

SMART TIRES

“active smart tread sensors”

powered by
CEREBRUM



FLEET BENEFITS:



PRESSURE



Temperature



Tread Depth



Tire Load



Efficiency



Emission



Maintenance



Alignment



Road Surface
Classification



Dually Mismatch



Wheel Failure



Tire Blowout
Warning



Tire Change
Scheduler



Tire Forces &
Dynamics



Tire Theft /
Locator



Braking Distance

%01.07

%14.06

%05.66

%08.52



How Smart are your Tires?

Accurate, Real-Time Tread Depth Monitoring & Reporting

Monitor tread/tire data in real-time using sensors and cloud based technologies. An easy-to-use web portal for comprehensive data collection, storage and analysis. Benefits of fleet tread wear monitoring include:

Efficiency: Reduce "COSTLY" Blow-Outs and Roadside Service calls. Increase vehicle and driver uptime. STOP manual tire/tread measurements. Customizable ALERTS create tire replacement(s) and maintenance requests.

Performance: Reports show which tire brands and models are performing best for your fleet. GPS tire tracking, driver behavior indicators and more.

Sustainability: Safely extend and Maximize the usable lifecycle of each tire. Protecting the casing reduces rubber waste, tire costs and keeps tires out of landfills.

Profit: Save 100's of thousands on your current annual tire spend. Tires are your second largest operational expense – second only to fuel, enhancing tire usage and reducing tire consumption shows a solid ROI.

SMART-TIRES

SENSORS AUTO CONNECT TO "GATEWAY"



Integrates with



Our Internal & Roll-Over Sensor solutions. Provide Robust, Rich Data on a Simple Platform.

The autonomous sensor system eliminates manual tread depth measuring and removes human error and variability in readings. Smart-Tires provide complete traceability for the entire lifecycle of the tire(s):

- Provides accurate tread monitoring of tires under routine measuring conditions.
- Non-invasive for quick and easy installation.
- Solution is low-cost and maintenance free.
- Sensors automatically connect to "Gate-way" upon installation.

- Tread Depth & Irregular Wear Patterns
- Air Pressure, Air Loss & Excessive Pressure
- Tire Temperature
- GPS Vehicle Location
- Driver Behavior
- Excessive Loads
- Immediate ROI



SMART-TIRES Live

Digital Tire-Tread Monitoring. Anywhere, Anytime...

System

Tire Sensor
One per running wheel



Gate-Way CCU

Mounted on the vehicle asset, the Gate-Way captures data from the sensors and generates Tread-wear, irregular wear, pressure and temperature alerts.

Smart-Tires Driver App

Available on Android or iOS smartphones and tablets. App displays R/T tire tread wear, heat, air pressure, irregular wear and more for each tire position to the driver, and transmits data to the Smart-tire Web Portal for fleet and dispatch visibility.



Web Portal & Mobile Alerts

Web Portal accesses data, alerts, statistics and tire performance reports. The portal provides tire and tread information for every tire on every vehicle anywhere, anytime. Mobile SMS and e-mail alerts with customized settings can be sent to any recipient. Allowing R/T reaction to Real-Time issues.



Benefits



Improve Tire Runout



Real-Time Monitoring



Save Fuel



Save Labor & Maintenance Costs



Reduce Roadside Breakdowns



Improve Safety

Specifications

Short Description	Digital Tire Monitoring with Mobile App & Web Portal
Monitors	All connected vehicles, real-time (regardless of their location)
Data Access	Data is transmitted via GSM cellular network whenever vehicles are connected through iOS Apple or Android Mobile devices. Data is accessible real-time, anywhere, in the Driver apps or Smart-Tire Cerebrum Web Portal.
Alerts	Receive web portal, text message and email alerts with customizable settings.
Hardware	Bluetooth Dongle • Central Control Unit (CCU) • Receiver • Harnesses • Tire Sensors • Hand Held Tool



SMART-TIRES powered by CEREBRUM

- Accurate, real-time tire pressure and temperature to prevent tire damage and breakdowns.
- Sensors warranted for 1 -2 years to minimize disruptions to your tire program. Actual results may vary. See Warranty Policy for Details.
- Sensor provides true casing temperature, allowing preventive actions that make your tire last longer.
- Avoids valve damage and air leaks by mounting on the inner liner of the tire.

FEATURES & BENEFITS:

SMART-TIRES



Pressure



Temperature



Tread Life



LIMITED MARKETS
Load



COMING SOON
Alignment



Maintenance



Efficiency



75%
Improved Vehicle Safety

Cerebrum's solutions provide accurate, real time visibility to tire conditions for proactive maintenance and repairs prior to catastrophic failures.



35%
Reduced Downtime

With software that delivers advanced visibility to fleet managers and drivers to resolve tire-related concerns before downtime occurs & expedite roadside service.



60%
Improved Inspections

Software provides historical and real-time tracking of: rotations, inspections, tire changes, pressure, temperature, tread depth, tire/axle/vehicle load, etc.



100%
Tire Asset Visibility

Our sensors enable unique identification, classification, & visibility from cradle-to-grave including information such as VIN, manufacturing date, etc. critical for OE applications.



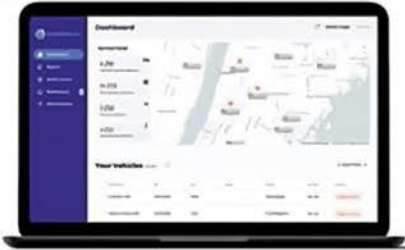
15%
Increase Efficiency

Cerebrum's Intelligent Tire Solutions deliver tangible savings to the bottomline from improved fuel economy to reduction of carbon emissions.

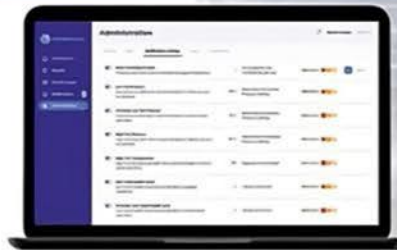


10%
Reduced Compliance Cost

With Cerebrum, savings extend to additional areas of fleet operating costs including insurance premiums, costs of compliance (fines and penalties), and beyond.



Vehicle & Tire Asset Tracking



Customizable Alerts



Actionable Reports

Return-On-Investment Case Studies



Medium & Heavy Truck

Baseline Scenario

Average Annual Mileage:	100k
Trigger For Tire Changes:	Inspection
Currently using TPMS:	No
Pre-Trip / Post Trip Checks:	Yes
Tire Maintenance Frequency:	Monthly
Tire-Related Downtime:	Not Often

Improvements w/Cerebrum

Fuel Consumption Reduction:	4%
Carbon Emissions Reduction:	15k lbs
Premature Tire Wear Reduction:	20%
New Tire Purchases Saved:	1.6
Downtime Cost Reduction:	\$600
Maintenance Labor Reduction:	\$1,925

Annual Savings

\$5,480 per asset / year



Trailer & Chassis

Baseline Scenario

Average Annual Mileage:	70k
Trigger For Tire Changes:	Mileage
Currently using TPMS:	No
Pre-Trip / Post Trip Checks:	No
Tire Maintenance Frequency:	Infrequent
Tire-Related Downtime:	Bi-annual

Improvements w/Cerebrum

Fuel Use Reduction (net of tractor):	2%
Carbon Emissions Reduction:	5k lbs
Premature Tire Wear Reduction:	30%
New Tire Purchase Reduction:	3.5
Downtime Cost Reduction:	\$1,200
Maintenance Labor Reduction:	\$1,687

Annual Savings

\$6,605 per asset / year



Waste Collection

Baseline Scenario

Average Annual Mileage:	40k
Trigger For Tire Changes:	Inspection
Currently using TPMS:	Yes
Pre-Trip / Post Trip Checks:	No
Tire Maintenance Frequency:	Monthly
Tire-Related Downtime:	Bi-Monthly

Improvements w/Cerebrum

Fuel Consumption Reduction:	4%
Carbon Emissions Reduction:	20k lbs
Premature Tire Wear Reduction:	25%
New Tire Purchase Reduction:	4
Downtime Cost Reduction:	\$2,100
Maintenance Labor Reduction:	\$1,925

Annual Savings

\$10,225 per asset / year