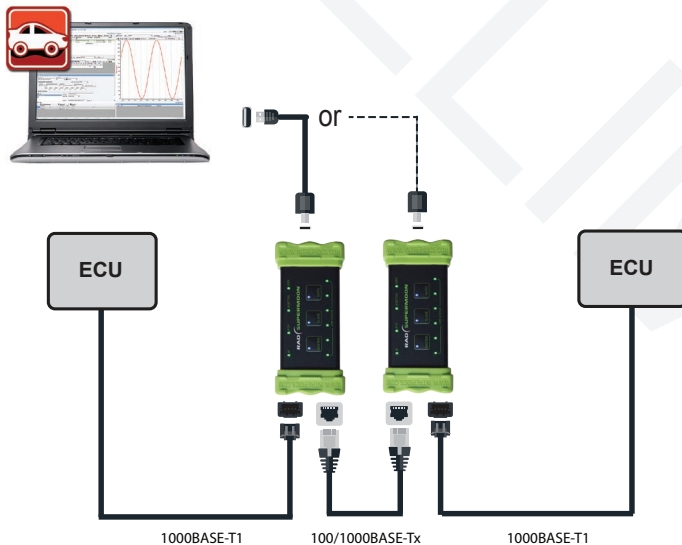# RAD-SuperMoon

100/1000BASE-T1 Media Converter and Active Tap

Intrepid's RAD-SuperMoon is the most advanced media converter for Automotive Ethernet applications. Using the RAD-SuperMoon, you can convert from 100/1000BASE-T1 Automotive Ethernet to standard 10/100/1000 Ethernet, useful for connecting a PC to a 100/1000BASE-T1 host or switch. Two RAD-SuperMoons can also be used as a pair to implement an active tap.
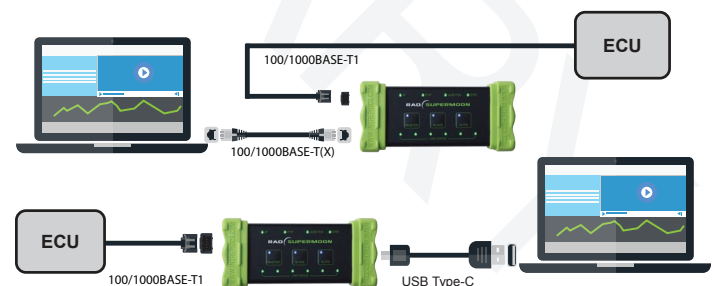

Two RAD-SuperMoons used as an active tap

Features

- 100/1000BASE-T1 via Marvell 88Q2112 PHY
- Programmable membrane label with LEDs to show PHY and network status
- Membrane switches allow switching between 100BASE-T1 and 1000BASE-T1, and selecting master, slave or automatic PHY configuration
- Uses the TE MATEnet connector specially designed for 1000BASE-T1
- Connect two RAD-SuperMoons to make an active tap that copies full-duplex communications between two hosts or a host and switch port with very low latency
- Configure and monitor PHY registers via USB 3 (USB 3.1 Gen1, 3.2 Gb/s)
- 4.5-40V power range, compatible with in-vehicle power
- Ruggedized USB Type-C connector

Media Converter Mode

The RAD-SuperMoon can act as a media converter, allowing a PC to interact with 100/1000BASE-T1* ECUs. This allows you to simulate nodes or perform direct diagnostics or ECU flashing. In addition, the "pure" media converter mode disables encapsulation of messages and allows connections between media of differing bit rates, buffering as needed.

Using the RAD-SuperMoon as a media converter

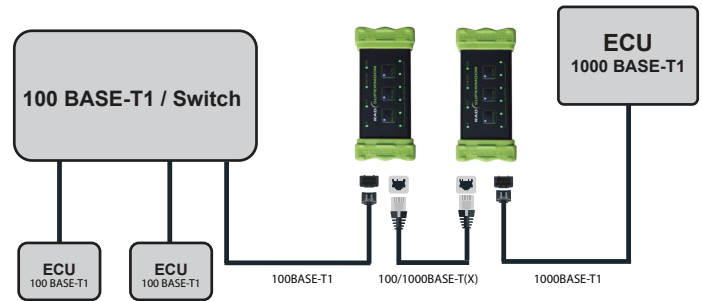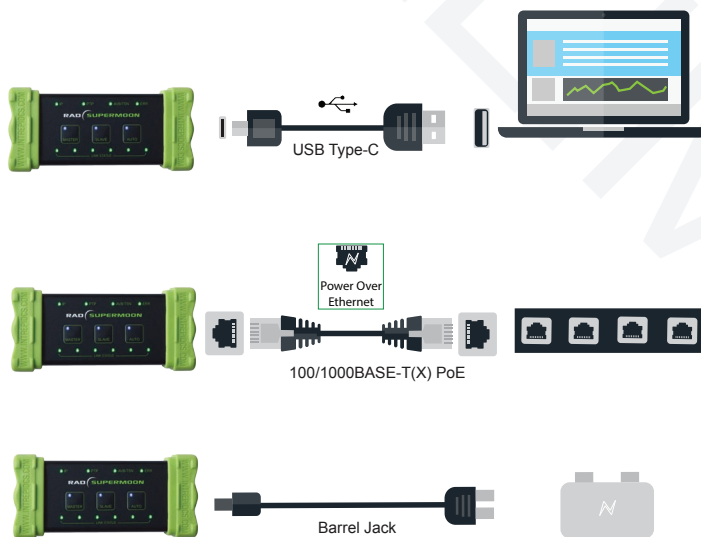
RAD-SuperMoon

Active Tap Configuration

A primary use of the RAD-SuperMoon is to act as an active tap, transparently interposing itself between a pair of 100/1000BASE-T1* Automotive Ethernet devices. This can be either an ECU-to-switch or ECU-to-ECU link. The traffic from each device on a tapped link is forwarded to its partner, ensuring seamless operation of the network. Copies of all messages are also aggregated and sent to the PC over the RAD-SuperMoon Gigabit Ethernet link, where they can be analyzed using powerful Vehicle Spy Enterprise software.

RAD-SuperMoons used to connect a 100BASE-T1 switch to a 1000BASE-T1 ECU

The RAD-SuperMoon can be powered via USB-C, Power over Ethernet, or a DC barrel jack

Ordering Information

Part Number	Description
RSM-1	RAD-SuperMoon Device

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

* Can also be used with BroadR-Reach®.