

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



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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				
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		K°	L°	M°	N°		K°	L°	M°	N°
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)

Jam Nut Shell

Flange Mount Shell



BACKSHELL

PRODUCT	MF	Family: MACHFORCE		
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)

Legend: MF, 3825, SP, W, S, BC

Standard Profile Sealed Backshell

Low Profile Unsealed Backshell



Standard Profile 90° Backshell

