/1000 Mbps)
- 1 standard Ethernet port (10/100 Mbps)
- Surge, reverse polarity, and input overvoltage protection
- 5 LED indicators; one each for Ethernet ports and for power
- 4 M12 8-pin Phoenix female connectors
- Compact, IP67
- Suitable for high vibration and shock environments



Applications:

- Connect multiple Ethernet devices (cameras, displays, etc.) in
 - Off-highway equipment
 - Mining equipment
- Harsh environments with power transients and high humidity, vibrations, and shock

Ordering Part Numbers:

4 Port Gigabit Ethernet Switch: **AX140720**

Description:

The 4 Port Gigabit Ethernet Switch operates as an unmanaged switch. It can connect to 4 different Ethernet capable devices. 3 ports can communicate up to 1000 Mbps (Gigabit Ethernet) and one port can communicate up to 100 Mbps (standard Ethernet).

Each port has LED indicators showing the status of the ports.

Technical Specifications:

Specifications are indicative and subject to change. Actual performance will vary depending on the application and operating conditions. Users should satisfy themselves that the product is suitable for use in the intended application. All our products carry a limited warranty against defects in material and workmanship. Please refer to our Warranty, Application Approvals/Limitations and Return Materials Process as described on <https://www.axiomatic.com/service/>.

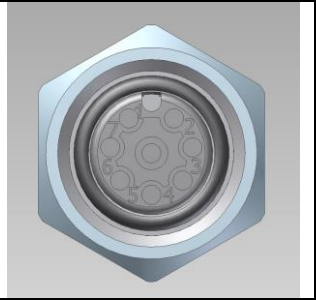
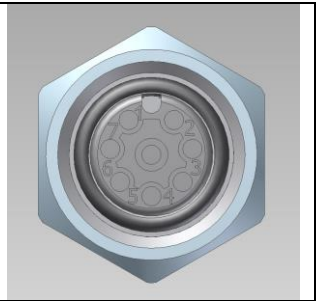
Input Specifications

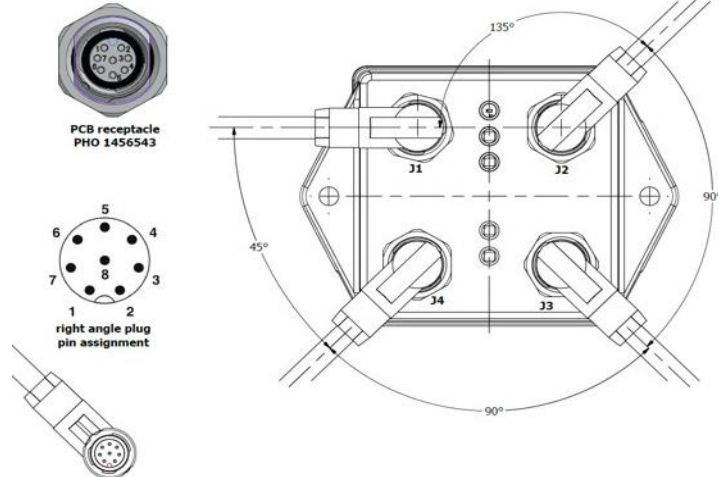
Power Supply Input	12 or 24 VDC nominal (8 to 36 VDC range)
Quiescent Current Draw	60 mA @ 12 VDC; 33 mA @ 24VDC
Protections	Reverse polarity, transient, and surge protection are provided.
Power LED	GREEN ON = Power ON

Communications

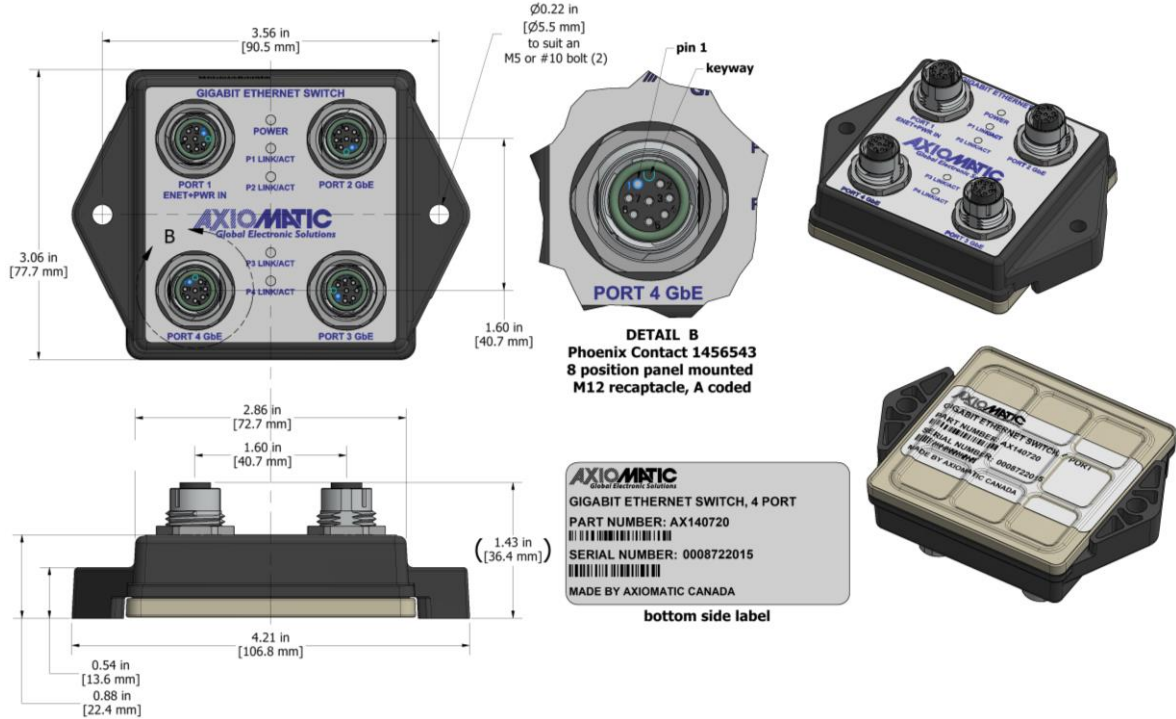
Ethernet	1 10/100BASE-TX, ESD Protected 3 10/1000BASE-T, ESD Protected
Switch and PHY	Maxlinear GSW145
LEDs	4 bi-colour LEDs, Red and Green RED = 10 Mbps or 100 Mbps, GREEN = 1000 Mbps Solid = Link, Flashing = Activity

General Specifications

Compliance	RoHS																																				
Vibration	Pending																																				
Shock	Pending																																				
Operating Temperature	-40°C to 70°C (-40°F to 155°F)																																				
Storage Temperature	-40°C to 85°C (-40°F to 185°F)																																				
Protection	IP67																																				
Weight	0.136 kg (0.3 lb.)																																				
Enclosure	Injection molded plastic, PA66 30%, laser welded See dimensional drawing.																																				
Electrical Connections – Ports 1 to 6	<p>4 Phoenix 1456543 M12 8-pin female sockets</p> <p>J1 (Power and Ethernet connector):</p> <table border="1"> <thead> <tr> <th>PIN#</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Battery +</td> </tr> <tr> <td>2</td> <td>Battery –</td> </tr> <tr> <td>3</td> <td>(These 2 pins are electrically connected)</td> </tr> <tr> <td>4</td> <td>TXD_N</td> </tr> <tr> <td>5</td> <td>RXD_P</td> </tr> <tr> <td>6</td> <td>TXD_P</td> </tr> <tr> <td>7</td> <td>Battery +</td> </tr> <tr> <td>8</td> <td>RXD_N</td> </tr> </tbody> </table>  <p>J2, J3, J4 (Gigabit Ethernet connectors):</p> <table border="1"> <thead> <tr> <th>PIN#</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>BI_DC_P</td> </tr> <tr> <td>2</td> <td>BI_DD_P</td> </tr> <tr> <td>3</td> <td>BI_DD_N</td> </tr> <tr> <td>4</td> <td>BI_DA_N</td> </tr> <tr> <td>5</td> <td>BI_DB_P</td> </tr> <tr> <td>6</td> <td>BI_DA_P</td> </tr> <tr> <td>7</td> <td>BI_DC_N</td> </tr> <tr> <td>8</td> <td>BI_DB_N</td> </tr> </tbody> </table> 	PIN#	Description	1	Battery +	2	Battery –	3	(These 2 pins are electrically connected)	4	TXD_N	5	RXD_P	6	TXD_P	7	Battery +	8	RXD_N	PIN#	Description	1	BI_DC_P	2	BI_DD_P	3	BI_DD_N	4	BI_DA_N	5	BI_DB_P	6	BI_DA_P	7	BI_DC_N	8	BI_DB_N
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	 <p>PCB receptacle PHO 1456543</p> <p>right angle plug pin assignment</p>
Mating Cables	Not supplied
Installation	The device should be installed after a protective power supply to avoid damage from load dump voltage fluctuations.

Dimensional Drawing



Form: TDAX140720-02/13/2024