

# RAD-wBMS

## Wireless Battery Management System (wBMS) Monitoring Solution

Intrepid has partnered with Analog Devices to create a state of the art battery cell measurement and network testing hardware using the wBMS (Wireless Battery Management System®) technology. The RAD-wBMS is an adaptor designed to interface between ADI's electric vehicle wBMS and legacy test platforms in a variety of use cases. It contains ADI wBMS radios and isoSPI interfaces with which to control and configure the wireless network components along with DW CAN-FD, 100Base-T and USB interfaces with which to connect to legacy test platforms.

The RAD-wBMS comes pre installed with ADI's wireless interface API (WIL) allowing easy control of the ADI wBMS network. RAD-wBMS combines Analog Devices' wBMS technology to deliver a complete solution for monitoring critical parameters of battery systems in real time using Vehicle Spy 3 software. Parameters monitored include cell voltage, cell current, ambient temperature, cell/unit voltage, impedance, and temperature. The RAD-wBMS is compatible with many battery chemistries such as VLA, VRLA, and Li-Ion battery types.

### APPLICATIONS:

- Engineering development of wireless network components
- Engineering development of wireless battery modules and packs
- Manufacture and assembly of wireless battery modules and packs
- Inventory management of wireless battery modules and packs
- Vehicle assembly for wireless battery pack configuration
- Vehicle servicing for wireless battery module and pack configuration

### FEATURES

- Wirelessly monitor up to 24 wBMS nodes (12 cells/node) in dual manager configuration
- 2x isoSPI interfaces
- 2x DW CAN-FD channels
- 2x software enabled CAN terminations
- 1x 100 Megabit Ethernet (10/100BASE-TX) for use with DoIP, XCPoE and more
- 10x Programmable tri-color LEDs
- Membrane LEDs to show link, error, and activity status

### GENERAL SPECIFICATIONS

- Interface to PC via Ethernet or USB 2.0
- Power supply: 6-40V operation via barrel jack; use included power supply or vehicle power
- Ten scriptable, multi-color LEDs indicate link status and modes of operation
- All components rated -40°C to +85°C
- One-year limited warranty
- Field-upgradeable binary flash firmware
- Flash firmware functionality
- ADI wireless interface API (WIL)
- Royalty free configuration only version of Intrepid's Vehicle Spy3 software
- Standalone mode, including scripting, receive messages, transmit messages, expressions, I/O and transport layers
- Dimensions: 5.41" × 3.43" × 1.43" (13.7 × 8.72 × 3.62 cm)
- Weight: 0.65 lb (295 g)



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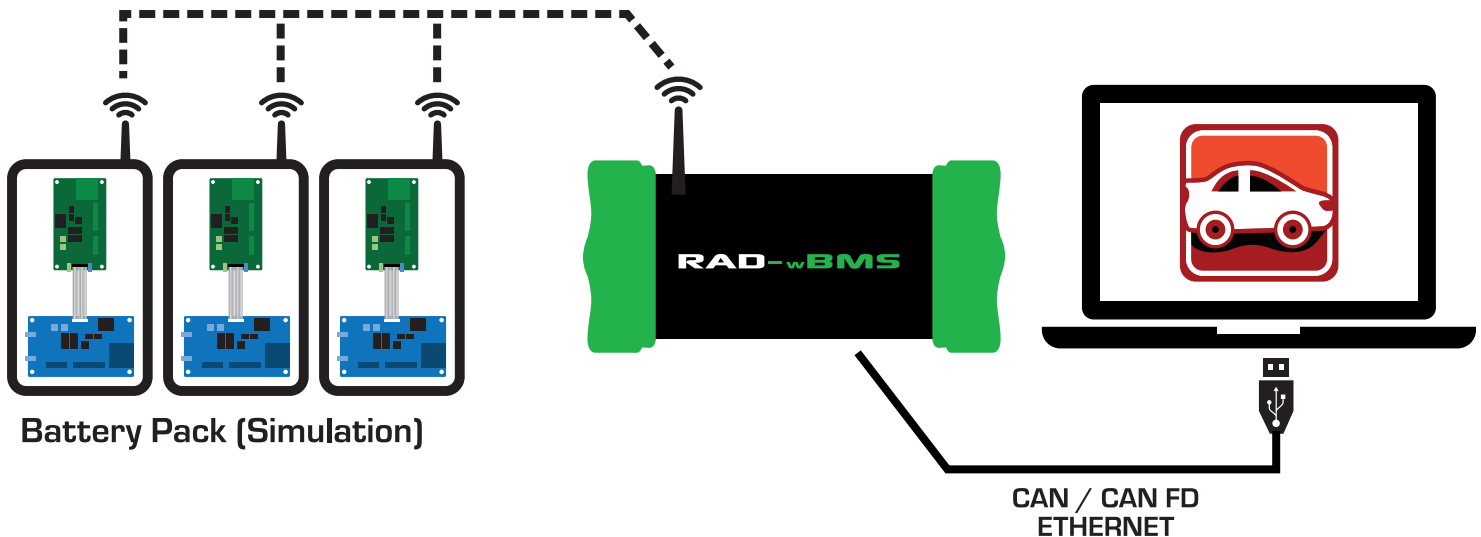
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### TIMING SPECIFICATIONS

- 64-bit timestamping with 25ns precision across all networks
- Simultaneous operation on all CAN FD networks

### NETWORK SPECIFICATIONS

- 2x CAN / CAN FD channels: two dedicated ISO11898 Dual Wire CAN physical layers (ADM3056EBRIZ)
- Software-switchable between ISO CAN FD and non-ISO (Bosch) CAN FD versions
- Up to 1 Mb/s software-selectable baud rate for arbitration phase
- Up to 8 Mb/s software-selectable baud rate for data phase
- Listen-only mode support
- CAN FD implemented using the Bosch MCAN CAN controller IP



### ORDERING INFORMATION:

Part Number	Description
RAD-wBMS	Automotive Audio Bus and Network Monitoring Solution

\*Specifications subject to change. Please contact Intrepid for the latest information.

Rev. 20220105



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