

MC700 Series

The Rugged Media Converter Family

Designed to bridge dissimilar network media in demanding military and tactical environments. The MC700 Series enables seamless connectivity between copper Ethernet, optical Ethernet, and legacy E1 infrastructures across vehicle, shelter, command-post, and deployed communication networks.

Key Features

Primary Network Role	Tactical Media Converter
Conversion Types	Copper ↔ Fiber, Fiber ↔ Fiber, E1 ↔ Ethernet
Network Interfaces	Copper Ethernet, Optical Ethernet, E1, and SFP-based interfaces
Ethernet Speed	Fast Ethernet (100 Mbps) and Gigabit Ethernet (1000 Mbps)
Fiber Support	Single-Mode (SM), Multimode (MM), and SM↔MM conversion
Power Input	Wide-Range 10-32 VDC with optional 5 VDC USB power

Capabilities

The MC700 Series is purpose-built for defense and tactical communications applications requiring reliable connectivity between heterogeneous network infrastructures. It enables transparent media conversion across platform, shelter, and deployed network environments while maintaining operational simplicity and reliability.

Designed for deployment in military vehicles, command posts, communication shelters, naval platforms, and other mission-critical environments, the MC700 Series combines rugged mechanical construction with wide-range DC power support to ensure reliable operation under demanding field conditions. The series supports interchangeable SFP transceivers, enabling users to adapt the optical interface to evolving network requirements while reducing inventory and lifecycle costs.

The capabilities of the MC700 series include:

- **Tactical Media Conversion:** Copper ↔ Fiber, Fiber ↔ Fiber, and E1 ↔ Ethernet conversion.
- **Network Interoperability:** Connects tactical, sensor, and legacy networks.
- **Optical Flexibility:** Supports single-mode, multimode, and SFP-based interfaces.
- **Mission-Ready Ruggedization:** Designed for demanding military environments.
- **Wide-Range Platform Power:** Operates from 10-32 VDC platform power sources.
- **Compact Integration:** Ideal for embedded and rack-based installations.

Form factors

The MC700 series offers different form factors depending on best fit for a particular use case.

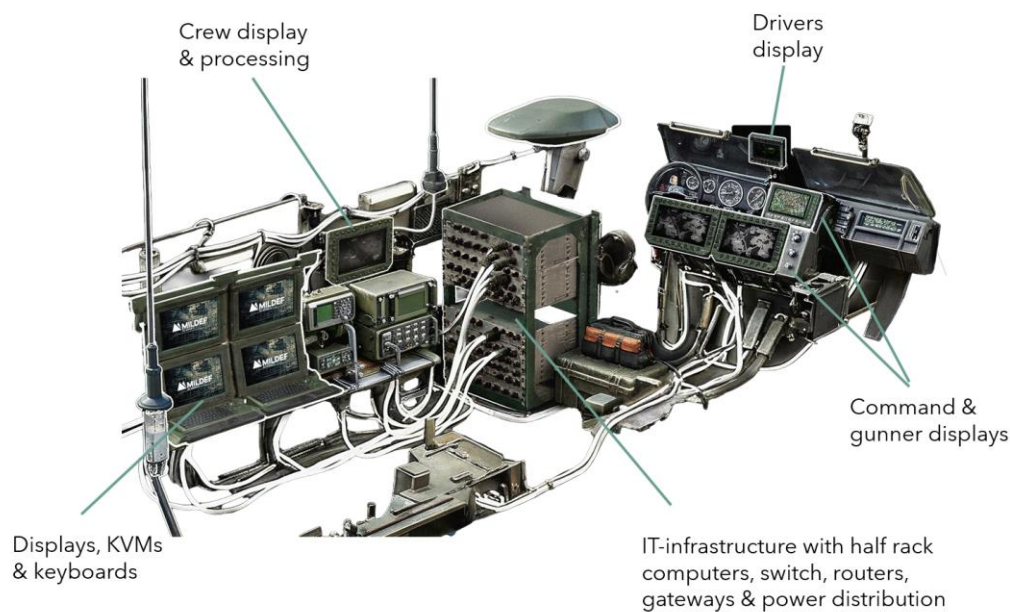
19"/6 form factor	19"/4 form factor	Customized form factor
		

Solution provider

MilDef offers solution and integration delivering seamless, end-to-end solutions by integrating hardware and software into complete systems that meet customer requirements. Managing integration projects/programs to ensure alignment with mission objectives/business strategy and technological capabilities.

Hardware ECO-system

Our hardware offering including all the building blocks for complete IT infrastructure for the tactical edge, such as displays, network products, power products, docking stations, mounting solutions etc.



Use case

The MC700 Series is an enabling component in tactical and mission-critical networks where different communication media must be interconnected reliably and efficiently. Some use case examples are:

- **Armoured Vehicles:** Connects vetronics, radios, sensors, and mission systems.
- **Tactical Communications:** Links command posts, shelters, radios, and deployed nodes.
- **ISR & Surveillance:** Connects sensors, radar systems, and operator workstations.
- **Legacy Integration:** Bridges E1-based systems with Ethernet and fiber networks.

Specifications

Network Conversion			
Conversion Type	Copper ↔ Fiber Fiber ↔ Fiber E1 ↔ Ethernet	Ethernet Speed	Fast Ethernet (100 Mbps) and Gigabit Ethernet (1000 Mbps)
Network Interfaces	Copper Ethernet, optical Ethernet, E1, and SFP-based interfaces	SFP Support	Fixed optics or configurable via SFP modules
Optical Characteristics			
Fiber Type	Single-Mode (SM), Multimode (MM), SM ↔ MM Conversion	Optical Wavelength	Depends on the optical interface or installed SFP module
Installation & Power			
Form Factor	19"/4 or 19"/6 module	Auxiliary Power	Optional 5 VDC USB power
Power Input	10-32 VDC		
Environmental			
MIL-STD-810			
Shock operating	Functional Shock. 40G/11ms	Noise level	Max noise level of 40 dB SPL 1 m (3.3 ft)
Temp. operating	-40 to 65°C (-40 to 149 °F)*	Salt fog	5 ± 1%
Temp. storage	-40 to 71°C (-40 to 160 °F)*	Temp. shock	55 °C (131 °F) / -40 °C (-40 °F)*
Humidity	Aggravated, 95 ± 4% RH	Vibration	Rotary wing aircraft - helicopter
IP Class	IP65*		Truck/trailer - loose cargo
Low air pressure	Rapid Decompression 8000 ft / 40000 ft		Ground vehicles - ground mobile tracked
	Operation/Air Carriage 15,000 ft		Ground vehicles - ground mobile wheeled
Optional standards			
RTCA/D0160, VG, DEFSTAN, MIL-STD, etc can be included on request.			
EMC			
MIL-STD-461			
EMI/EMS	Ground Army	ESD	CS118
Optional standards			
RTCA/D0160, VG, DEFSTAN, MIL-STD, etc can be included on request.			
Power			
Vehicle Power	MIL-STD-1275		
Optional standards			
VG, DEFSTAN, MIL-STD, etc can be included on request.			

*Higher available on request