RES-GMC WITH BUTT JOINT FIBER CONNECTOR - Military Ethernet media converter

For harsh environment - Fully MIL-STD compliant

Description

Amphenol's RES-GMC is a MIL-STD rugged, unmanaged-military-grade Media converter, offering up to 2 Gigabit security gateways per device for total isolation between two network with different security classification.

The unit supports PoE on 2 ports (IEEE802.3af and IEEE802.3at).

Developed for military and harsh environment applications, the RES-GMC features mechanical packaging enhancements designed for MIL-STD-810F ground environmental compliance and high reliability.

The unit has been especially 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.

Leveraging best-in-class switching technology, the RES-GMC series serves as a robust solution to extend your Tactical Gigabit Ethernet network connectivity of up to 120Km over fiber.

The RES-GMC media converter with Butt Joint fiber connections is particularly suitable for extension of tactical systems over long distances. Typical applications are long connection on vessels up to the deck, as well as Ethernet extension for drones control station.

Main features

ETHERNET PORTS
- 1 or 2 ports 10/100/1000 or 10/100 Base TX
- 1 or 2 ports 1000 or 100 Base FX/SX/LX or WDM single fiber
- Version 2x2 ports: total isolation between the 2 networks

NETWORKING
- Full wire-speed forwarding rate
- Option for Up to 2 ports PoE - IEEE802.3af, IEEE802.3at
- Auto MDI-II, MDI-X, FDX, HDX, Flow control
- Auto-negotiation on copper LAN ports
- Jumbo frame support
- Link loss forwarding mechanism

CONNECTORS
- LAN connector type:
  - Models 1x1 ports: RJFTV
  - Models 2x2 ports: D38999/24WB35SN
- Fiber connector type:
  - TVOP arrangement 11-02
  - 2 fibers are used for 1x1 ports versions
  - 4 fibers are used for 2x2 ports versions.

CHASSIS
- Low profile rugged aluminium extrusion
- Conductively cooled w/custom internal heat-sinks
- Ingress protection against sand, dust and moisture
- Polyurethane Paint, Per MIL-C-83286 type II, matt texture, color:
  - Nato green FS24079

STANDARDS
- MIL-STD-1275, MIL-STD-704A, MIL-STD-461E,
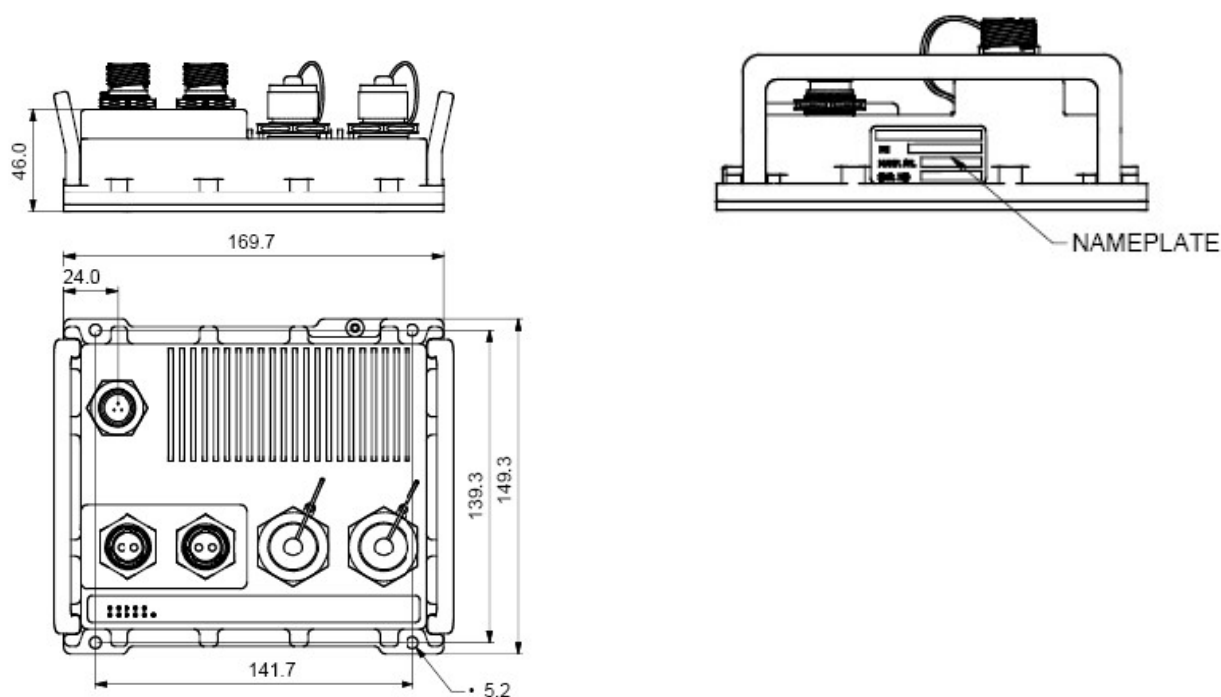- MIL-STD-810F GM, IP67/68

MILITARY RUGGED SWITCH
MIL-STD-1275B
MIL-STD-704A
MIL-STD-461E
MIL-STD-810F/GM
IP67

Amphenol SOCAPEX

Ethernet Switch & Media Converter

Military Ethernet Switch for Harsh Environment

Military Ethernet Switch for Harsh Environment with Industrial EMI Compliancy

RES-GMC WITH BUTT JOINT FIBER CONNECTOR - Military Ethernet media converter

Product specifications

Performance	• 26.8 Mpps wire speed forwarding rate • 2 Gbps maximum forwarding bandwidth • 4K MAC address • 2 LED indication (Speed, Link/Activity) per port • Wire-speed reception and transmission
Standards compliance	• IEEE 802.3, 10 Mbps 10BASE-T (Ethernet) • IEEE 802.3u, 100 BASE-TX 100 Mbps (Fast Ethernet) • IEEE 802.3ab, 1000Base-T • IEEE 802.3z, 1000Base-X • IEEE 802.3af, IEEE802.3at
Voltage input	• VDC versions: 24VDC nominal (18-32VDC) • VAC versions: 90-265 VAC / 47-65 Hz • PoE versions: 48VDC
Electromagnetic	• MIL-STD-461E Electromagnetic compatibility • CE-102, CS-114, CS-115, CS-116, RE-102, RS-103
Environmental: shock/vibration/humidity	• MIL-STD-810F, 501.4I, 501.4II, 502.4I, 502.4II, 507.4, 500.4II, 514, 516I, 516VI, 514.5, 512.4 • IP67/68
Physical	• Dimensions: 170mm(L) x 150(W) x 65(H), including connectors & hardware • Weight: 1.3 kg
Installation	• Set of Four 4x4.5 mounting holes on bottom for mounting to any flat surface • Carrying handles
Cooling	• No moving parts. Passive cooling
Operating temp	• -40°C to +85°C (-40°F to +185°F) - Cold start-up
Storage temp	• -45°C to +85°C (-49°F to +185°F)

Overall dimension

Dimensional line drawing - All measurements are in millimeters

Due to technical modifications, all information provided is subject to change without prior notice
Designed by Amphenol Socapex

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How to order

1.	2.	3.	4.	5.	6.	7.	8.
Series	Ports and type of optical fiber	Datarate	Copper LAN connectors	Optical fiber connectors	Protection of connectors	Voltage input	Network configuration (only for 2x2 ports versions)
RESGMC	1M	G	RJF	1TVOP	OD	DC	SW

1. Series

RESGMC	Rugged Ethernet Media Converter

2. Ports and type of optical fiber

1M	1 copper port and 1 optical fiber port, Multimode 50/125µm
1S	1 copper port and 1 optical fiber port, Singlemode
2M	2 copper port and 2 optical fiber port, Multimode 50/125µm
2S	2 copper port and 2 optical fiber port, Singlemode

3. Datarate

G	1000 Mbps fixed fiber port, 10/100/1000TX auto-negotiation on copper port
100	100 Mbps fixed fiber port, 10/100/1000TX auto-negotiation on copper port
WA	WDMA TX 1310nm/RX1550nm, 1000BASE-LX, 20kms, BiDi over 1 single fiber
WB	WDMB TX 1550nm/RX1310nm, 1000BASE-LX, 20kms, BiDi over 1 single fiber

4. Copper LAN connectors

RJF	RJFTV connector, RJ45 with MIL-DTL-38999 III Thread coupling mechanism (for 1x1 ports versions)
TV	MIL-DTL-38999 III connector, arrangement 11-35S (for 1x1 ports versions)
2TV	MIL-DTL-38999 III connector, arrangement 11-35S (for 2x2 ports versions)

For specific cable harnesses, please consult us.

✓ : RoHS compliant

5. Optical fiber connectors

1TVOP	1x TVOP connector with butt joint, arrangement 11-02 (for 1x1 ports versions)
2TVOP	2x TVOP connectors with butt joint, arrangement 11-02 (for 2x2 ports versions)

6. Protection of connectors

OD	All connectors and caps are plated with Olive drab Cadmium
ZN	All connectors and caps are plated with Black Zinc Nickel (✓ MC)
NI	All connectors and caps are plated with Nickel (✓ MC)

7. Voltage input

DC	Unit powered with 18-36 VDC
VAC	Unit powered with 90-265 VAC / 47-65 Hz
PD	Power over Ethernet, Powered Device mode
PSE	Power over Ethernet, Power Source Equipment

8. Network configuration (only for 2x2 ports versions)

2N	Total isolation between the 2 networks (configuration by default)
SW	Full communication between the 4 ports (Ethernet switch configuration)

Ethernet Switch & Media Converter

Military Ethernet Switch for Harsh Environment

Military Ethernet Switch for Harsh Environment with Industrial EMI Compliancy

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