

ENABLING HIGH DENSITY MILITARY SWITCHES

HOW DO YOU SQUEEZE MASSIVE AMOUNTS OF DATA INTO A 19" CHASSIS?

When Crystal Rugged® was asked to provide the military with an ISR system requiring 48 ports of 10G ethernet capacity but no other existing connector would work, the patented MACHFORCE® D38999 style data connector was the answer to solve their port density need.

Crystal Group partnered with PIC Wire & Cable to integrate the MACHFORCE into their RCS7750-48CM network switch. The rugged switch provides intelligent, scalable stackable LAN solution for small or medium applications that require fail-safe operation in MIL-SPEC environments. These switches needed connectors that can handle the extreme temperatures, humidity, shock and vibration, dust, sand and salt fog.

The MACHFORCE connector can optimize space and provide the highest density 10G connector on the market today by utilizing our patented High-Speed Module. In this case, Crystal Group's high-data density networking switch features five MACHFORCE connectors for a total of 48 10G Ethernet ports and squeezed massive amounts of data into a 19" chassis that would also allow for multiple disconnects in the aircraft.

Crystal Rugged RSC7750-48CM shown below with five MACHFORCE connectors installed



APPLICATION NOTE

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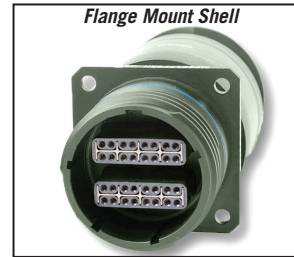
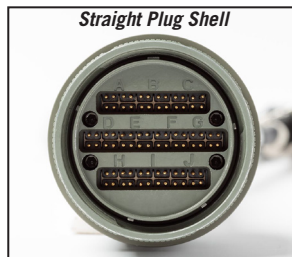
ASSEMBLY PART NUMBER BUILDER

Accelerate the procurement process by building a custom MACHFORCE part number with design details that meet an application's specific requirements. MACHFORCE is offered as a complete assembly for your customization needs. For customized configurations, contact PIC.

CONNECTOR

PRODUCT	MF	Family: MACHFORCE	MF	3825	F	S	W	N	EC	
SHELL TYPE	3825	D38999 – Size 25	3817	D38999 – Size 17						
SHELL STYLE	F	Flange Mount Receptacle*	P	Straight Plug	J	Jam Nut Receptacle				
CONTACT	S	Sockets (F or J Shell Style)	P	Pin (Plug Only)						
PLATING	W	Olive Drab Cadmium								
KEY POSITION DETAIL	N	80	142	196	293	C	66	140	200	257
	A	135	170	200	310	D	62	145	180	280
	B	49	169	200	244					
CABLE TYPE	EC	24 AWG Ethernet (E6A6824)	PC1	PCB Length 1 (F or J Shell Style)						
	ED	26 AWG Ethernet (E6A6826)	PC2	PCB Length 2 (F or J Shell Style)						
			PC3	PCB Length 3 (F or J Shell Style)						

*1/4" Mounting Nut Plates Available



BACKSHELL

PRODUCT	MF	Family: MACHFORCE	MF	3825	SP	W	S	BC
SHELL TYPE	3825	D38999 – Size 25	3817	D38999 – Size 17				
STYLE	SP	Standard Profile Sealed	LP	Low Profile Unsealed				
PLATING	W	Olive Drab Cadmium						
ANGLE	S	Straight	R	Right Angle (SP Style, 3817 Shell Type)				
CABLE TYPE	BC	24 AWG Ethernet (E6A6824)	BD	26 AWG Ethernet (E6A6826)				

