Amphenol
MILITARY HIGH SPEED

72 CHANNEL NETWORK SWITCH

48X 10GBASE-SR PORTS I 20X UP TO 25GBASE-SR I 14X

PDS - 700

DESCRIPTION

This high-density, ruggedized 1U rackmount switch delivers up to 68 fiber optic 10 Gbps (10GBase-SR) ports alongside 14 copper 1 Gbps (1GBase-T) ports—ideal for space-constrained systems requiring both ultra-fast backbone connectivity and widespread copper access.

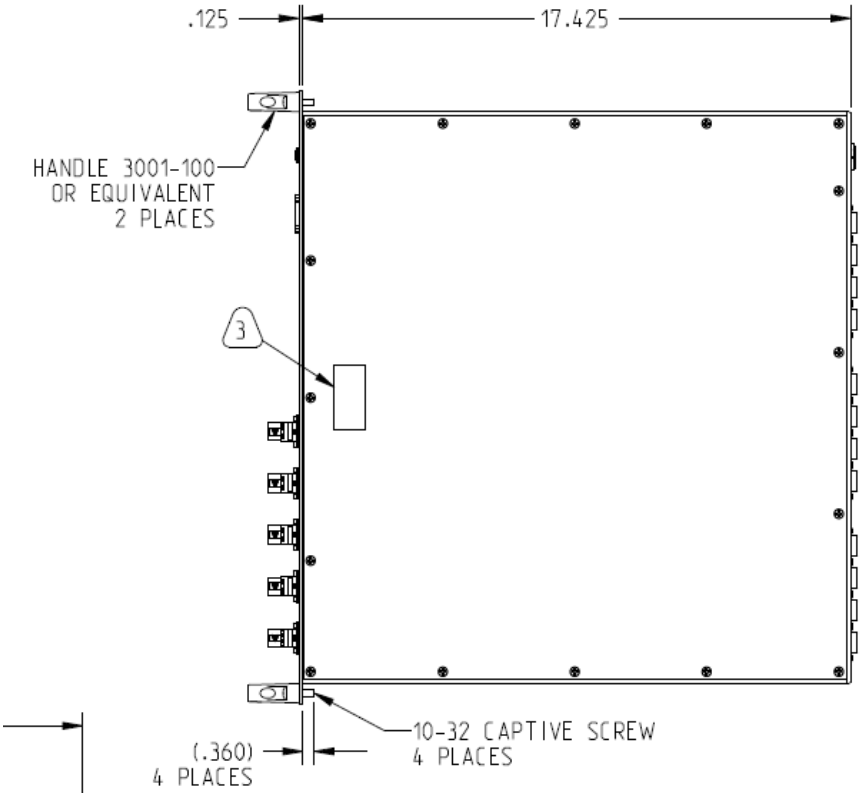
FEATURES & BENEFITS

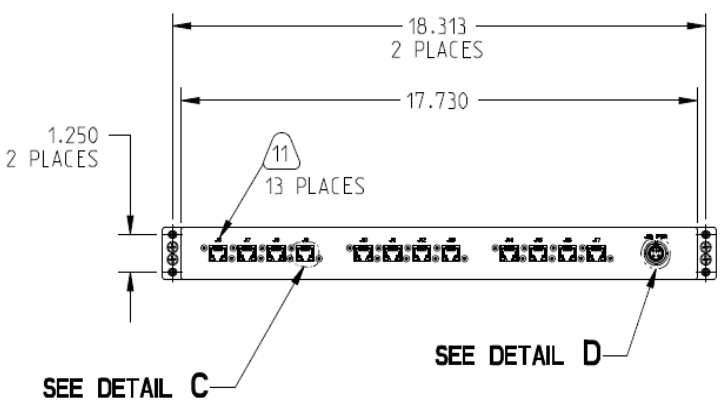
- 68×: 48X-10GBase-SR ports / 20X up to 25GBase-SR - Supports 850 nm multimode fiber, auto-negotiable down to 1 Gbps. Ideal for high-throughput, parallel fiber networks.
- 14× 10/100/1GBase-T ports - Standard RJ-45 copper ports, auto-negotiation from 10 Mbps up to 1 Gbps—perfect for legacy devices and longer cable runs.
- Ultra-compact 1U/19" form factor - Delivers unmatched port density (72 total) in a slim 1-rack-unit case, saving valuable chassis space.
- Rugged chassis design - Built with conduction cooling, MIL-grade connectors, and wide temperature tolerance (–40 °C to +85 °C) to thrive in harsh military and industrial environments
- Advanced management & networking - Layer 2/3 switching with features like VLAN tagging, link aggregation, IGMP snooping, QoS, SNMP, CLI and web GUI management for robust network control
- Fast boot & low power - Powers up and becomes operational within seconds, while maintaining efficient power usage (typically under 50 W).

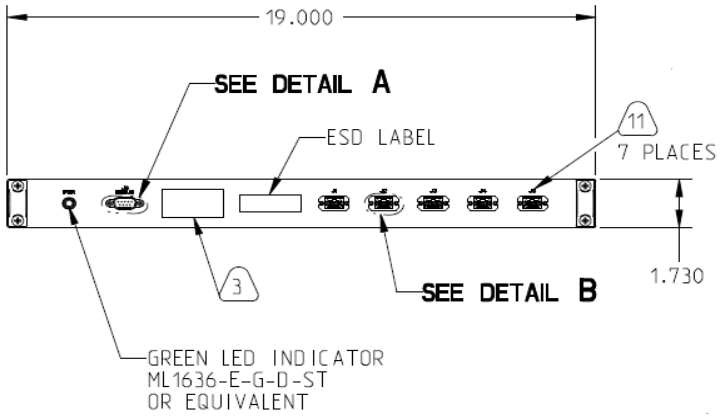
PART NUMBER	DESCRIPTION
CF-02WA00-37X	Network Switch

Jared Sibrava • +1 (607) 643 - 1845 • jsibrava@amphenol-aao.com
amphenol-aerospace.com

DIMENSIONAL INFORMATION







Jared Sibrava • +1 (607) 643 - 1845 • jsibrava@amphenol-aao.com
amphenol-aerospace.com

I/O CHART

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
JO(DEBUG)	1	TBD
	2	RS232_RXD
	3	RS232_TXD
	4	TBD
	5	GND
	6	TBD
	7	TBD
	8	TBD
	9	TBD

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J18(POWER)	1	28VDC_IN
	2	28VDC_RTN
	3	CHASSIS_GND
	4	N/C

I/O CHART

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J6 (RJ45)	1	CH1_1GBase-T_DA+
	2	CH1_1GBase-T_DA-
	3	CH1_1GBase-T_DB+
	4	CH1_1GBase-T_DB-
	5	CH1_1GBase-T_DC+
	6	CH1_1GBase-T_DC-
	7	CH1_1GBase-T_DD+
	8	CH1_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J10 (RJ45)	1	CH5_1GBase-T_DA+
	2	CH5_1GBase-T_DA-
	3	CH5_1GBase-T_DB+
	4	CH5_1GBase-T_DB-
	5	CH5_1GBase-T_DC+
	6	CH5_1GBase-T_DC-
	7	CH5_1GBase-T_DD+
	8	CH5_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J14 (RJ45)	1	CH9_1GBase-T_DA+
	2	CH9_1GBase-T_DA-
	3	CH9_1GBase-T_DB+
	4	CH9_1GBase-T_DB-
	5	CH9_1GBase-T_DC+
	6	CH9_1GBase-T_DC-
	7	CH9_1GBase-T_DD+
	8	CH9_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J7(RJ45)	1	CH2_1GBase-T_DA+
	2	CH2_1GBase-T_DA-
	3	CH2_1GBase-T_DB+
	4	CH2_1GBase-T_DB-
	5	CH2_1GBase-T_DC+
	6	CH2_1GBase-T_DC-
	7	CH2_1GBase-T_DD+
	8	CH2_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J11 (RJ45)	1	CH6_1GBase-T_DA+
	2	CH6_1GBase-T_DA-
	3	CH6_1GBase-T_DB+
	4	CH6_1GBase-T_DB-
	5	CH6_1GBase-T_DC+
	6	CH6_1GBase-T_DC-
	7	CH6_1GBase-T_DD+
	8	CH6_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J15 (RJ45)	1	CH10_1GBase-T_DA+
	2	CH10_1GBase-T_DA-
	3	CH10_1GBase-T_DB+
	4	CH10_1GBase-T_DB-
	5	CH10_1GBase-T_DC+
	6	CH10_1GBase-T_DC-
	7	CH10_1GBase-T_DD+
	8	CH10_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J8 (RJ45)	1	CH3_1GBase-T_DA+
	2	CH3_1GBase-T_DA-
	3	CH3_1GBase-T_DB+
	4	CH3_1GBase-T_DB-
	5	CH3_1GBase-T_DC+
	6	CH3_1GBase-T_DC-
	7	CH3_1GBase-T_DD+
	8	CH3_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J12 (RJ45)	1	CH7_1GBase-T_DA+
	2	CH7_1GBase-T_DA-
	3	CH7_1GBase-T_DB+
	4	CH7_1GBase-T_DB-
	5	CH7_1GBase-T_DC+
	6	CH7_1GBase-T_DC-
	7	CH7_1GBase-T_DD+
	8	CH7_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J16 (RJ45)	1	CH11_1GBase-T_DA+
	2	CH11_1GBase-T_DA-
	3	CH11_1GBase-T_DB+
	4	CH11_1GBase-T_DB-
	5	CH11_1GBase-T_DC+
	6	CH11_1GBase-T_DC-
	7	CH11_1GBase-T_DD+
	8	CH11_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J9 (RJ45)	1	CH4_1GBase-T_DA+
	2	CH4_1GBase-T_DA-
	3	CH4_1GBase-T_DB+
	4	CH4_1GBase-T_DB-
	5	CH4_1GBase-T_DC+
	6	CH4_1GBase-T_DC-
	7	CH4_1GBase-T_DD+
	8	CH4_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J13 (RJ45)	1	CH8_1GBase-T_DA+
	2	CH8_1GBase-T_DA-
	3	CH8_1GBase-T_DB+
	4	CH8_1GBase-T_DB-
	5	CH8_1GBase-T_DC+
	6	CH8_1GBase-T_DC-
	7	CH8_1GBase-T_DD+
	8	CH8_1GBase-T_DD-

I/O CHART		
CONN.	PIN NO.	SIGNAL NAME
J17 (RJ45)	1	CH12_1GBase-T_DA+
	2	CH12_1GBase-T_DA-
	3	CH12_1GBase-T_DB+
	4	CH12_1GBase-T_DB-
	5	CH12_1GBase-T_DC+
	6	CH12_1GBase-T_DC-
	7	CH12_1GBase-T_DD+
	8	CH12_1GBase-T_DD-

Amphenol Ruggedization Design

OVERVIEW:

Amphenol integrated electronic products are designed and manufactured to our Ruggedization 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:

- Opperating 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 cycle between 0-100% non-condensing humidity while device operating
- Storage Humidity - humidity cycle 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
    - o 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 @ 15 Hz, 0.1 @ 2,000 Hz
    - o 60 minutes per axis, in each of three mutually perpendicular axes.
- 40 G Peak Shock Cycle
    - o Three hits in each axis, both directions, 1/2 sine and terminal-leak saw tooth, total 36 hits

FLUID SUSCEPTABILITY:

- 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-STL-461E

PRINTED CIRCUIT BOARD ASSEMBLIES:

- Conformal Coat
- Amphenol performs Conformal Coting 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 are fabricated in accordance with IPC-6012, 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

Amphenol
MILITARY HIGH SPEED
40-60 Delaware Avenue
Sidney, NY 13838
amphenol-aerospace.com | amphenolmao.com