

# MEGA RUGGED ETHERNET SWITCH

256- CHANNEL 50G Fiber Optic SWITCHBOX



## DESCRIPTION

Amphenol's Rugged 256 Channel Ethernet Switch Box is liquid cooled and configurable for system connectivity, speeds, port types, and interoperability with various high-speed media converters and connectors for system interfacing.

The switch is manufactured using derivatives of Amphenol's MIL-DTL-38999 Series connectors. These connectors contain standard AS39029 qualified contacts and 48F MT Ferrule Fiber Optic contact assemblies. The MT ferrules are used for fiber optic Ethernet ports and the AS39029 style contacts are used for power inputs and management functions.

The switch comes with an intricate network management system that we call the Embedded Web System (EWS). The EWS configures, monitors, and troubleshoots network devices from a remote web browser. The EWS web pages are easy-to-use and easy-to-navigate. In addition, the EWS provides real time graphs and RMON statistics to help system administrators monitor network performance.

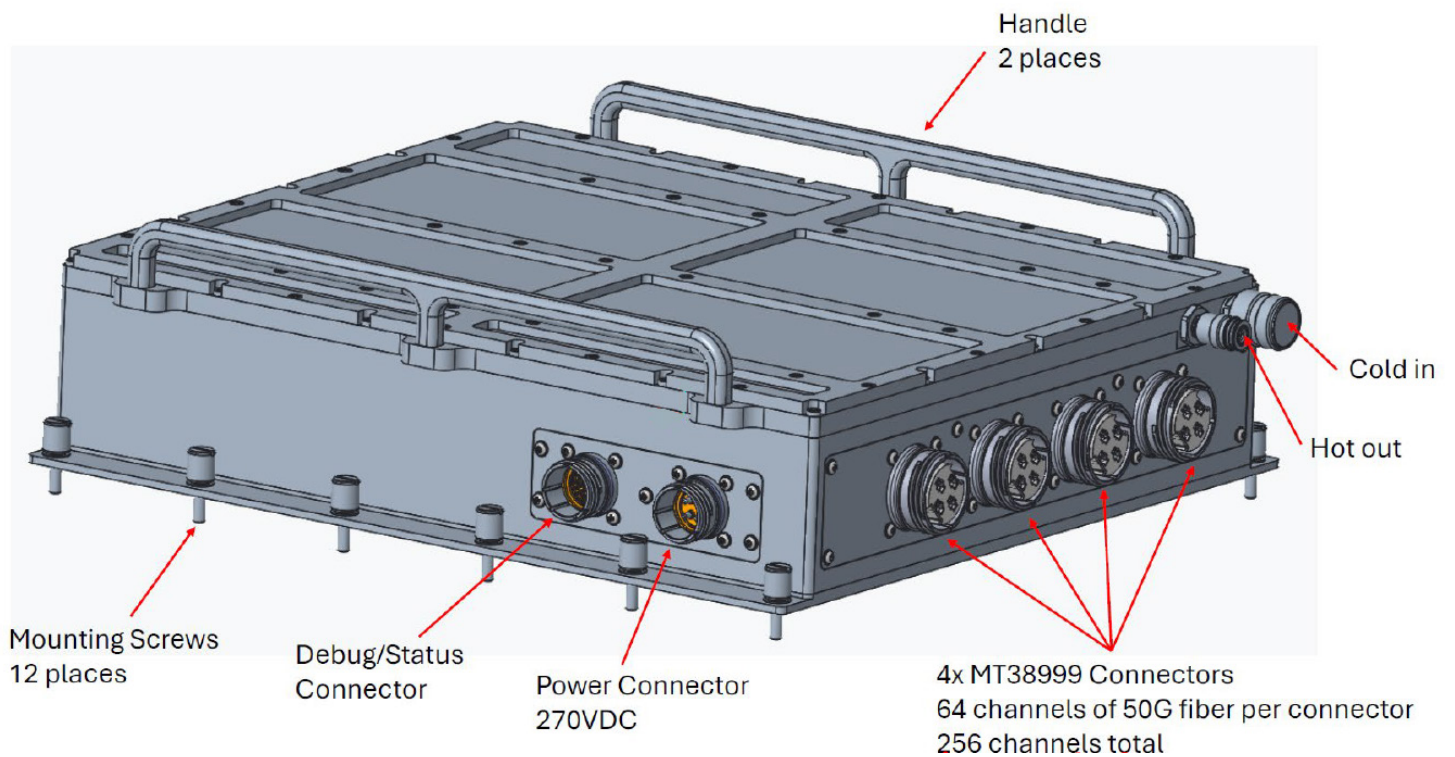
## FEATURES & BENEFITS

- Chassis with 4x MT38999 Connectors'
  - Each having 64X channels of 50G fiber per connector
- 256 channels in total that can support up to 400G (x8) and 50G (x1) interfaces in PAM4 mode
  - Also, complete NRZ support for 50G (x2), 40G (x4), 25G (x1), 10G (x1) and 1G (x1) among others
- Liquid cooling for rugged -40-+85C environments
- Embedded Management system
  - Web and command line interface user guides.
- Supports Ethernet multicast, IP multicast, IGMP, SNMP, & many other management options
- Host management processor
- Debug/Status connector & 270V DC power connector

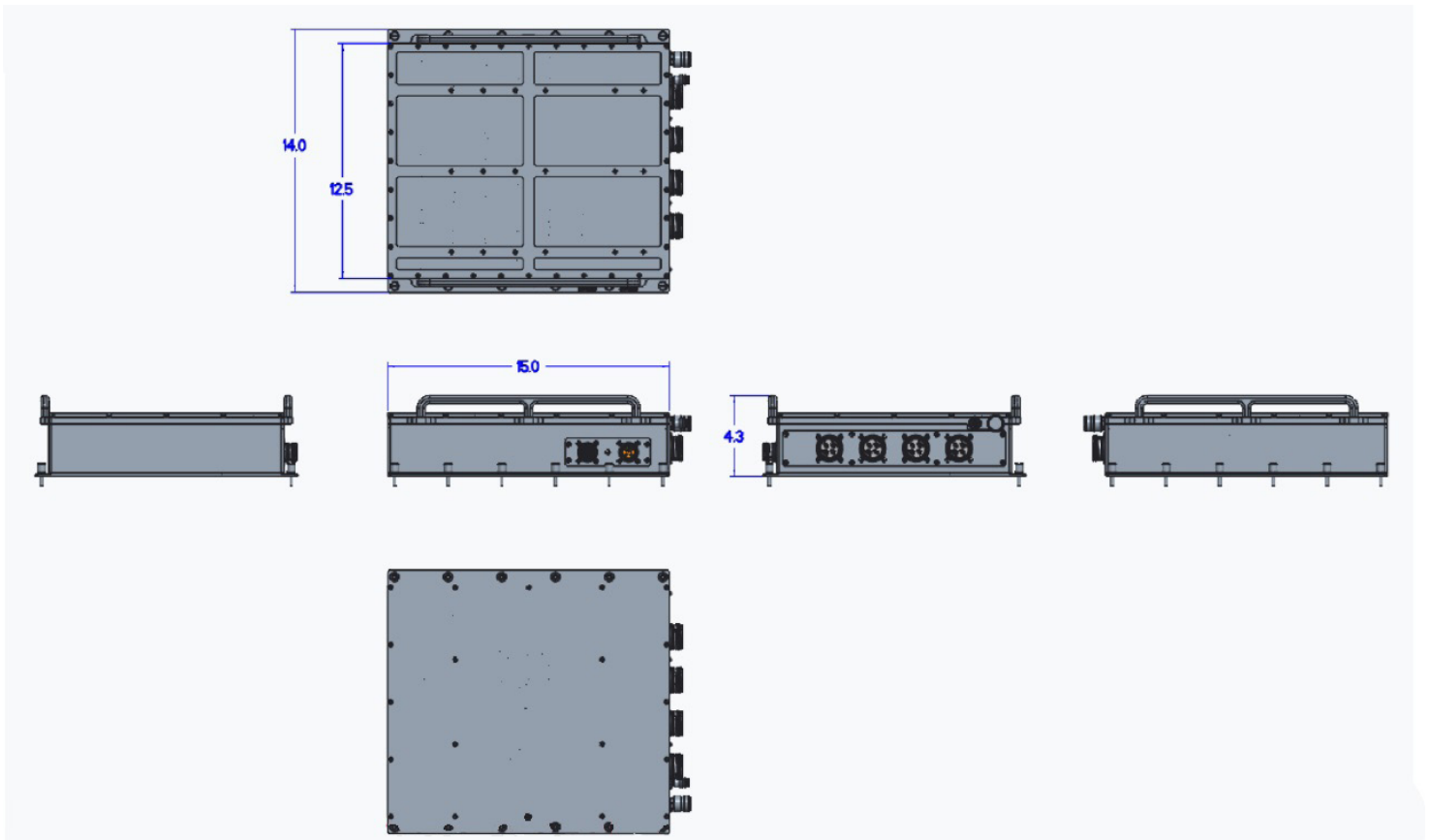
# HOW TO ORDER

Part Number	CF-02WA00-16X	Mega Switch 2.0
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## VISUAL DESCRIPTION



# MECHANICAL SPECIFICATIONS



# SOFTWARE FEATURES

<b>Stacking</b>	Configuring VLANs	Configuring IGMP Snooping
Stacking Ring Topology	Defining VLAN Properties	Configuring MLD Snooping
Stacking Chain Topology	Defining VLAN Membership	Viewing IGMP/MLD IP Multicast Groups
Stacking Members and Unit ID	Defining VLAN Interface Settings	Defining Multicast Router Ports
Removing and Replacing Stacking Members	Configuring GARP	Defining Forward All Multicast
Exchanging Stacking Members	Defining GARP	Defining Unregistered Multicast Settings
Switching the Stacking Master	Defining GVRP	<b>Managing System Files</b>
<b>Configuring System Time</b>	Viewing GVRP Statistics	Downloading System Files
Configuring Daylight Savings Time	<b>Defining IP Addresses</b>	Firmware Download
Configuring SNTP	Configuring IP Addressing	Configuration Download
Polling for Unicast Time Information	Defining IP Addresses	Uploading System Files
Polling for Anycast Time Information	Defining ARP	Upload Type
Broadcast Time Information	Defining Domain Name Servers	Software Image Upload
Defining SNTP Settings	Defining DNS Servers	Configuration Upload
<b>Configuring Device Security</b>	Defining DNS Host Mapping	Copying Files
Configuring Management Security	<b>Defining the Forwarding Database</b>	Restoring the Default Configuration File
Configuring Authentication Methods	Defining the Forwarding Database	<b>Configuring Quality of Service</b>
Defining Access Profiles	Defining Access Profiles	Quality of Service Overview
Defining Profile Rules	<b>Configuring Spanning Tree</b>	VPT Classification Information
Defining Authentication Profiles	Defining Classic Spanning Tree	CoS Services
Mapping Authentication Methods	Defining STP on Interfaces	Defining General QoS Settings
Defining RADIUS Settings	Defining Rapid Spanning Tree	Configuring QoS General Settings
Defining TACACS+ Authentication	Defining Multiple Spanning Tree	Restoring Factory Default QoS Interface Settings
Configuring Passwords	Defining MSTP Instance Settings	Defining Queues
Defining Local Users	Defining MSTP Interface Settings	Defining Bandwidth Settings
Defining Line Passwords	<b>Configuring SNMP</b>	Mapping CoS Values to Queues
Defining Enable Passwords	SNMP v1 and v2c	Mapping DSCP Values to Queues
Configuring Network Security	SNMP v3	Defining QoS Basic Mode
Network Security Overview	Configuring SNMP Security	Defining Basic Mode Settings
Port-Based Authentication	Defining SNMP Security	Rewriting Basic Mode DSCP Values
Advanced Port-Based Authentication	Defining SNMP View	Defining QoS Advanced Mode
Defining Port Authentication Properties	Defining SNMP Group Profiles	Setting Policy Binding
Defining Port Authentication	Defining SNMP Group Members	<b>Managing Device Diagnostics</b>
Configuring Multiple Hosts	Defining SNMP Communities	Configuring Port Mirroring
Defining Authentication Hosts	SNMP Communities Basic Table	<b>Viewing Statistics</b>
Viewing EAP Statistics	SNMP Communities Advanced Table	Viewing Interface Statistics
Defining Access Control Lists	Configuring SNMP Notifications	Viewing Interface Statistics
Defining IP Based Access Control Lists	Defining SNMP Notification Global Parameters .	Receive Statistics
Defining MAC Based Access Control Lists	Defining SNMP Notification Filters	Transmit Statistics
Binding Device Security ACLs	Defining SNMP Notification Recipients	Viewing Etherlike Statistics
Managing Port Security	SNMPv1,2c Notification Recipients	Managing RMON Statistics
Enabling Storm Control	SNMPv3 Notification Recipients	Viewing RMON Statistics
<b>Configuring System Logs</b>	<b>Configuring Multicast Forwarding</b>	Configuring RMON History
Defining General Log Properties	Multicast Forwarding	Defining RMON History Control
Viewing Memory Logs	Typical Multicast Setup	Viewing the RMON History Table
Viewing Flash Logs	Multicast Operation	Configuring RMON Events
Defining System Log Servers	Multicast Registration	Defining RMON Events Control
<b>Configuring Interfaces</b>	Multicast Address Properties	Viewing the RMON Events Logs
Configuring Ports	Defining Multicast Properties	Defining RMON Alarms
Aggregating Ports	Adding MAC Group Address	
Configuring LACP	Adding IP Multicast Groups	

# AMPHENOL RUGGEDIZATION DESIGN

## OVERVIEW:

Amphenol integrated electronic products are designed and manufactured to our Ruggedized guidelines listed below. These guidelines ensure years of reliable operation in harsh environment applications where extreme operating temperatures, shock, vibration, and corrosive atmospheres are regularly experienced. Unless otherwise noted, the parts conform to the below specifications.

## TEMPERATURE

Operating Temperature - Thermal cycles between -40°C and 85°C while device is operating

Temperature is measured at chassis housing or card edge

Storage Temperature - Thermal cycles between -55°C and 125°C

## HUMIDITY

Operating Humidity - Humidity cycles between 0-100% non-condensing humidity while device operating

Storage Humidity - Humidity cycles between 0-100% condensing humidity

## SEALING

Sealing can be optionally provided at the MIL-DTL-38999 interface with up to 10-5 cc/sec performance

## SHOCK AND VIBRATION

Sine Vibration - 10g Peak, 5-2,000Hz

Based on a sine sweep duration of 10 minutes per axis in each of three mutually perpendicular axes. May be displacement limited from 5 to 44 Hz, depending on specific test.

Random Vibration - 0.0005 @ 5Hz, 0.1 @ 15Hz, 0.1 @ 2,000 Hz

60 minutes per axis, in each of three mutually perpendicular axes.

40 G Peak Shock Cycle

Three hits in each axis, both directions, 1/2 sine and terminal- peak saw tooth, Total 36 hits.

## FLUIDS SUSEPTABILITY

MIL-DTL-38999 receptacle interface per EIA-364-10E

## ALTITUDE

-1,500 to 60,000 ft Altitude Testing w/ Rapid Depressurization

## ELECTROMAGNETIC COMPATIBILITY

Designed to comply with MIL-STD-461E

## PRINTED CIRCUIT BOARD ASSEMBLIES

Conformal Coat

Amphenol performs Conformal Coating to both sides of printed circuit board assemblies using HUSMISEAL IB31 in accordance with IPC-610, Class 3.

Printed Circuit Board Rigidity

Amphenol printed circuit boards acceptance criteria is in accordance with IPC-610, class 3.

Printed Circuit Board Fabrication

Amphenol printed circuit boards acceptance criteria is in accordance with IPC-610, Class 3.

## RELIABILITY PREDICTIONS (MTBF)

Amphenol can perform Mean Time Between Failure (MTBF) reliability analysis in full compliance with MIL-HDBK-217F-1 Parts Count Prediction and MIL-HDBK-217F-1 Parts Stress Analysis Prediction. We can also perform reliability analyses in full compliance of ANSI/VITA 51.1 if it is required or preferred over the later method.

Notice: Specifications are subject to change without notice. Contact your nearest Amphenol Corporation Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should assume that all safety measures are indicated or that other measures may not be required.

Specifications are typical and may not apply to all connectors.

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MILITARY HIGH SPEED

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