

## External Sensors

- Weatherproof -

Patented flow-through sensor enables refilling air without sensor removal



Cap sensor with user replaceable battery - sealed sensor with double batteries is also available



## Internal Sensors



Valve-Mounted & Rim-Mounted Sensors  
Sensors do not expose to outside environment  
Accurately measures temperature inside the tires

### Features:

- External sensors are easy to install and have locking set screws for theft and loss prevention
- Internal sensors are protected by the tire and measures accurate internal temperature
- Monitors tires 24/7 and issues warnings immediately upon detection of abnormal tire conditions
- Strong signals enable in-cab monitor reception for most trucks with external sensors - not needing signal booster
- Weatherproof signal booster available for internal sensors and tractor-trailer applications
- Pressure range: 0 to 199 PSI. Operating temperature: -40 °F to 230 °F. Pressure accuracy: ± 1.5 PSI for < 60 PSI; ± 2.5% for ≥ 60 PSI.

## Portable Monitor with Rechargeable Battery



### Features:

- Shows pressure & temperature for each tire, one-by-one
- Alerts with icons, light & beeps
- Per axle adjustable warning levels
- Shows problem tire location and associated icons & readings
- Displays tractor and trailer info alternately on separate screens
- Supports up to a 10-tire truck and an 8-tire trailer, plus spare tires
- Vehicle configuration changeable
- One-touch LCD backlight on/off
- Rechargeable battery operated & powered by vehicle's 12~24 VDC
- Works with all Tire-Insight sensors - user programmable



Low Pressure



Slow Leak



High Pressure



High Temperature



No Signal



Low Battery

Info & Support Hotline: 818-400-9976

### External Communication Interface



- Interface box and embedded receiver board available
- Can be adapted to support any standard or proprietary communication protocol
- Currently supports: J1939/RV-C, J1708, I<sup>2</sup>C, RS-232/UART & Pull-up/Pull-down signaling

## Tire-Insight

Tire Pressure Monitoring System



Tractor-Only, Tractor-Trailer & GPS Tracking Trailer-Only TPMS



Internal Rim-mounted & Valve-Mounted Sensors



External Cap, Flow-Through & Battery-Replaceable Sensors



Inline TPMS Controller Controls Inflation

Tire Inflation System Integration - Simply Attach A Hose To Its Output Port



Fully Automated Fleet Drop-N-Hook TPMS

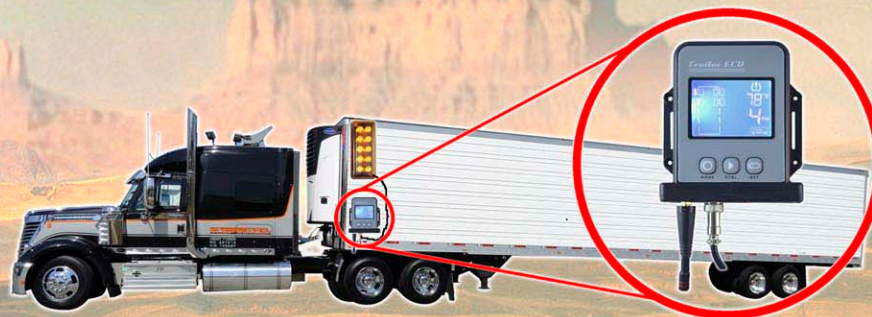
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# Tire-Insight

Tire Pressure Monitoring System

## Tractor-Trailer Drop-N-Hook TPMS

- Tractor equips with a dash-mounting monitor
- Trailer equips with a Trailer ECU (Electronic Control Unit)
- **Fully automated** – after hooking up, the tractor monitor will immediately establish wireless communication with the trailer ECU, retrieve tire sensor information, and display tire readings & statuses on the monitor screen – there would be no crosstalk with non-hooked-up trailers.
- Any tractor can monitor any hooked-up trailer in a Tire-Safeguard equipped fleet
- Easy integration with fleet telematics / GPS tracking systems



## Trailer-Only TPMS

- Weatherproof monitor is to be installed on a trailer and receives wireless signals from the trailer tire sensors
- Upon detection of abnormal tire condition the monitor will flash a trailer-mounted warning light that is viewable by the driver from the tractor rear-view mirror
- Driver also can be alerted by a low-cost TPMS receiver plugging into the auxiliary power socket that emits a warning light and beeps
- Monitor has a large LCD screen and control buttons for the driver and fleet maintenance crew to access tire information and program the system
- Supports integration with fleet telematics / GPS tracking systems
- Optional GPS tracking and GSM communication functionalities - built into the monitor

All HCI products were developed with proprietary technologies in the USA and made in own factories **Info & Support Hotline: 818-400-9976**

## HCI has participated in five government TPMS studies since 2005

**2009-2010:** Three 6-tire TPMS with J1939 interface were in a yearlong test conducted by the National Transportation Research Center (NTRC) at the Oak Ridge National Laboratory (ORNL) in Tennessee.

**2009-2010:** "Drop-N-Hook" TPMS were installed on 13 10-tire tractors and 15 8-tire trailers for a yearlong test conducted by Booz Allen Hamilton Inc. under a contract with the U.S. Department of Transportation (USDOT).

**2008:** Two 10-tire TPMS were tested by the National Highway Traffic Safety Administration (NHTSA) at the Transportation Research Center, Inc. (TRC Inc.) in Ohio.

**2006-2007:** Four 6-tire TPMS were tested on buses at the Washington Metropolitan Area Transit Authority (WMATA). The Federal Motor Carrier Safety Administration (FMCSA) sponsored study was in charge by Booz Allen and carried out from November 2006 to November 2007.

**2005:** One 18-tire TPMS was installed on a 10-tire tractor towing an 8-tire trailer and tested at the Transportation Research Center, Inc. (TRC Inc.) in Ohio. The test was conducted by Booz Allen under a contract with USDOT.

**Note: Test reports available**

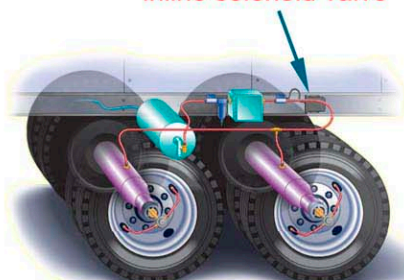
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## Dual-Tire Pressure Monitor & Equalizer (Patent Pending)

- Easy Integration to Tire Inflation Systems



TPMS controller with inline solenoid valve



- Built-in equalizer equalizes pressure in the dual tires
- Wireless transmission of tire readings to in-cab monitor
- One unit monitors individual pressure for both tires; powered by replaceable battery
- Shuts off equalization upon detection of low tire conditions and issues warning signals
- Easy integration - simply attaches a hose from inflation system output port to monitor air input port
- TPMS controller with inline solenoid valve controls inflation - only inflates when tires are actually low