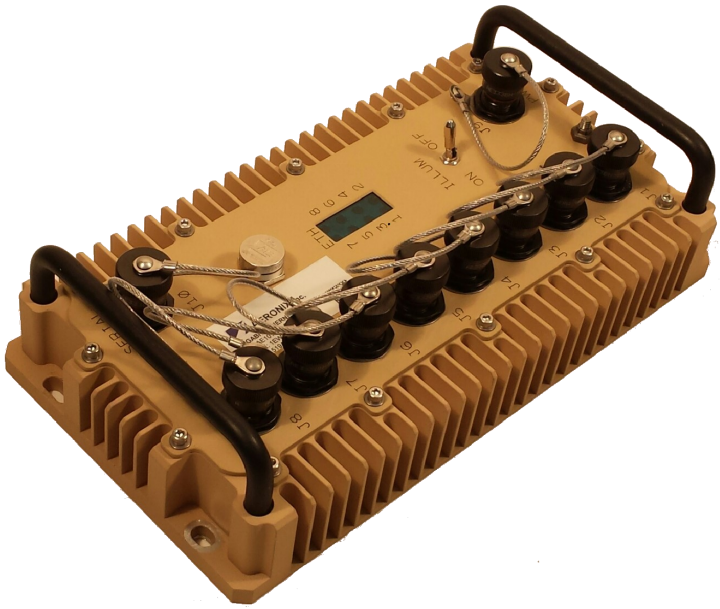
Gigabit Ethernet Switch (GES) GV8m

Part Number: AE101971-003 **8-Port Rugged Ethernet Switch**



FEATURES

Ethernet Ports	• 8x managed tri-speed 10/100/1000 BASE-T
Networking	• 16K MAC Switching Engine • Auto MDI/MDX and polarity correction • Auto/Manual Port Speed/Duplex Selection • 802.1p Quality of Service / DiffServ • 802.1q VLANs, Rapid Spanning Tree Protocol • Port Mirroring
Control and Status	• Serial Port Command Line Interface • In Band SSH, HTTPS GUI, SNMP v2/3 MIBs • Default and custom non-volatile configurations • Built-In Test: Startup, Periodic, Commanded
Power	• MIL-STD-1275D Power/Voltage • Voltage Input: 12Vdc - 33Vdc (28Vdc nominal) • Power Consumption: 12 W maximum
Connectors / Indicators	• Power and LAN Connector: MIL-C-38999 • LED Indicators: 1 per port, link connection and activity, dimmable
Mechanical	• Housing: Machined rugged aluminum • Weight: 4.5 lbs • Dimensions: 6.0” W x 11.0” L x 3.0” H • Installation: 2x 0.28x0.38, 2x 0.25x0.58 holes
Standards Compliance and Compatibility	• IEEE 802.1, IEEE 802.3, IEEE 801.1, MIL-STD-1275, MIL-STD-704, MIL-STD-810, MIL-HDBK-5400, MIL-HDBK-217, NEMA-250-2003, Victory 1.6.2
Cooling	• No forced air or conductive cooling needed.
Environmental	• MIL-STD-810F
EMI / EMC	• MIL-STD-461F Electromagnetic interference
Temperature Range	• Operating: -32C to +60C • Storage: -51C to +71C
Altitude	• Operating up to: 15,000 ft @ -32C
MTBF	• >125,000 hours @ 40C, Ground Mobile Environment (calculated)
Customizable	• Aeronix offers an extensive line of Engineering Services including the creation and implementation of custom configurations for the GV8-Packaging, Connectors, Number of Channels, and/or other customer unique requirements.

The Aeronix Gigabit Ethernet Switch (GES) GV8m provides eight Tri-speed 10/100/1000 BASE-T Ethernet ports for use in commercial, industrial, and military applications that require ultra-high data transfer rates in a self contained ruggedized package. The GV8m was designed for Ground Vehicle applications that require a rugged package with individual interface connectors. The GV8m meets rigorous environmental, EMI and EMC requirements specifically to meet Ground applications.

The GV8m design has a low maximum power consumption while providing extensive Layer 2 management capabilities. Functions like Spanning Tree Protocol (STP) prevent looping and provide more efficient communication using cheapest cost routes and route recovery in case of link failure. VLANs and QOS allow targeted data to flow on specific routes or with higher priority. The GV8m differs from the GV8 in that it has an upgraded switch fabric chip, which can be extended to provide additional features with software upgrades.

Each of the eight IEEE 802.3ab ports can individually auto-detect data rates of 10, 100, or 1000 BASE-T, or can be managed externally. The 8 ports have individual connectors and individual LED indicators that can be turned off for operational scenarios.

The GV8m is a fully managed Layer 2 switch with the capability of customer specific configurations. The management functions are stored in non-volatile memory for fixed configurations, or loaded at startup for application specific requirements.

Incorporating the Aeronix GES GV8m into your design allows the use of high speed connectivity between any or all of your devices while virtually eliminating data-rate bottlenecks.

AERONIX

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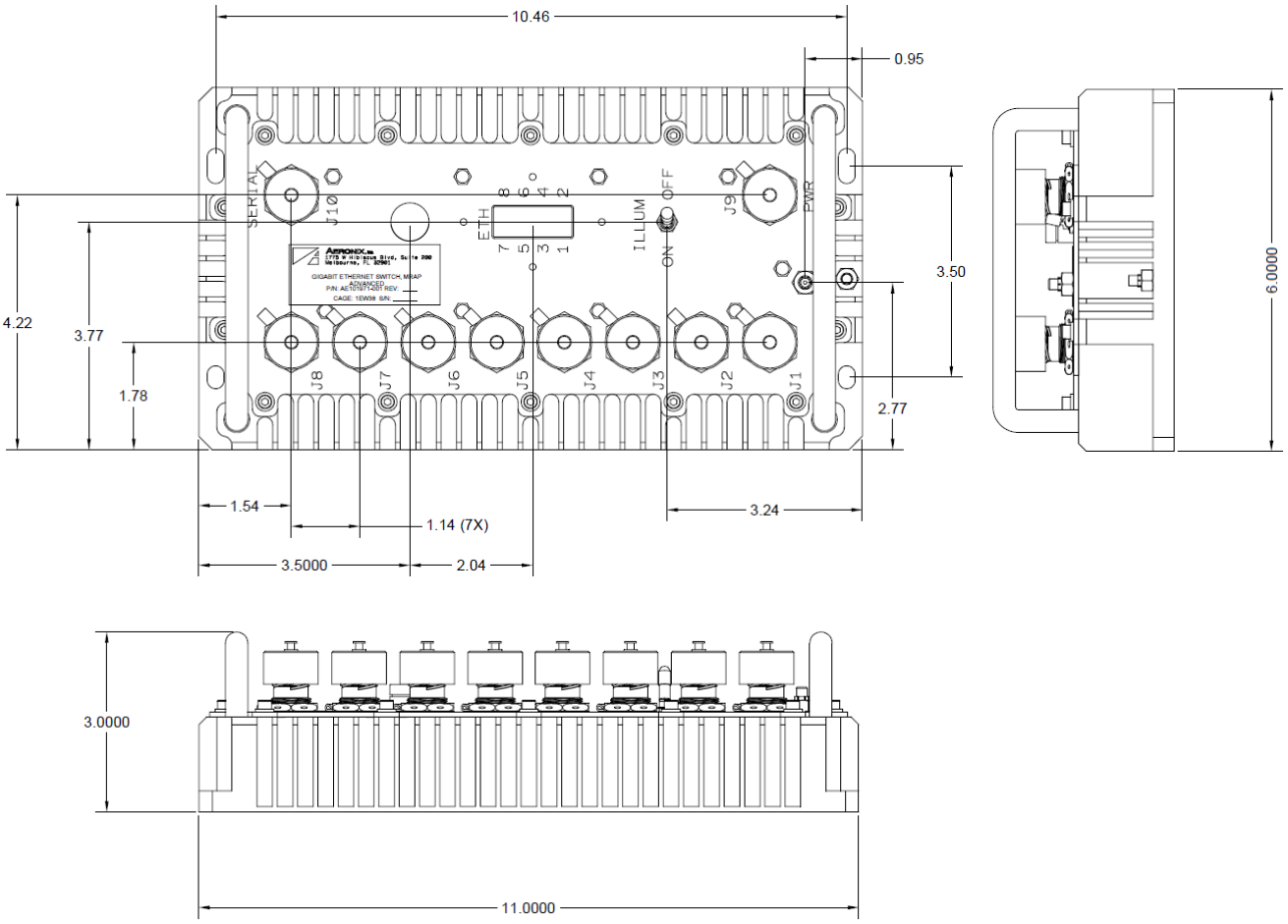
Aeronix Gigabit Ethernet Switch Ground Vehicle (GES-GV8m) Qualifications

Characteristic	Detail
Ports	8x 1000Mbps full duplex,10Mbps or 100Mbps full or half duplex
Dimensions	6.0"W x 11.0"L x 3.0"H
Weight	4.5 lb (2.41kg)
Processor	Freescale P1010, Prestera-DX4122
Connectors	MIL-C-38999

Test	Detail	Military Specification	Comment/Tailoring
Environmental			
Altitude	Storage	MIL-STD-810F Method 500.4 Procedure I	Procedure I: -60°C @ 50,000 feet
	Operational	MIL-STD-810F Method 500.4 Procedure II	Procedure II : -32°C @ 15,000 feet
High Temperature	Storage	MIL-STD-810F Method 501.4 Procedure I	Procedure I: +71°C
	Operational	MIL-STD-810F Method 501.4 Procedure II	Procedure II: +60°C
Low Temperature	Storage	MIL-STD-810F Method 502.4 Procedure I	Procedure I: -51°C
	Operational	MIL-STD-810F Method 502.4 Procedure II	Procedure II: -32°C
Temperature Shock		MIL-STD-810F Method 503.4 Procedure I	-51°C - +71°C
Water Ingress		NEMA-250-2003 P 5.7	Hose Down
Humidity		MIL-STD-810F Method 507.4 Procedure II	Operating and non-operating effects of humidity, including conditions wherein condensation takes place in and on the equipment
Fungus		MIL-STD-810F Method 508.5	Designed with certified fungus inert materials
Salt Fog		MIL-STD-810F Method 509.4	Operating and non-operating exposure to salt-sea atmosphere
Dust		MIL-STD-810F Method 510.4 Procedure I	Blowing Dust
Explosive Atmosphere		MIL-STD-810F Method 511.4 Procedure I	Operation
Vibration	Geneal Vibration	MIL-STD-810F Method 514.5 Procedure I	Category 20 (Annex A Par 2.3.9) type A (Wheeled Vehicle) 4Hz to 2000 Hz
Vibration	Loose Cargo	MIL-STD-810F Method 514.5 Procedure II	Category 2 (Anex A p2.3.9) Loose Cargo Type A Wheeled Vehicle
Shock	Transit Drop	MIL-STD-810F Method 516.5 Procedure IV	
	Bench Handling	MIL-STD-810F Method 516.5, Procedure VI	
	Operational	MIL-STD-810F Method 516.5 Procedure I, II	Functional 20G, Crash hazard 40G
MTBF		MIL-HDBK-217 FN2	125,000 hours @ +40°C, Ground Mobile
Electromagnetic Compatibility			
CE102	Conducted Emissions	MIL-STD-461F	Power leads, 10 kHz to 10MHz
CS101	Conducted Susceptibility	MIL-STD-461F	Power leads, 30Hz to 150 kHz
CS114			Bulk cable injection, 10 kHz to 200MHz
CS115			Bulk cable injection, impulse excitation
CS116			Damped sinusoidal transients, cables and power leads, 10kHz to 100MHz
RE102	Radiated Emissions	MIL-STD-461F	Electric field, 2MHz to 18GHz
RS103	Radiated Susceptibility	MIL-STD-461F	50 V/m from 2MHz to 18GHz
DC Bonding		MIL STD 464A Section 5.10.3b	DC resistance measured from external connector to the bonding facility of 10milliOhm
ESD	Electrostaic Discharge	MIL-STD-464C	8 KV Direct, 15KV air
Primary Power			
Power Input	+28VDC in	MIL-STD-1275D	28 VDC Ripple, Surge & Spike 12 watts
Power Consumption			12 Watts maximum



3D model file available upon request

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
AE101971-003	• Military Rugged, Ethernet Switch, DX4122, Ground Vehicle Qualified, 8x 10/100/1000 BASE-T with MIL-C-38999 Connectors