

# **Fiber Optic Convection Cooled Ethernet Switch**

168-Channel 25G/100G PDS - 374



### DESCRIPTION

Amphenol's rugged 168-channel 25G/100G Fiber Optic Convection Cooled Ethernet switch box offers configurable system connectivity, supporting a variety of speeds, port types, and seamless integration with high-speed media converters and connectors. Additionally, the switch is capable of supporting 1G, 10G, and 40G speeds.

Featuring 168 multi-mode fiber optic ports, each supporting up to 25G Ethernet, this switch undergoes rigorous testing at Amphenol's state-of-the-art communications testing center. It is tested at line rates in accordance with RFC 2889 for switching and RFC 2544 for Layer 2/Layer 3 performance, including metrics such as latency, packet forwarding, and other key performance indicators.

The switch is built using Amphenol's MIL-DTL-38999 Series connectors, incorporating standard AS39029-qualified Size 22D contacts, Octonet contacts, and 48F MT Ferrule Fiberoptic contact assemblies. For fiber optic Ethernet ports, Amphenol employs advanced MT ferrules, while the MT 38999-style contacts are utilized for power input and management functions.

### **FEATURES & BENEFITS**

- 168 channels of up to 25G fiber Ethernet
- 28V MIL-STD-704 input module; MFM and DC/DC mil-spec power supply with hold-up capacitor and in-rush current limiting circuit.
- Built-in test functionality for power up, initiated, and continuous operation.
- Link status on demand, port counter status, configurable port speed/routing, ARP list, drop report, ping, MTU configuration, LUA configuration
- Power connector, debug connector, maintenance connector all D38999's
- Mil-Spec black painted chassis with cold plate external conduction cooling

Part Number	Description
CF-02WA00-33X	168-channel 25G fiber Ethernet switch box



# **SOFTWARE FEATURES**

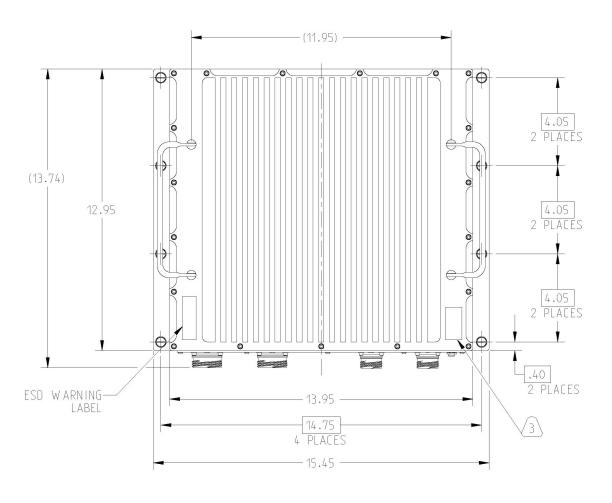
Stacking
Stacking Ring Topology
Stacking Chain Topology
Stacking Members and Unit ID
Removing and Replacing Stacking Members
Exchanging Stacking Members
Switching the Stacking Master
Configuring System Time
Configuring Daylight Savings Time
Configuring SNTP
Polling for Unicast Time Information
Polling for Anycast Time Information
Broadcast Time Information
Defining SNTP Settings
Configuring Device Security
Configuring Management Security
Configuring Authentication Methods
Defining Access Profiles
Defining Profile Rules
Defining Authentication Profiles
Mapping Authentication Methods
Defining RADIUS Settings
Defining TACACS+ Authentication
Configuring Passwords
Defining Local Users
Defining Line Passwords
Defining Enable Passwords
Configuring Network Security
Network Security Overview
Port-Based Authentication
Advanced Port-Based Authentication
Defining Port Authentication Properties
Defining Port Authentication
Configuring Multiple Hosts
Defining Authentication Hosts
Viewing EAP Statistics
Defining Access Control Lists
Defining IP Based Access Control Lists
Defining MAC Based Access Control Lists
Binding Device Security ACLs
Managing Port Security
Enabling Storm Control
Configuring System Logs
Defining General Log Properties
Viewing Memory Logs
Viewing Flash Logs
Defining System Log Servers
Configuring Interfaces
Configuring Ports
Aggregating Ports
Configuring LACP

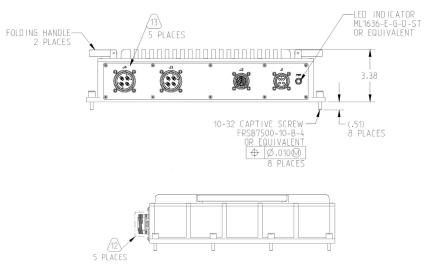
RES
Configuring VLANs
Defining VLAN Properties
Defining VLAN Membership
Defining VLAN Interface Settings
Configuring GARP
Defining GARP
Defining GVRP
Viewing GVRP Statistics
Defining IP Addresses
Configuring IP Addressing
Defining IP Addresses
Defining ARP
Defining Domain Name Servers
Defining DNS Servers
Defining DNS Host Mapping
Defining the Forwarding Database
Defining the Forwarding Database
Defining Access Profiles
Configuring Spanning Tree
Defining Classic Spanning Tree
Defining STP on Interfaces
Defining Rapid Spanning Tree
Defining Multiple Spanning Tree
Defining MSTP Instance Settings
Defining MSTP Interface Settings
Configuring SNMP
Configuring SNMP SNMP v1 and v2c
Configuring SNMP SNMP v1 and v2c SNMP v3
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles
Configuring SNMP  SNMP v1 and v2c  SNMP v3  Configuring SNMP Security  Defining SNMP Security  Defining SNMP View  Defining SNMP Group Profiles  Defining SNMP Group Members
Configuring SNMP  SNMP v1 and v2c  SNMP v3  Configuring SNMP Security  Defining SNMP Security  Defining SNMP View  Defining SNMP Group Profiles  Defining SNMP Group Members  Defining SNMP Communities
Configuring SNMP  SNMP v1 and v2c  SNMP v3  Configuring SNMP Security  Defining SNMP Security  Defining SNMP View  Defining SNMP Group Profiles  Defining SNMP Group Members  Defining SNMP Communities  SNMP Communities Basic Table
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP Wiew Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters Defining SNMP Notification Recipients SNMPV1,2c Notification Recipients SNMPV3 Notification Recipients
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP Wiew Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters Defining SNMP Notification Recipients SNMPv1,2c Notification Recipients SNMPv3 Notification Recipients Configuring Multicast Forwarding
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP Wiew Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters Defining SNMP Notification Recipients SNMPV1,2c Notification Recipients SNMPV3 Notification Recipients
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters Defining SNMP Notification Recipients SNMPV1,2c Notification Recipients SNMPv3 Notification Recipients Configuring Multicast Forwarding Multicast Forwarding Typical Multicast Setup
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP Wiew Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters Defining SNMP Notification Recipients SNMPV1,2c Notification Recipients SNMPV3 Notification Recipients Configuring Multicast Forwarding Multicast Forwarding
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters Defining SNMP Notification Recipients SNMPV1,2c Notification Recipients SNMPv3 Notification Recipients Configuring Multicast Forwarding Multicast Forwarding Typical Multicast Setup
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP Security Defining SNMP View Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters Defining SNMP Notification Recipients SNMPV1,2c Notification Recipients SNMPV3 Notification Recipients Configuring Multicast Forwarding Multicast Forwarding Typical Multicast Setup Multicast Operation
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP Security Defining SNMP Wiew Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters Defining SNMP Notification Recipients SNMPV1,2c Notification Recipients SNMPV3 Notification Recipients Configuring Multicast Forwarding Multicast Forwarding Typical Multicast Setup Multicast Registration
Configuring SNMP SNMP v1 and v2c SNMP v3 Configuring SNMP Security Defining SNMP Security Defining SNMP Group Profiles Defining SNMP Group Profiles Defining SNMP Group Members Defining SNMP Communities SNMP Communities Basic Table SNMP Communities Advanced Table Configuring SNMP Notifications Defining SNMP Notification Global Parameters Defining SNMP Notification Filters Defining SNMP Notification Recipients SNMPv1,2c Notification Recipients SNMPv3 Notification Recipients Configuring Multicast Forwarding Multicast Forwarding Typical Multicast Setup Multicast Registration Multicast Address Properties

Configuring IGMP Snooping
Configuring MLD Snooping
Viewing IGMP/MLD IP Multicast Groups
Defining Multicast Router Ports
Defining Forward All Multicast
Defining Unregistered Multicast Settings
Managing System Files
Downloading System Files
Firmware Download
Configuration Download
Uploading System Files
Upload Type
Software Image Upload
Configuration Upload
Copying Files
Restoring the Default Configuration File
Configuring Quality of Service
Quality of Service Overview
VPT Classification Information
CoS Services
Defining General QoS Settings
Configuring QoS General Settings
Restoring Factory Default QoS Interface Settings
Defining Queues
Defining Bandwidth Settings
Mapping CoS Values to Queues
Mapping DSCP Values to Queues
Defining QoS Basic Mode
Defining Basic Mode Settings
Rewriting Basic Mode DSCP Values
Defining QoS Advanced Mode
Setting Policy Binding
Managing Device Diagnostics
Configuring Port Mirroring
Viewing Statistics
Viewing Interface Statistics
Viewing Interface Statistics
Receive Statistics
Transmit Statistics
Viewing Etherlike Statistics
Managing RMON Statistics
Viewing RMON Statistics
Configuring RMON History
Defining RMON History Control
Viewing the RMON History Table
Configuring RMON Events
Defining RMON Events Control
Viewing the RMON Events Logs
Defining RMON Alarms



### **DIMENSIONAL INFORMATION**







# **Pinout Chart**

I/O CHART											
CONNECTOR DESCRIPTION	N PIN NO. DIRECTION SIGNAL NAME										
11	А	IN	28VDC_IN								
(POW ER)	В	OUT	28VDC_RTN								
15-4P	С		SAFETY GROUND / CHASSIS								
KEYING	D		NOT CONNECTED								
″N″	SHELL		CHASSIS								

	I/O CHART											
CONNECTOR DESCRIPTION	PIN NO.	DATA DIRECTION	SIGNAL NAME									
	1	OUT	RS232_CONSOLE_TX									
	2	IN	RS232_CONSOLE_RX									
	3		GND									
	4		N/C									
	5		N/C									
	6		GND									
	7	ВІ	SW ITCHBOX_RESET									
	8		GND									
	9		N/C									
	10		N/C									
	11		GND									
	12		DEBUG1_1GBase-T_DA+									
	13		DEBUG1_1GBase-T_DA-									
	14		DEBUG1_1GBase-T_DB+									
	15	D.I.	DEBUG1_1GBase-T_DB-									
	16	ВІ	DEBUG1_1GBase-T_DC+									
	17		DEBUG1_1GBase-T_DC-									
J2 (DEBUG)	18		DEBUG1_1GBase-T_DD+									
(DEBUU)	19		DEBUG1_1GBase-T_DD-									
15-35P KEYING	20		N/C									
"N"	21		GND									
	22		N/C									
	23		N/C									
	24		N/C									
	25		N/C									
	26		N/C									
	27		GND									
	28		N/C									
	29		N/C									
	30		DEBUG2_1GBase-T_DA+									
	31		DEBUG2_1GBase-T_DA-									
	32		DEBUG2_1GBase-T_DB+									
	33	ВІ	DEBUG2_1GBase-T_DB-									
	34	וט	DEBUG2_1GBase-T_DC+									
	35		DEBUG2_1GBase-T_DC-									
	36		DEBUG2_1GBase-T_DD+									
	37		DEBUG2_1GBase-T_DD-									
	SHELL		CHASSIS									



I/C		O CHART			1/0	CHART			1/0	CHART			1/0	CHART	
CONNECTOR DESCRIPTION	PIN NO	SIGNAL NAME	ETHERNET PORT NO	CONNECTOR DESCRIPTION	PIN NO	SIGNAL NAME	ETHERNET PORT NO	CONNECTOR DESCRIPTION	PIN NO	SIGNAL NAME	ETHERNET PORT NO	CONNECTOR DESCRIPTION	PIN NO	SIGNAL NAME	ETHERNET PORT NO
	A1	25GBase-SR_RX	12		B1	25GBase-SR_RX	36		C1	25GBase-SR_RX	60		D1	25GBase-SR_RX	84
	A2	25GBase-SR_RX	11		B2	25GBase-SR_RX	35		C2	25GBase-SR_RX	59		D2	25GBase-SR_RX	83
	A3	25GBase-SR_RX	10		B3	25GBase-SR_RX	34		C3	25GBase-SR_RX	58		D3	25GBase-SR_RX	82
	Α4	25GBase-SR_RX	9		B4	25GBase-SR_RX	33		C 4	25GBase-SR_RX	57		D4	25GBase-SR_RX	81
	A5	25GBase-SR_RX	8		B5	25GBase-SR_RX	32		C.5	25GBase-SR_RX	56		D5	25GBase-SR_RX	80
	A6	25GBase-SR_RX	7		B6	25GBase-SR_RX	31		C 6	25GBase-SR_RX	55		D6	25GBase-SR_RX	79
	Α7	25GBase-SR_RX	6		B7	25GBase-SR_RX	30		C7	25GBase-SR_RX	54		D7	25GBase-SR_RX	78
	A8	25GBase-SR_RX	5		B8	25GBase-SR_RX	29		C8	25GBase-SR_RX	53		D8	25GBase-SR_RX	77
	A9	25GBase-SR_RX	4		B9	25GBase-SR_RX	28		C 9	25GBase-SR_RX	52		D9	25GBase-SR_RX	76
	A10	25GBase-SR_RX	3		B10	25GBase-SR_RX	27		C 10	25GBase-SR_RX	51		D10	25GBase-SR_RX	75
	A11	25GBase-SR_RX	2		B11	25GBase-SR_RX	26		C 11	25GBase-SR_RX	50		D 11	25GBase-SR_RX	74
	A12	25GBase-SR_RX	1		B12	25GBase-SR_RX	25		C 12	25GBase-SR_RX	49		D12	25GBase-SR_RX	73
	A13	25GBase-SR_TX	12		B13	25GBase-SR_TX	36		C 13	25GBase-SR_TX	60		D 13	25GBase-SR_TX	84
	A14	25GBase-SR_TX	11		B14	25GBase-SR_TX	35		C 14	25GBase-SR_TX	59		D14	25GBase-SR_TX	83
	A15	25GBase-SR_TX	10		B15	25GBase-SR_TX	34		C 15	25GBase-SR_TX	58		D 15	25GBase-SR_TX	82
	A16	25GBase-SR_TX	9		B16	25GBase-SR_TX	33		C 16	25GBase-SR_TX	57		D16	25GBase-SR_TX	81
	A17	25GBase-SR_TX	8		B17	25GBase-SR_TX	32		C 17	25GBase-SR_TX	56		D.17	25GBase-SR_TX	80
	A18	25GBase-SR_TX	7		B18	25GBase-SR_TX	31		C 18	25GBase-SR_TX	55		D18	25GBase-SR_TX	79
	A19	25GBase-SR_TX	6		B19	25GBase-SR_TX	30		C 19	25GBase-SR_TX	54		D19	25GBase-SR_TX	78
	A20	25GBase-SR_TX	5		B20	25GBase-SR_TX	29		C 20	25GBase-SR_TX	53		D20	25GBase-SR_TX	77
J3	A21	25GBase-SR_TX	4	J3	B21	25GBase-SR_TX	28	J3	C21	25GBase-SR_TX	52	J3	D21	25GBase-SR_TX	76
	A22	25GBase-SR_TX	3		B22	25GBase-SR_TX	27		C22	25GBase-SR_TX	51		D22	25GBase-SR_TX	75
21-04S	A23	25GBase-SR_TX	2	21-04S	B23	25GBase-SR_TX	26	21-04S	C23	25GBase-SR_TX	50	21-04S	D23	25GBase-SR_TX	74
	A24	25GBase-SR_TX	1		B24	25GBase-SR_TX	25		C24	25GBase-SR_TX	49		D24	25GBase-SR_TX	73
4X 48F MT	A25	25GBase-SR_RX	24	4X 48F MT	B25	25GBase-SR_RX	48	4X 48F MT	C 25	25GBase-SR_RX	72	4X 48F MT	D25	25GBase-SR_RX	96
VEVINE	A26	25GBase-SR_RX	23	VEVING	B26	25GBase-SR_RX	47	VENZING	C 26	25GBase-SR_RX	71	CEVINE	D26	25GBase-SR_RX	95
KEYING	A27	25GBase-SR_RX	22	KEYING	B27	25GBase-SR_RX	46	KEYING	C 27	25GBase-SR_RX	70	KEYING	D27	25GBase-SR_RX	94
"N"	A28	25GBase-SR_RX	21	"N"	B28	25GBase-SR_RX	45	"N"	C 28	25GBase-SR_RX	69	"N"	D28		93
	A29	25GBase-SR_RX	20		B29	25GBase-SR_RX	44		C 29	25GBase-SR_RX	68		D29	25GBase-SR_RX	92
	0EA	25GBase-SR_RX	19		B30	25GBase-SR_RX	43		C30	25GBase-SR_RX	67		D30	25GBase-SR_RX	91
	A31	25GBase-SR_RX	18		B31	25GBase-SR_RX	42		C 31	25GBase-SR_RX	66		D31	25GBase-SR_RX	90
	A32	25GBase-SR_RX	17		B32	25GBase-SR_RX	41		C32	25GBase-SR_RX	65		D32	25GBase-SR_RX	89
	A33	25GBase-SR_RX	16		B33	25GBase-SR_RX	40		C33	25GBase-SR_RX	64		D33	25GBase-SR_RX	88
	A34	25GBase-SR_RX	15		B34	25GBase-SR_RX	39		C34	25GBase-SR_RX	63		D34	25GBase-SR_RX	87
	A35	25GBase-SR_RX	14		B35	25GBase-SR_RX	38		C 35	25GBase-SR_RX	62		D 35	25GBase-SR_RX	86
	A36	25GBase-SR_RX	13		B36	25GBase-SR_RX	37		C36	25GBase-SR_RX	61		D36	25GBase-SR_RX	85
	A37	25GBase-SR_TX	24		B37	25GBase-SR_TX	48		C37	25GBase-SR_TX	72		037	25GBase-SR_TX	96
	8EA	25GBase-SR_TX	23		B38	25GBase-SR_TX	47		C38	25GBase-SR_TX	71		D38	25GBase-SR_TX	95
	A39	25GBase-SR_TX	22		B39	25GBase-SR_TX	46		C39	25GBase-SR_TX	70		D39	25GBase-SR_TX	94
	A40	25GBase-SR_TX	21		B40	25GBase-SR_TX	45		C40	25GBase-SR_TX	69		D40		93
	A41	25GBase-SR_TX	20		B41	25GBase-SR_TX	44		C41	25GBase-SR_TX	68		D41	25GBase-SR_TX	92
	A42	25GBase-SR_TX	19		B42	25GBase-SR_TX	43		C42	25GBase-SR_TX	67		D42	25GBase-SR_TX	91
	A43	25GBase-SR_TX	18		B43	25GBase-SR_TX	42		C43	25GBase-SR_TX	66		043		90
	A44	25GBase-SR_TX	17		B44	25GBase-SR_TX	41		C44	25GBase-SR_TX	65		D44	25GBase-SR_TX	89
	A45	25GBase-SR_TX	16		B45	25GBase-SR_TX	40		C 45	25GBase-SR_TX	64		D45	25GBase-SR_TX	88
	A46	25GBase-SR_TX	15		B46	25GBase-SR_TX	39		C46	25GBase-SR_TX	63		D46	25GBase-SR_TX	87
	A47	25GBase-SR_TX	14		B47	25GBase-SR_TX	38		C 47	25GBase-SR_TX	62		047	25GBase-SR_TX	86
	A48	25GBase-SR_TX	13		B48	25GBase-SR_TX	37		C48	25GBase-SR_TX	61		D48	25GBase-SR_TX	85



I/O CHART		CHART		I/O CHART					1/0	CHART		I/O CHART					
CONNECTOR DESCRIPTION	PIN NO	SIGNAL NAME	ETHERNET PORT NO	CONNECTOR DESCRIPTION	PIN NO	SIGNAL NAME	ETHERNET PORT NO	CONNECTOR DESCRIPTION	PIN NO	SIGNAL NAME	ETHERNET PORT NO	CONNECTOR DESCRIPTION	PIN NO	SIGNAL NAME	ETHERNET PORT NO		
	A1	25GBase-SR_RX	108			108	B1	25GBase-SR_RX	132		C1	25GBase-SR_RX	156				
	A2	25GBase-SR_RX	107		B2	25GBase-SR_RX	131		C2	25GBase-SR_RX	155						
	A3	25GBase-SR_RX	106		B3	25GBase-SR_RX	130		C3	25GBase-SR_RX	154						
	Α4	25GBase-SR_RX	105		B4	25GBase-SR_RX	25GBase-SR_RX 129		C 4	25GBase-SR_RX	153						
	A5	25GBase-SR_RX	104					25GBase-SR_RX	128		C5	25GBase-SR_RX	152				
	A6	25GBase-SR_RX	103			B6	25GBase-SR_RX	127		C 6	25GBase-SR_RX						
	A7	25GBase-SR_RX	102		B7 25GBase-SR_RX	126		C7	25GBase-SR_RX	150							
	A8	25GBase-SR_RX	101		B8	25GBase-SR_RX	125		C8	25GBase-SR_RX	149		D	NO CONNECT			
	A9	25GBase-SR_RX	100		B9	25GBase-SR_RX	124		C 9	25GBase-SR_RX	148						
	A10	25GBase-SR_RX	99		B10	25GBase-SR_RX	123		C 10	25GBase-SR_RX	147						
	A11	25GBase-SR_RX	98		B11	25GBase-SR_RX	122		£ 11	25GBase-SR_RX	146						
	A12	25GBase-SR_RX	97		B12	25GBase-SR_RX	121		C 12	25GBase-SR_RX	145						
	A13	25GBase-SR_TX	108		B13	25GBase-SR_TX	132		C 13	25GBase-SR_TX	156						
	A14	25GBase-SR_TX	107		B14	25GBase-SR_TX	131		C14	25GBase-SR_TX	155						
	A15	25GBase-SR_TX	106		B15	25GBase-SR_TX	130		C 15	25GBase-SR_TX	154						
	A16	25GBase-SR_TX	105		B16	25GBase-SR_TX	129		C 16	25GBase-SR_TX	153						
	A17	25GBase-SR_TX	104		B17	25GBase-SR_TX	128		C 17	25GBase-SR_TX	152						
	A18	25GBase-SR_TX	103		B18	25GBase-SR_TX	127		C 18	25GBase-SR_TX	151						
	A19	25GBase-SR_TX	102		B19	25GBase-SR_TX	126		C 19	25GBase-SR_TX	150						
	A20	25GBase-SR_TX	101	Ј4	B20	25GBase-SR_TX	125		C 20	25GBase-SR_TX	149	Ј4					
J4	A21	25GBase-SR_TX	100		B21	25GBase-SR_TX	124	J4	C21	25GBase-SR_TX	148						
	A22	25GBase-SR_TX	99		B22	25GBase-SR_TX	123		C22	25GBase-SR_TX	147						
21-04S	A23	25GBase-SR_TX	98	21-04S	B23	25GBase-SR_TX	122	21-04S	C 23	25GBase-SR_TX	146	21-04S 4X 48F MT					
	A24	25GBase-SR_TX	97		B24	25GBase-SR_TX	121		C24	25GBase-SR_TX	145						
4X 48F MT	A25	25GBase-SR_RX	120	4X 48F MT	B25	25GBase-SR_RX	144	4X 48F MT	C 25	25GBase-SR_RX	168						
KEYING	A26	25GBase-SR_RX	119	KEYING	B26	25GBase-SR_RX	143	KEYING	C 26	25GBase-SR_RX	167	KEYING					
"A"	A27	25GBase-SR_RX	118	"A"	B27	25GBase-SR_RX	142	"A"	C 27	25GBase-SR_RX	166	"A"					
M	A28	25GBase-SR_RX	117	A	B28	25GBase-SR_RX	141	, A	C 28	25GBase-SR_RX	165	A					
	A29	25GBase-SR_RX	116		B29	25GBase-SR_RX	140		C 29	25GBase-SR_RX	164						
	A30	25GBase-SR_RX	115		B30	25GBase-SR_RX	139		C30	25GBase-SR_RX	163						
	A31	25GBase-SR_RX	114		B31	25GBase-SR_RX	138		C 31	25GBase-SR_RX	162						
	A32	25GBase-SR_RX	113		B32 B33	25GBase-SR_RX	137		C32	25GBase-SR_RX	161						
	A33 A34	25GBase-SR_RX	112		B34	25GBase-SR_RX	136 135		C33	25GBase-SR_RX	160 159						
	A34	25GBase-SR_RX 25GBase-SR_RX	110		B35	25GBase-SR_RX 25GBase-SR_RX	134		C35	25GBase-SR_RX 25GBase-SR_RX	158						
	A36	25GBase-SR_RX	109		B36	25GBase-SR_RX	133		C36	25GBase-SR_RX	157						
	A37	25GBase-SR_TX	120		B37	25GBase-SR_TX	144		C37	25GBase-SR_TX	168						
	A38	25GBase-SR_TX	119		B38	25GBase-SR_TX	143		C38	25GBase-SR_TX	167						
	A39	25GBase-SR_TX	118		B39	25GBase-SR_TX	142		C39	25GBase-SR_TX	166						
	A40	25GBase-SR_TX	117		B40	25GBase-SR_TX	141		C40	25GBase-SR_TX	165						
	A41	25GBase-SR_TX	116		B41	25GBase-SR_TX	140		C41	25GBase-SR_TX	164						
	A42	25GBase-SR_TX	115		B42	25GBase-SR_TX	139		C41	25GBase-SR_TX	163						
	A43	25GBase-SR_TX	114		B43	25GBase-SR_TX	138		C43	25GBase-SR_TX	162						
	A44	25GBase-SR_TX	113		B44	25GBase-SR_TX	137		C44	25GBase-SR_TX	161						
	A45	25GBase-SR_TX	112		B45	25GBase-SR_TX	136		C45	25GBase-SR_TX	160						
	A46	25GBase-SR_TX	111		B46	25GBase-SR_TX	135		C46	25GBase-SR_TX	159						
	A47	25GBase-SR_TX	110		B47	25GBase-SR_TX	134		C47	25GBase-SR_TX	158						
	A48	25GBase-SR_TX	109		B48	25GBase-SR_TX	133		C48	25GBase-SR_TX	157						
	MAO	Fannage-SWTIV	10.7		040	- STODAGE-DKTIV	133		C40	_ 2300036-3K_1X	157						



## **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:

- 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 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
  - 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
  - 60 minutes per axis, in each of three mutually perpendicular axes.
- 40 G Peak Shock Cycle
  - Three hits in each axis, both directions, ½ 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

#### **ELECTRONMAGNETIC COMPATIBILITY:**

Designed to comply with MIL-STD-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

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