

# MACC II

Excalibur's **MACC II** is a complete **Miniature Airborne Communications Converter** designed to convert bi-directional messages. Small, light, and with low power dissipation, the **MACC II** 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 Ethernet 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 II** provides the optimal solution.

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

- ◆ MIL-STD-1553/1760
- ◆ MMSI
- ◆ ARINC 429 (Transmit or Receive)
- ◆ ARINC 708
- ◆ ARINC 717
- ◆ ARINC 825 (CAN bus)
- ◆ Serial (RS-232/422/485)
- ◆ Ethernet
- ◆ H009
- ◆ A/D and D/A
- ◆ Discrete I/Os
- ◆ Additional protocols available upon request

The converter can be ordered with up to four modules, see the list below, and can simultaneously convert data in realtime between all the installed interfaces.

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

## General Features

- ◆ Conduction cooled
- ◆ Waterproof aluminum case
- ◆ Black, anodized casing with built-in heat sink
- ◆ No moving parts – fanless
- ◆ No internal wiring
- ◆ Glued components
- ◆ Conformal coating
- ◆ Uses MIL-38999 I/O Connectors
- ◆ Rugged screw down internal assembly

## Channels Per Module (Up to Four Modules)

- ◆ 1 Dual redundant MIL-STD-1553/1760
- ◆ 5 MMSI channels
- ◆ 5 ARINC 429 channels
- ◆ 2 ARINC 708 channels
- ◆ 2 ARINC 717 channels
- ◆ 5 ARINC 825 channels
- ◆ 2 Serial channels (RS-232/422/485)
- ◆ 1 Ethernet (100 Mbps or Gigabit)
- ◆ 1 Dual redundant H009 channel
- ◆ 5 differential or 10 single ended DAC or ADC channels
- ◆ 10 Discrete I/O signals



## Compliance

Designed to meet:

- ◆ MIL-STD-810G Environmental conditions
- ◆ MIL-STD-461E Electromagnetic compatibility

## Power Supply

- ◆ 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

## Power Requirements

- ◆ Maximum 15 Watts (11–36VDC)

## Dimensions

- ◆ 75.5mm (L) x 141.0mm (W) x 55.0mm (H)  
(excluding mounting tabs and connectors)

## Weight

- ◆ Approximately 700g (depending on configuration)

## Operating Environment

- ◆ Operating temperature: -40° to +75°
- ◆ Humidity: 5% to 90%
- ◆ MTBF can be provided per configuration

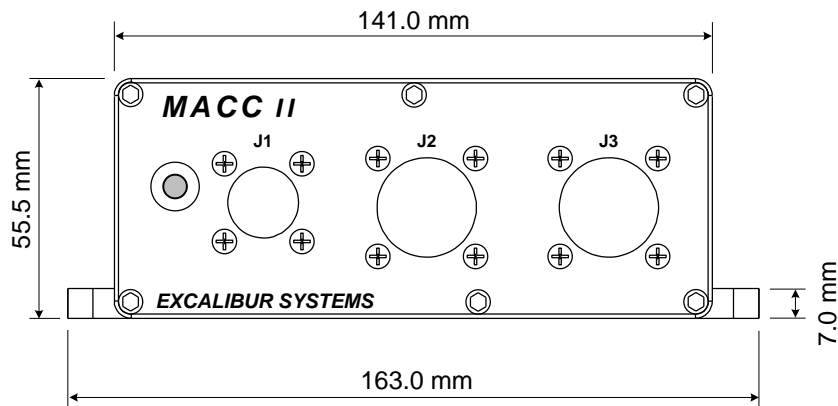
## Ordering Information

- ◆ **ES-9800/xxxx-yyy**

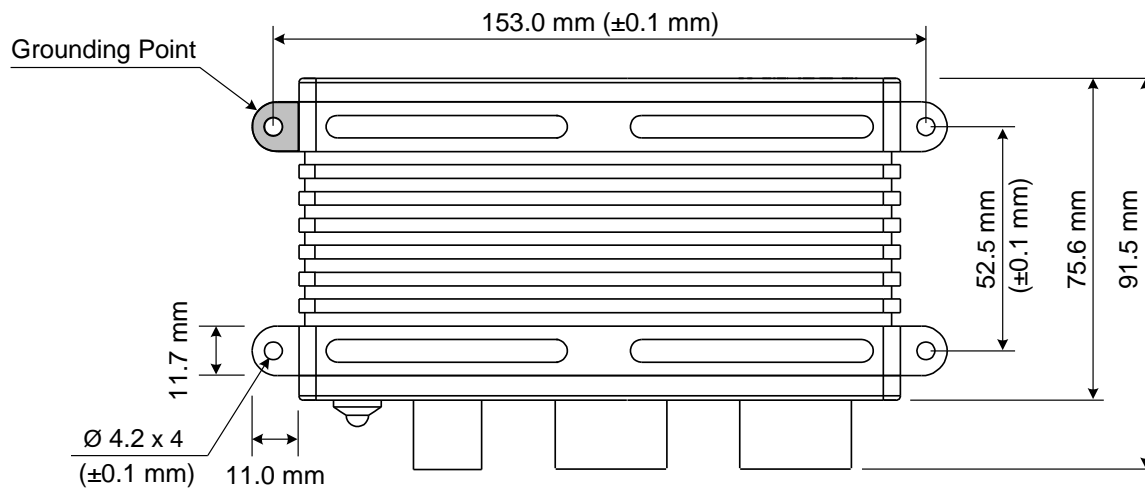
### Note:

- ◆ Replace “xxxx” with up to four module codes. See **Ordering Information** in the *MACC II ES-9800 User’s Manual*. Replace “yyy” with the 3-digit unique identifier of your MACC. Contact the Excalibur Sales Department for your MACC’s 3-digit identifier.
- ◆ Additional Options:
  - S Add this suffix before “yyy” to order the MACC with the ground return isolated from the chassis
  - IP Add this suffix before “yyy” for a waterproof configuration
- ◆ Mating connectors and adapter cables can be ordered separately.

## Mechanical Specifications



**Figure 1** MACC II Front View



**Figure 2** MACC II Top View

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These specifications are subject to change without notification

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