

RUNET II

The RUNET II is a ruggedized, intelligent, multiprotocol interface device. Its small size and rugged casing and its ability to interface through Ethernet make it a complete solution for developing, testing and performing system simulation, both in the lab and in rugged environments. The RUNET II is designed with a modular architecture supporting up to 4 of any of our standard avionics protocols, enabling you to customize it to your exact needs.

Multiple units can operate on the same network, and can be accessed from any computer on the network. It shares its API with the current Excalibur products so that applications running on our PCIe, PCI, ExpressCard, or PCMCIA cards, will run without change on this device.

General Features

- ◆ Supported protocols (on up to 4 modules):
 - ARINC 429/575 (5 ch. per module)
 - ARINC 708/453 (2 ch. per module)
 - MIL-STD-1553 (1 ch., single or multifunction)
 - MIL-STD-1760 (1 ch., single or multifunction)
 - Discrete I/O (10 ch. per module)
 - Serial RS-232/485/422/ (2 ch. per module)
 - ARINC 825 (CAN) (5 ch. per module)
 - ARINC 717 (2 ch. per module)
 - MMSI/AS5652 (5 ch. per module)
 - H009 (1 ch. per double-sized module)
 - A/D and D/A (5 differential ch. per module)
- ◆ 16-bit Count Down Timer with 1–65,635 μ s resolution
- ◆ Conduction cooled
- ◆ Waterproof aluminum case (optional)
- ◆ 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

IRIG B Time Code Input

- ◆ Standard IRIG B120 Serial Time Code
- ◆ Carrier wave:
 - 1KHz Amplitude modulated sine wave
- ◆ Rate Designation: 100 peaks per second
- ◆ Modulation ratio: 3:1
- ◆ Input Amplitude: 0.8–3.5 Vpp (3 Vpp Typ)
- ◆ Coded Expressions supported:
 - BCD time-of-year code word
 - Control functions
 - Straight Binary Seconds (SBS) time-of-day
- ◆ Application:
 - Synchronization of Time Tags, display and IRIG B time

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

- ◆ 11–36VDC (maximum 15 watts)

Physical Characteristics

- ◆ 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

Host Interface

- ◆ 100/1000 Ethernet

Software Support

- ◆ *Excalibur Carrier Board Software Tools:*
 - Intuitive and flexible API with source code
 - Compatible with 32/64-bit Windows 7/8/10/11 & Linux kernel 3.x/4.x/5.x
 - Includes application interface for NI LabView & CVI
- ◆ *Exalt Plus:* Excalibur Analysis Laboratory Tools for Windows (optional)
- ◆ GUI driven software for many of our supported protocols

Ordering Information

◆ ES-9810/xx

Note:

- ◆ Replace “xx” with up to four module codes. See **Ordering Information** in the *RUNET II ES-9810 User's Manual*.
- ◆ Additional Options:
 - S Add this suffix for ground return isolated from the chassis
 - IP Add this suffix for waterproof configuration
- ◆ Mating connectors and adapter cables can be ordered separately.

Mechanical Specifications

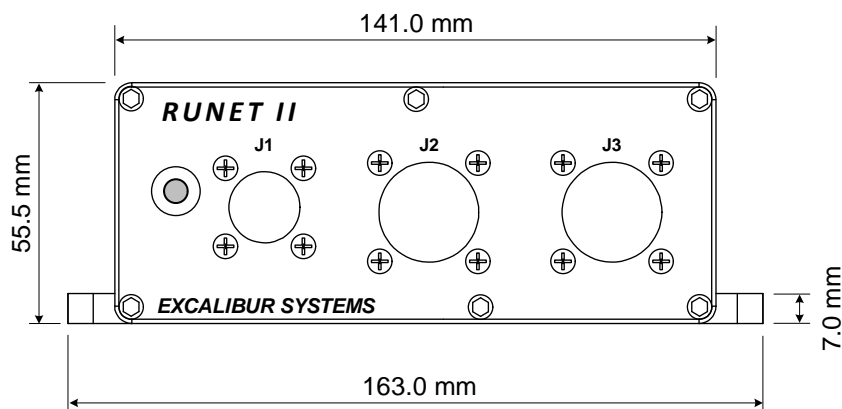


Figure 1 RUNET II Front View

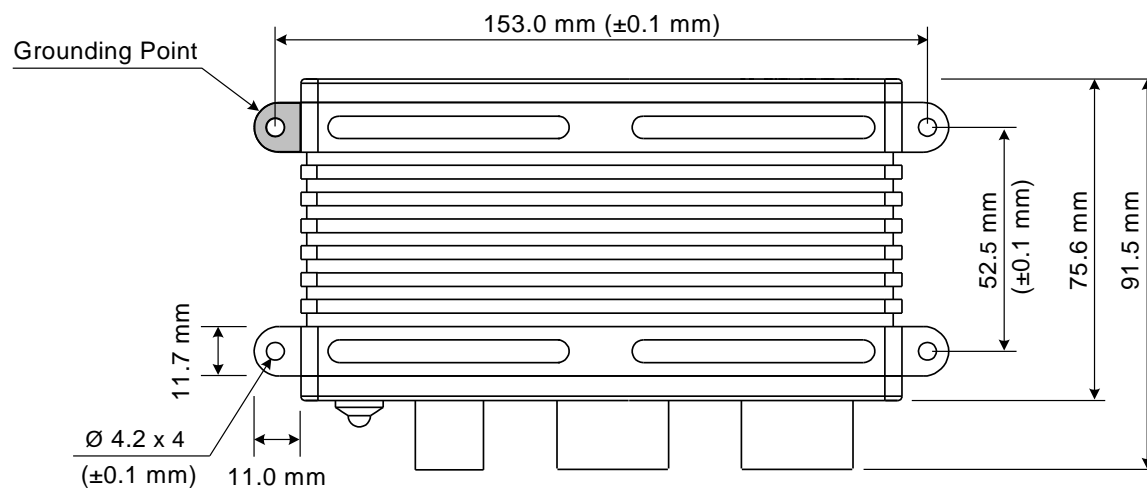


Figure 2 RUNET II Top View

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These specifications are subject to change without notification

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