19"/4 MC719

Rugged ethernet media converter

The MC719 converts between 1000BASE-T (Copper Gigabit Ethernet) and 1000BASE-LX (Fiber Gigabit Singlemode Ethernet).

Small form factor

The MilDef 19"/2® form factor is optimized for reduced size, weight, and power (SWaP) to meet industry and military requirements without sacrificing reliability, ruggedness or performance.

Flexible mounting

The 19"/2® standard enables flexible mounting options for a wide array of integration scenarios. The unit can be mounted in a standard 19" rack, half racks, or directly on to a surface and at any angle.

Military-relevant rugged design

MilDef products are designed to operate in extreme environmental conditions and challenging electromagnetic operational scenarios. Operationally proven, MilDef products are actively employed in military operations in over 60 countries.

Customizable

Are you looking for additional features and functions? MilDef specializes in customized solutions, to include change of connectors, chassis modifications, mounting solutions, etc. Contact your nearest MilDef Sales Office and we will help you tailor a solution to meet your exact requirements.

Guaranteed performance

MilDef products are designed for the long lifecycles of military programs and come with a lifetime support program to ensure your equipment maintains peak performance for many missions to come.

We also guarantee the availability of spare parts for an additional 5 years after product end-of-life.

Features

- 12-36 VDC
- Passively cooled

MC719 Issue 02, 2023-04-12.

19"/4 MC719

Connector Interfaces

X1 DC IN (back)	• 1x Power
SERVICE (back)	• 1x RS232 Service
X2 (front)	• 1x 1000BASE-T
X3 (front)	• 1x 1000BASE-LX

Other Interfaces

1x System button (front)

Technical Specification

Blanking	Enable/disable all externally visible indicators from emitting light via the "blanking command"
Fiber characteristics	SM 1310 nm 9/125
LAN 1000BASE-T	1000BASE-T standard
MIL-STD-1275E	Fully compliant
Polarity protection	Protected against polarization failure on the power input in the voltage range of normal operation
Power consumption	7 W
Power input	12-36 VDC
Chassis material	Aluminum
Coating and color	RAL1013-HR
Cooling	Passively cooled
Dimensions depth	195 mm (7.7 in)
Dimensions width and height	110 x 43.4 mm (4.34 x 1.71 in) (WxH)
Earth point	M6 12 mm
Surface treatment chassis	Chromit-Al
Weight	1 kg (2.2 lbs)
MTBF	68,785 h Ground Mobile at +45 °C (Passive components) / +65 °C (Active components)
CE	Compliant

Environmental Specification

Functional shock - Operating	MIL-STD-810G, Method 516.6, Procedure I - Functional Shock. Table 516.6-II, Terminal peak sawtooth pulse, Ground equipment 40 g 11 ms
High temperature - Operating	MIL-STD-810G, method 501.5, Procedure II - Operation 65 °C (149 °F)
High temperature - Storage	MIL-STD-810G, Method 501.5, Procedure I - Storage 71 °C (160 °F)
Humidity	MIL-STD-810G, Method 507.5, Procedure II - Aggravated 95 ± 4 % RH Ten 24 h cycles
IP Class (Solid Particle Protection)	IP Class 6X
IP Class (Water)	IP Class X5
Low air pressure - Rapid decompression	MIL-STD-810G, Method 500.5, Procedure III - Rapid decompression 75.2 kPa, corresponding to 2,438 m (8,000 ft) 17 kPa, corresponding to 12,192 m (40,000 ft)
Low air pressure - Operating	MIL-STD-810G, method 500.5, Procedure II - Operation/Air Carriage 4,572 m (15,000 ft)
Low temperature - Operating	MIL-STD-810G, method 502.5, Procedure II - Operation -40 °C (-40 °F)
Low temperature - Storage	MIL-STD-810G, method 502.5, Procedure I - Storage -40 °C (-40 °F)
Mechanical shock - Operating	Def Stan 00-35, Part 3, Issue 4, Test M3, Table 1, Page 161, Shock severity for material transported or installed in military tracked vehicle such as APC's 30 g 11 ms
Noise level	Maximum noise level of 40 dB SPL A-weighting at 1 m (3.3 ft) distance
Salt fog	MIL-STD-810G Method: 509.5 5 % ± 1 % (by weight) Two cycles, 24 h wet + 24 h dry / cycle
Shock	MIL-STD-810F Method: 516.5 Procedure: I (Terminal peak saw tooth shock pulse) 30G, 18ms
Temperature shock - Operating	MIL-STD 810G, Method 503.5 procedures I-C, - Multi-cycle shocks from constant extreme temperature 65 °C (149 °F) -46 °C (-51 °F)
Vibration - Helicopter	MIL-STD-810G. Method 514.6, Procedure I - General vibration, Category 14 - Rotary wing aircraft - helicopter
Vibration - Loose cargo	MIL-STD-810G. Method 514.6, Procedure II - Loose cargo transportation, Category 5 - Truck/ trailer - loose cargo

Vibration - Tracked vehicles	MIL-STD-810G. Method: 514.6 , Procedure 1 - General Vibration, Category 20 - Ground vehicles - ground mobile, tracked vehicles
Vibration - Tracked vehicles	Def Stan 00-35 Part 3, issue 4, Test M1. Paragraph A.3.2.2. Figures A24-25. Pages 123-124, Heavy Vehicle- Materiel on Sponson or Installed in Hull, Tracked Vehicle
Vibration - Wheeled vehicles	MIL-STD-810G. Method: 514.6 , Procedure 1 - General Vibration, Category 20 - Ground vehicles - ground mobile, wheeled vehicles

EMC Specification

EMS conducted CS117	MIL-STD-461G, Method CS117, conducted susceptibility, lightning induced transients, cables and power leads
EMI conducted CE101	MIL-STD-461G, Method CE101 BASIC CURVE 30 kHz to 150 kHz
EMI conducted CE102	MIL-STD-461G, Method CE102 BASIC CURVE 10 kHz to 10 MHz
EMI radiated RE102	MIL-STD-461G Navy Mobile & Army 2 MHz - 18 GHz
EMS conducted CS101	MIL-STD-461G, Method CS101, conducted suceptibility, power leads CURVE #1 30 Hz to 150 kHz
EMS conducted CS114	MIL-STD-461G Army, Ground 10 kHz - 200 MHz
EMS conducted CS115	MIL-STD-461G Conducted susceptibility, bulk cable injection, impulse excitation
EMS conducted CS116	MIL-STD-461G 10 kHz - 100 MHz
EMS radiated RS103	MIL-STD-461F Army 2 MHz - 18 GHz 200 V/m
ESD CS118	MIL-STD-461G
EMS radiated DRS02.B	Def Stan 59-411 1 GHz - 18 GHz 200 V/m