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Find the *Excalibur Systems MACC* at our website: ***Click HERE***

MACC

Miniature Airborne Communications Converter

Excalibur's **MACC** is a complete **M**iniature **A**irborne **C**ommunications **C**onverter designed to convert bi-directional messages. Small, light, and with low power dissipation, the **MACC** is the perfect solution for airborne communications incompatibilities.

When designing or upgrading an avionics system, engineers are often faced with integrating components that were not originally designed to work together. For example, a flight computer that communicates using RS-232 may need to control a component that expects MIL-STD-1553 messages; or an INS transmits ARINC 429 labels needed by a multifunctioning display, designed around RS-422. No longer will you have to choose between giving up one of the units, because of communications incompatibility, or adding another computer system, to convert between the two. Now, Excalibur's **MACC** provides the optimal solution.

The **MACC** converts messages between the following protocols:

- MIL-STD-1553A/B
- ARINC 429 (Transmit or Receive)
- Serial (RS-232/422/485)
- Ethernet
- Discrete I/Os

The converter can be programmed to simultaneously control all these interfaces to convert data in realtime to the required format.

In addition, the **MACC** can be customized for specific word, data or protocol conversions and include specific bus lists and messages.



General Features

- Conduction Cooled
- Black, waterproof aluminum case
- Hard coat anodized per MIL A 8625F TYPE III CLS 2
- Uses MIL-38999 I/O Connectors, Series III
- Rugged screw down internal assembly
- Glued components
- No moving parts – fanless
- No internal wiring
- Conformal coating
- Industrial temperature range
- Configurable via Serial or Ethernet port of host computer

Channels Per Protocol

- 1 Dual redundant MIL-STD-1553A/B
- 4 ARINC 429 channels (3 receive, 1 transmit or receive)
- 2 Serial channels (1 RS-232, 1 RS-232/422/485)
- 1 Ethernet (10/100/Gigabit)
- 8 Discrete I/O signals (5 can be used as an RT address instead of Discretes)

Power Requirements

- Maximum 6.5 Watts (11–36 VDC)

Dimensions

- 75.5mm (L) x 141.0mm (W) x 51mm (H) (excluding mounting tabs and connectors)

Weight

- Approximately 700g (depending on configuration)

Compliance

- MIL-STD-810G Environmental conditions (See our website for complete compliance testing report.)
- MIL-STD-461E Electromagnetic compatibility (See our website for complete compliance testing report.)
- MIL-STD-704E Electric power compatibility for military airborne equipment (See our website for complete compliance testing report.)
- MIL-STD-1275B Electric power compatibility for 28VDC electrical systems in military vehicles
- EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control and laboratory use – Part 1: General requirements
- EN 61326-1:2006 Electrical equipment for measurement, control and laboratory use – EMC requirements

Ordering Information

- **ES-9000/*xx*-M**

Note:

- Replace "***xx***" with protocol codes. See **Ordering Information** in the *MACC ES-9000 User's Manual*.
- Mating connectors and adapter cables can be ordered separately.

CERTIFIED AMS AS 9100

CERTIFIED QMS SI ISO 9001: 2008

July 2017, Rev C-5

These specifications are subject to change without notification

311 Meacham Ave ♦ Elmont NY 11003
Tel [516] 327-0000 / Fax: [516] 327-4645
e-mail: excalibur@mil-1553.com
website: www.mil-1553.com

EXCALIBUR SYSTEMS

Mechanical Specifications

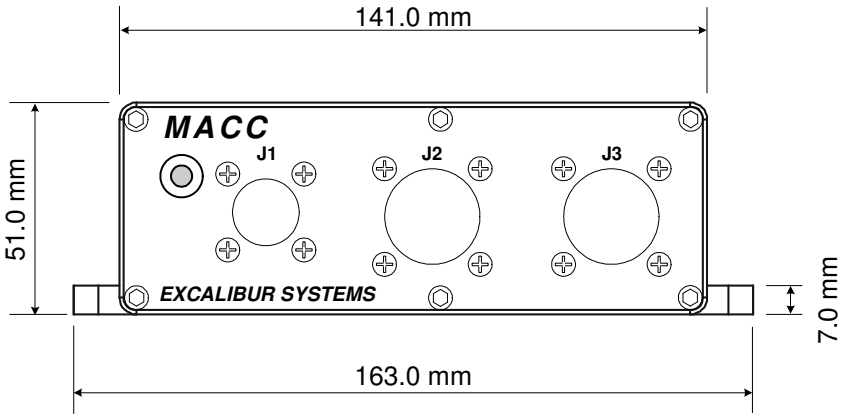


Figure 1 MACC Front View

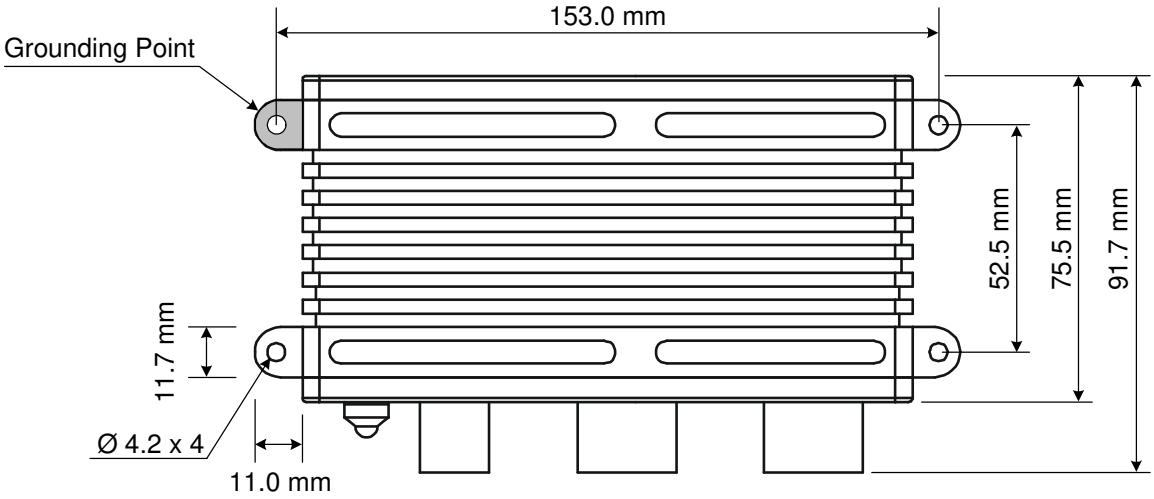


Figure 2 MACC Top View

311 Meacham Ave ♦ Elmont NY 11003
Tel [516] 327-0000 / Fax: [516] 327-4645
e-mail: excalibur@mil-1553.com
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