RAD-Moon 2 *with TC10 & MACsec*

1000BASE-T1 Media Converter now with TC10 and MACsec support for Automotive Ethernet

Intrepid has made several updates to its RAD-Moon 2 1000BASE-T1 media converter. In addition to offering an H-MTD connection system for 100/1000BASE-T1, the Automotive Ethernet physical layer transceiver (PHY) has been upgraded to the Marvell 88Q2220M. This introduces the MACsec functionality required for devices to meet the requirements of the OPEN Alliance TC17 MACsec Automotive Profile. This technology is seeing rapid adoption by new Automotive Ethernet architectures for its ability to provide the lowest level protection against network intrusions like man-in-the-middle and replay attacks, as well as optionally encrypt sensitive data.
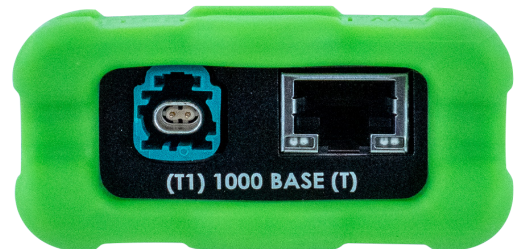
The RAD-Moon 2 1000BASE-T1 Media Converter is now also compliant with the OPEN Alliance TC10 requirements. This means that the PHY has integral Automotive Ethernet sleep/wake-up features allowing partial networking and other strategies needed to balance optimal battery conservation with all customer use cases.

- 5-40V power range, compatible with in-vehicle power from barrel jack.

- Ruggedized USB Type-C connector for device power, configuration, and firmware updates

- PHY register access over USB using Vehicle Spy or Intrepid's Open Source API allowing PHY status and configuration, as well as TC10 and MACsec related operations

Features

- 100/1000BASE-T1 (Marvell 88Q2220M PHY)

- Compliant with OPEN Alliance's TC10 Automotive Ethernet Sleep/Wake-up requirements

- Designed for use with the MACsec Automotive Profile of OPEN Alliance's TC17

- Informative membrane label with LEDs showing PHY and network status

- Membrane switches allow switching between 100BASE-T1 and 1000BASE-T1, and selecting master, slave or automatic PHY configuration

- HMTD Automotive Ethernet connection system (USCAR 777-U-002-1-Z01 compliant) designed for 1000BASE-T1

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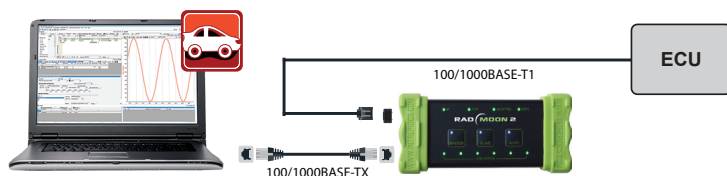
Using the RAD-Moon 2 as a media converter.

Media Converter Mode

The RAD-Moon 2 is a media converter that bridges standard Ethernet and Automotive Ethernet allowing communication between 100/1000BASE-T1 ECUs and typical PCs, Ethernet Switches, and Routers. Typical use cases include testing, simulation, diagnostics, and ECU flashing.
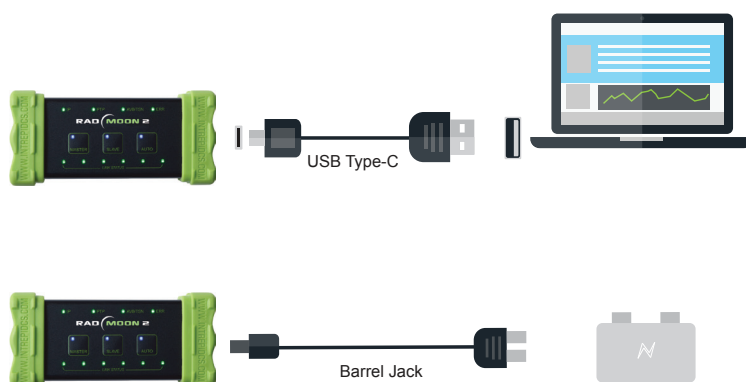
RAD-Moon 2 powered from USB Type-C or barrel jack.

Specifications

• Powered by industry standard USB Type C or Barrel Jack

• Power Supply: 5-40 Volt Operation

• 100/1000BASE-T1 PHY *(Marvell)* with H-MTD connector

• Firmware: Field upgradeable design *(flash firmware)*

• Housing materials: anodized aluminum and rubber

• Operating temperature range: -40°C to 85°C

• Warranty: One Year Limited Warranty

• Dimensions: 5.414" x 2.489" x 1.266" *(137.53mm x 63.22mm x 32.15mm)*

• Light weight: less than 1 lb *(.45 kg)*

Ordering Information

Part Number	Description
RAD-MOON2-2220M	RAD-Moon 2 with TC10 and MACsec

Specifications subject to change; please contact Intrepid for the latest information. All trademarks are the property of their respective owners.