



# MILTECH™ 2042

## Military Rugged Video/Serial/IO/LAN Over Fiber Communication System

Milpower's MILTECH™2042 Series is a MIL-STD rugged, communication system intended for transferring Video, Serial (RS-422), Discrete Signals and Gigabit Ethernet over single-strand Tactical Fibers.

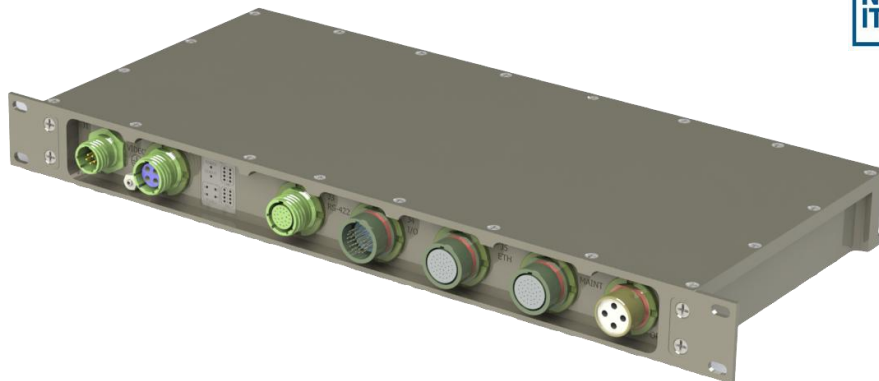
Providing 4 x 10/100/1000Base-T ports, 1Gb Fiber optic, 4 x RS422 serial interfaces, 2 x Composite Video inputs/outputs, 7 x Discrete inputs and 8 x Discrete outputs, this device is designed to meet the needs of manned/autonomous vehicles, Avionics and UAVs, and mobile equipment in battlefield environments.

The MILTECH 2042 system comprises of two units, 2042T and 2042R, connected via 1 to 4 1G F/O ports and supporting end to end connectivity of the Composite Video/RS422 /Discrete IO/Ethernet ports.

Leveraging best-in-class technology from Milpower, the MILTECH™2042 serves as a robust solution for transferring Tactical Communication signals over fiber interfaces, to provide connectivity to IP-enabled systems and net-centric devices.

Developed for military and harsh environment applications, the MILTECH™2042 features mechanical packaging enhancements designed for MIL-STD-810F airborne and ground environmental compliance and high reliability. The unit has been specially hardened to improve ingress, impact, and shock/vibration protection, as well as eliminate all moving parts through passive cooling, and interface through sealed MIL-D-38999 circular connectors.

Compact in size, the MILTECH™2042 is particularly useful for expanding port density in space-constrained airborne and ground vehicle environments. MILTECH™2042 is specifically designed for Data Acquisition & Transmission, Battlefield Communication C4ISR, Rugged Networks, Mobile Communications, Combat vehicles, and Avionic & Shipboard Systems.



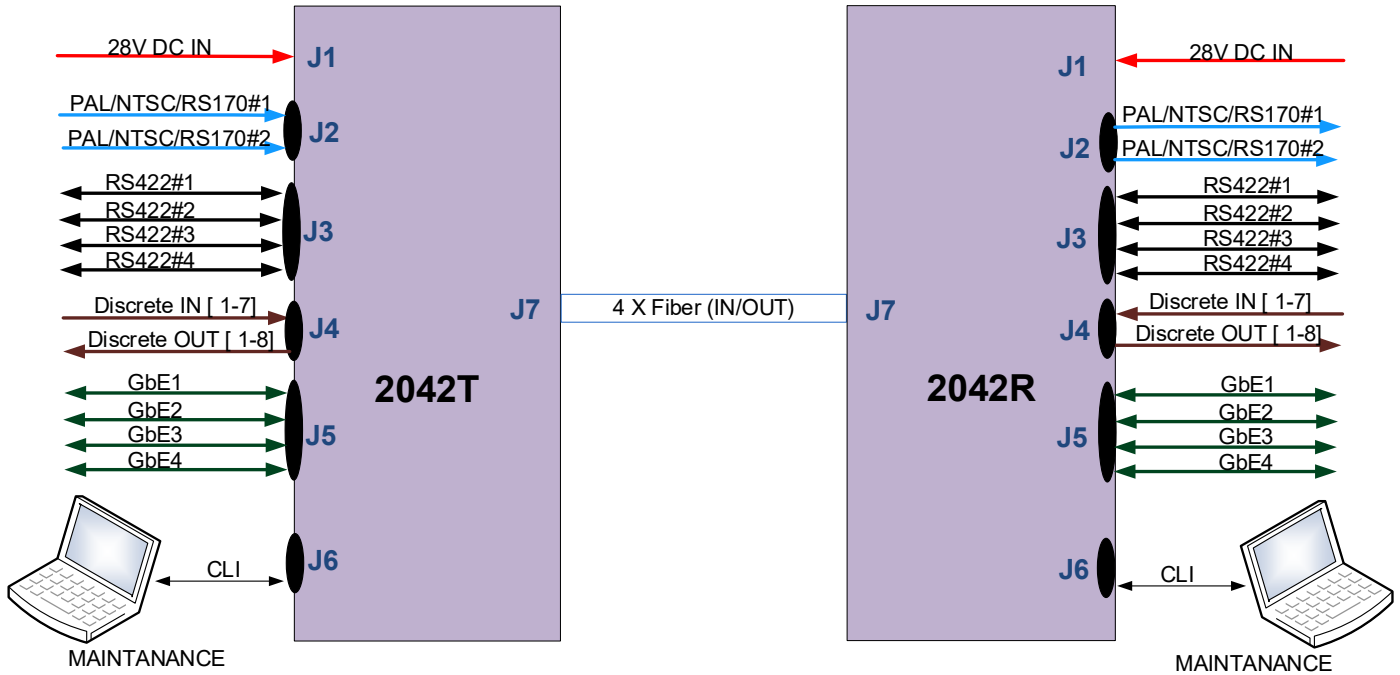


## SPECIFICATIONS

PORTS:	<ul style="list-style-type: none"> <li>• 2 x Composite video (PAL/NTSC/RS170) Inputs – In Transmitter Unit (2042T)</li> <li>• 2 x Composite video (PAL/NTSC/RS170) Outputs – In Receiver Unit (2042R)</li> <li>• 1 x Composite video (PAL/NTSC/RS170) Input and Output – In Transceiver Unit (2042)</li> <li>• 4 x Serial data ports RS-422 (Isolated)</li> <li>• 7 x DI (Open / GND, Isolated)</li> <li>• 8 x DO (Open / GND, Isolated)</li> <li>• 4 x Managed switched 10/100/1000Base-T ports</li> <li>• Up to 4 Fiber Optic (S.M Up to 20 Km, M.M Optional): <ul style="list-style-type: none"> <li>○ Fiber 1 – Video channel #1</li> <li>○ Fiber 2 – Video channel #2</li> <li>○ Fiber 3 – Serial/Discrete IOs channel</li> <li>○ Fiber 4 – Ethernet Switch port</li> </ul> </li> </ul>
PERFORMANCE:	<ul style="list-style-type: none"> <li>• Bi-Directional opto-isolated Discrete IOs</li> <li>• Analog video inputs/outputs NTSC/PAL/RS170, 75ohm</li> <li>• Serial Interfaces RS-422 up to 20Mbps per interface, galvanic isolated ports</li> <li>• 2042T/2042R Low Latency data path of below 1ms</li> <li>• Interfaces Activity LEDs array both in Front and Back Panels</li> <li>• Power and Built In Self Test (BIT) LED indications</li> <li>• Fully Managed SNMP/CLI Gigabit Ethernet switch</li> <li>• Full wire-speed forwarding rate Ethernet Switch</li> </ul>
EMC/ENVIRONMENTAL:	<p>Designed to meet:</p> <ul style="list-style-type: none"> <li>• MIL-STD-461E Electromagnetic compatibility</li> <li>• MIL-STD-810F</li> <li>• MILSTD-1275, MILSTD-704</li> <li>• IP67</li> </ul>
CONNECTORS:	<ul style="list-style-type: none"> <li>• MIL-D-38999 (Power &amp; Ethernet, I/O, Discrete signals)</li> <li>• All Interface connectors in one side panel</li> </ul>
CHASSIS:	<ul style="list-style-type: none"> <li>• Low profile rugged aluminum</li> <li>• Conductively cooled w/custom internal heat-sinks</li> <li>• Ingress protection against sand, dust and moisture</li> <li>• Anodize Coating, MIL-A-8625, Type II, Class 2</li> </ul>
POWER:	<ul style="list-style-type: none"> <li>• Voltage Input: 24Vdc Nominal (18-36V)</li> <li>• Power Consumption: 20W Typical</li> <li>• Chassis grounding</li> </ul>
PHYSICAL:	<ul style="list-style-type: none"> <li>• Dimensions: 482mm (L) x 208(D) x 44 (H) - including installation brackets</li> <li>• 19", 1U</li> <li>• Weight: ~3kg</li> </ul>
COOLING:	<ul style="list-style-type: none"> <li>• No Moving Parts, Passive Cooling</li> </ul>
TEMPERATURE:	<ul style="list-style-type: none"> <li>• Operational: -40°C to +71°C (-40°F to +160°F)</li> <li>• Storage: -55°C to +80°C (-67°F to +176°F)</li> </ul>
INSTALLATION:	<ul style="list-style-type: none"> <li>• Set of Four 4x10-32 captive screws for 19" cabinet mounting or holes on the bottom for mounting to any flat surface.</li> <li>• Carrying handles.</li> </ul>

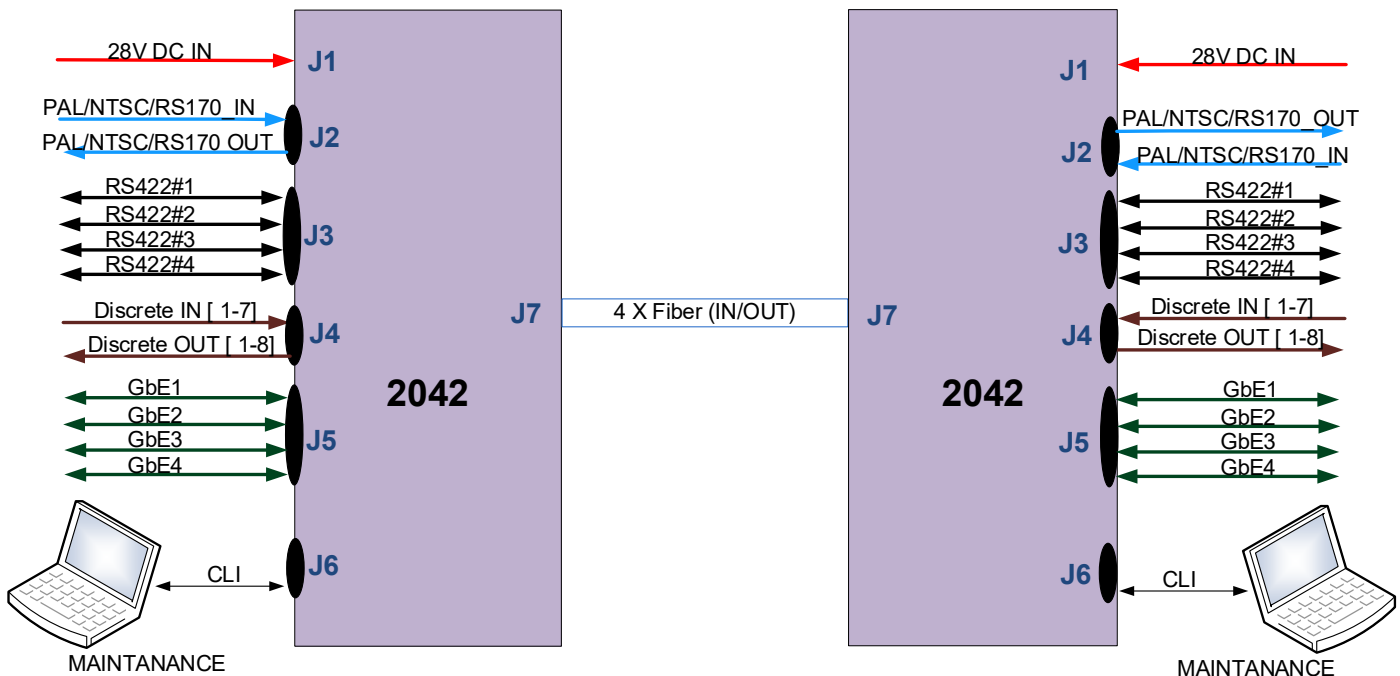


## Application Diagram – System based on Transmitter/Receiver Units



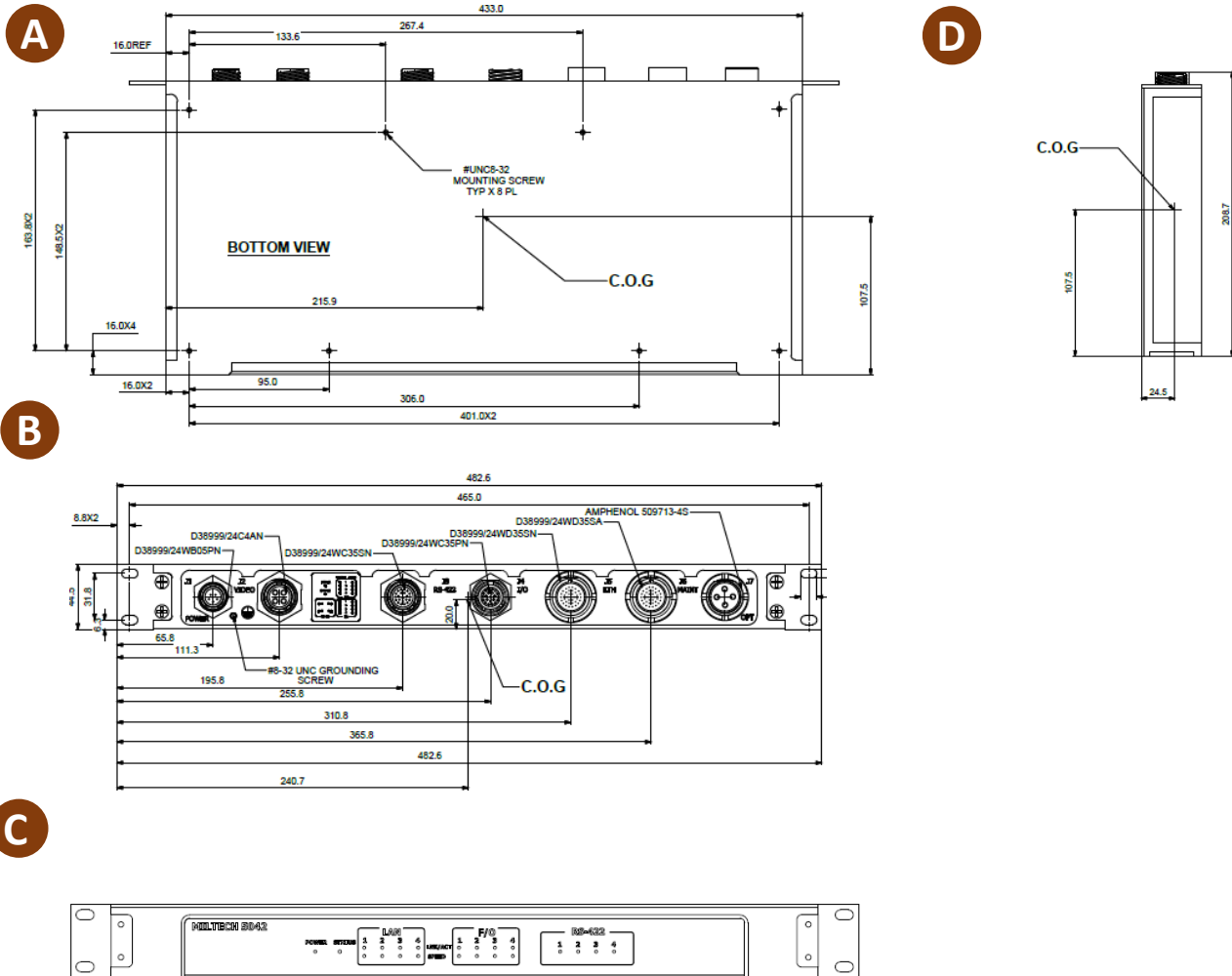
Note: A standard system comprises of one 2042T with two Video inputs and one 2042R unit with two Video outputs. An optional 2042 unit with Video Input and Video Output exist to support an identical unit to be used in a 2042 system, whereas video input of one 2042 unit is transferred to video output of the paired 2042 unit as follows:

## Application Diagram – System based on Identical Transceiver Unit





## Mechanical Info



## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
1-2042T-000	MILTECH™2042 MIL-STD Rugged Transmitter unit
1-2042R-000	MILTECH™2042 MIL-STD Rugged Receiver unit
1-2042-000	MILTECH™2042 MIL-STD Rugged Transceiver unit

Note: contact factory for more product configurations