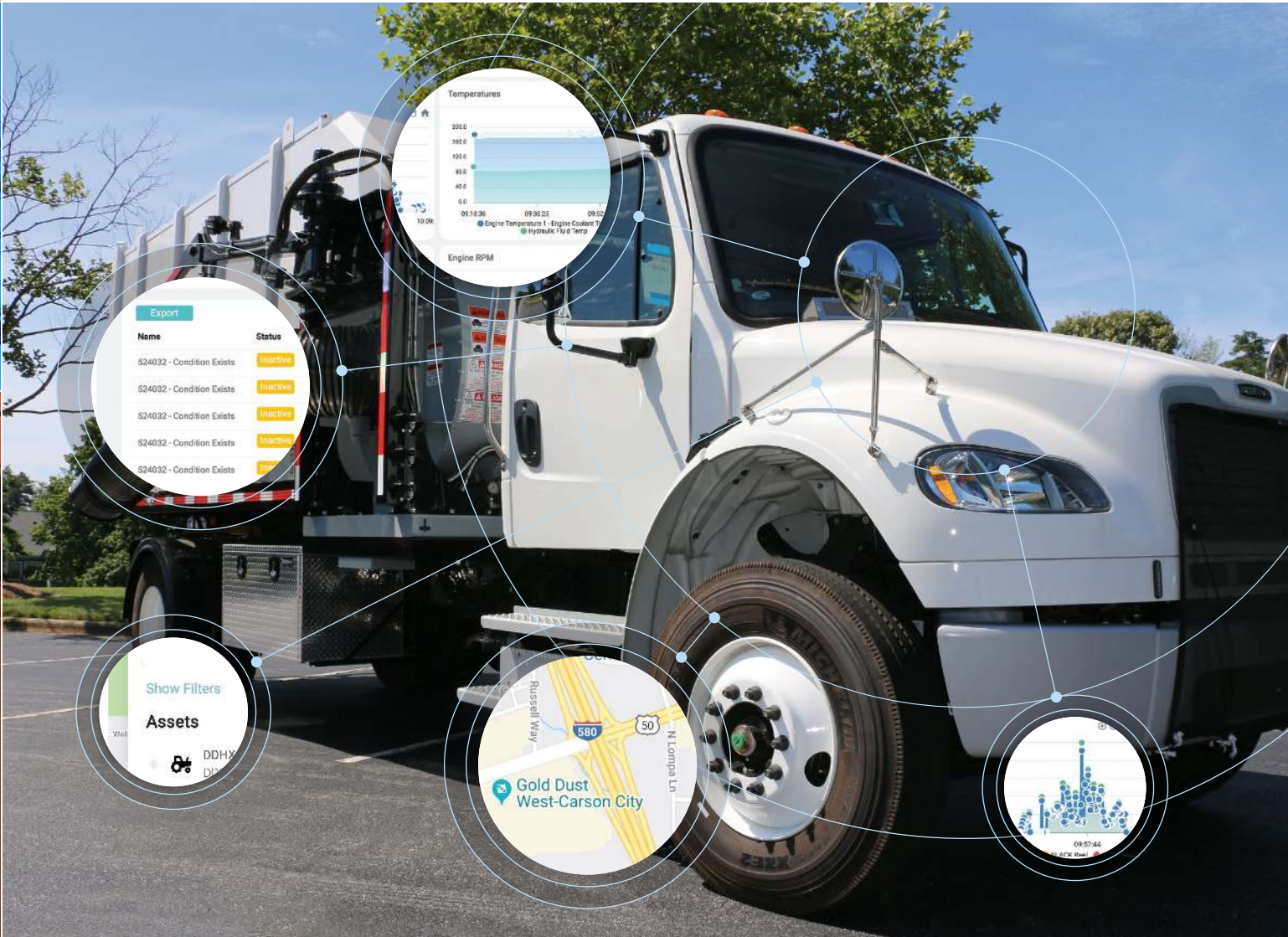


Cross Mobile IoT Powered By elevāt



Cross Mobile IoT

A hardware and software solution to drive efficiency, reduce cost and increase sales. Connecting fleet assets through a sophisticated – and easy to use - cellular gateway.

Cross's Mobile IoT solution helps equipment manufacturers generate additional revenue by creating new markets with new opportunities. Not only does our IoT solution provide genuine tangible value to your dealers and end users, but it can improve efficiency, reduce cost and increase sales in your business too.

- Control warranty costs by gathering machine operational information to make data-driven warranty decisions
- Monitor equipment performance to sell predictive and preventative maintenance
- Collect operational data on new machines in the field to optimize performance
 - Understand how your machine is being used: For example, monitor the machine's real-time power usage and duty cycle to make sure the batteries and other power sources are spec'd correctly
 - Location data: Allows you to understand when, and where new and demo equipment is being used
 - Easily make program changes: No more expensive trips to a customer's location just to update the plc's logic

DM1 Faults

Name	Status	CAN Bus	SPN	FMI	Source	Occurrences	Triggered At	Detected At
524032 - Condition Exists	Inactive	1	524032	31	Engine #1	127	5/11/19 10:09 AM	6/11/19 10:09 AM
524032 - Condition Exists	Inactive	1	524032	31	Engine #1	127	5/11/19 10:09 AM	6/11/19 10:09 AM
524032 - Condition Exists	Inactive	1	524032	31	Engine #1	127	5/11/19 10:09 AM	6/11/19 10:09 AM

Signal Collections

Name	Signals	Capture Interval	Type
GPS	2	300s	GPS
Accelerometer	1	50s	none
Accelometer	3	10s	accelerometer

Engine Information Summary

Signal Name	Value	Updated At
Engine Temperature 1 - Engine Coolant Temperature	184.00 °F	2019-06-11 10:08
Electronic Engine Controller 1 - Engine Speed	0.00 RPM	2019-06-11 10:08
Hydraulic Fluid Temp	109.00 °F	2019-06-11 10:09
Pull-In Pressure	12.00 PSI	2019-06-11 10:09
Play-Out Pressure	15.00 PSI	2019-06-11 10:09

Reel Tensions, **Temperatures**, **Hydraulic Pressures**, **Altitude**, **Engine RPM**, **Accelerometer**

Location

Updated at 2019-06-11 10:08

Map Satellite

39.2°N, 119.8°W 2019-6-11

– Features –

A mobile-rated (IP67) cellular gateway attached to your equipment transmits telemetry data for any number of variables. This IoT enabled data monitoring allows customers to easily collect and store information such as:

- Engine hours and downtime
- Engine fault codes
- GPS location information
- Fuel level
- Engine oil temperature
- Hydraulic temperature and more

The hardware also features additional analog and digital I/Os which enables data collection from external systems. Oil particle counters, pressure transmitters and more can all be connected without having to add them to your plc control system.

Certain connected systems can also be operated remotely. Turning the engine on and off, adjusting settings and making program changes are all possible through the Cross IoT solution.

Collect historical data to identify trends within a vehicle and between vehicles before they become an issue.



– Benefits to Equipment Dealers and End Users –

Dealers	End Users
<ul style="list-style-type: none"> • Receive notifications about key operational parameters Know when your engine oil temperature exceeds a certain limit, alert your service department when engine hours pass a threshold and more! 	<ul style="list-style-type: none"> • Increased visibility and optimize usage Know exactly when, where and how your machine is being used, in order to make the most efficient use of your assets and optimize operator behavior
<ul style="list-style-type: none"> • Sell predictive and preventative maintenance All the incoming information allows you to proactively sell your services and be more prepared for service calls when they occur 	<ul style="list-style-type: none"> • GPS location tracking Know where your equipment is at all times
<ul style="list-style-type: none"> • GPS location tracking No street information necessary. The IoT system guides you to the exact location in the event of a breakdown 	<ul style="list-style-type: none"> • Trend analysis Collect historical data to identify trends within a vehicle and between vehicles before they become an issue.
<ul style="list-style-type: none"> • Active time tracking 	<ul style="list-style-type: none"> • Understand when a vehicle has service due
<ul style="list-style-type: none"> • Determine machine utilization for billing and maintenance forecasting 	<ul style="list-style-type: none"> • Schedule your machine service on your time, when it is convenient to you, not when a machine breaks down
<ul style="list-style-type: none"> • Improve maintenance planning for more efficient onsite repairs Receive machine fault codes before you go onsite so you're better prepared when you arrive. 	
<ul style="list-style-type: none"> • Improve up-time Remotely, securely access equipment's CAN Bus system to troubleshoot, service and update software 	



Mobile Hydraulics & Controls

855.778.2795

4400 Piedmont Parkway | Greensboro, NC 27419

www.crossco.com