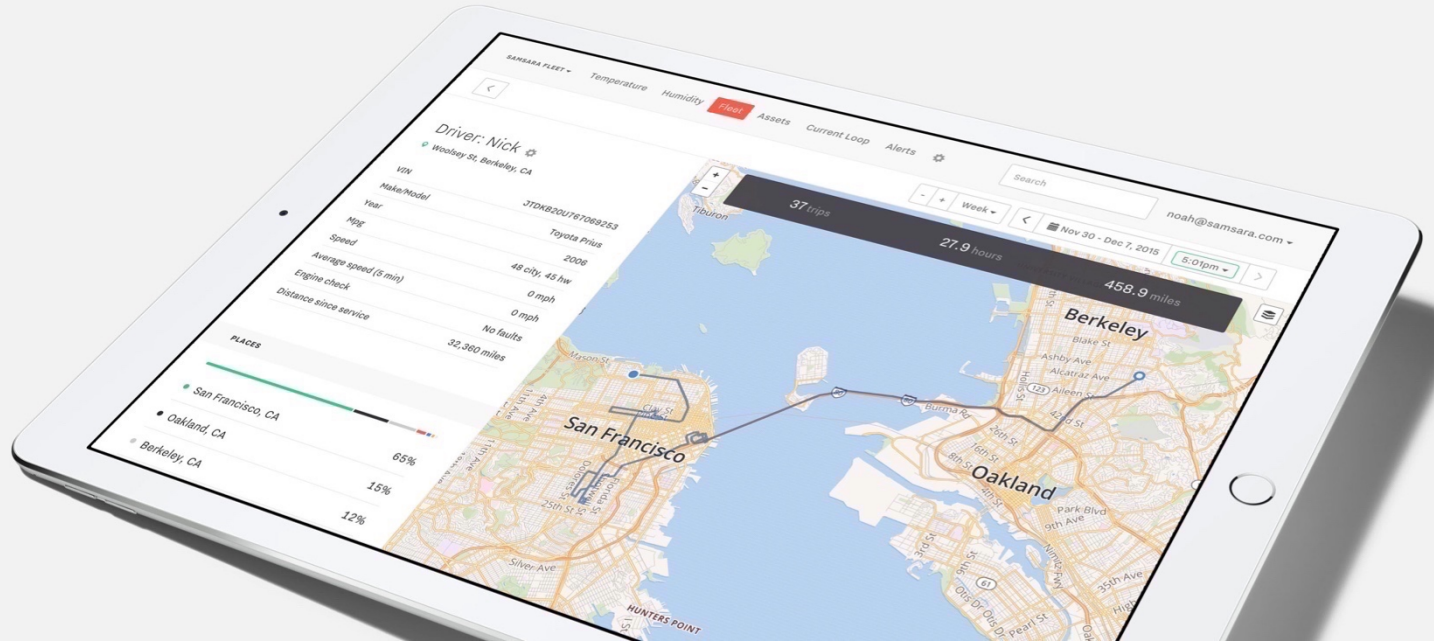




Samsara Asset Monitoring Solution

Company and Product Introduction



Company background

A fast-growing IoT technology company

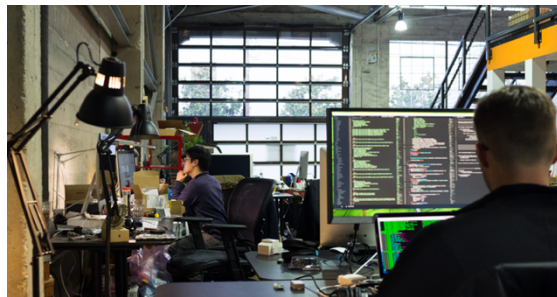
- Over 200 employees, headquartered in San Francisco
- Engineering teams from MIT, Stanford, Google, Apple

Led by founders of Meraki, the wireless networking leader

- Sold company to Cisco Systems for \$1.2 billion
- Bring Meraki's expertise in cloud and wireless technologies to transportation and industrial operations

Strong financial position to invest in growth

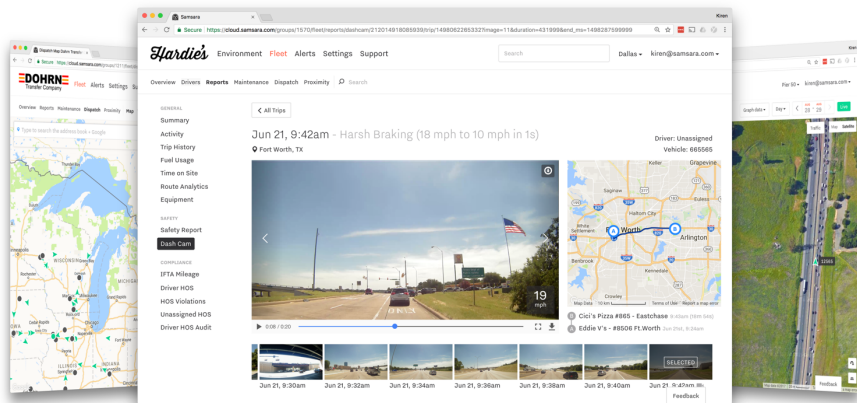
- Backed by \$80M in capital, 250% annual growth, no debt



Trusted by fleets of all sizes:

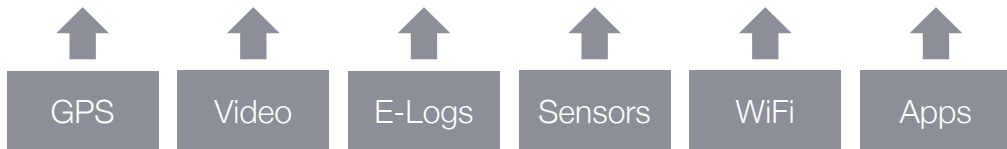


Samsara: A new data platform for operations



- A single system for vehicles, trailers, and remote assets
 - Hardware, cloud software, mobile apps
 - For asset management, compliance, and safety
- Modern and easy to use
- New features added every quarter

Samsara Data Platform



Serving a wide base of customers



Industries served:

- Distribution and freight
- Food and beverage
- Field services
- Oil and gas
- Passenger transit
- Oil and gas
- Construction
- Utilities
- Local government
- Education

Select customer references: Cash-Wa Distributing (NE), Crisp Co (CA), J Polep Distributing (MA), Gibson Technical Services (GA), San Jose Water Company (CA), Precision Ready Mix (TX), Washington County Sheriff Dept (NY), Bauers Intelligent Transport (CA), Produce Express (CA), Newgistics Inc (TX), GP Transportation (IL)

Samsara Asset Monitoring Solution

Deep visibility into mobile assets



Refrigerated and
Dry Van Trailers



Heavy Equipment



Rail Cars



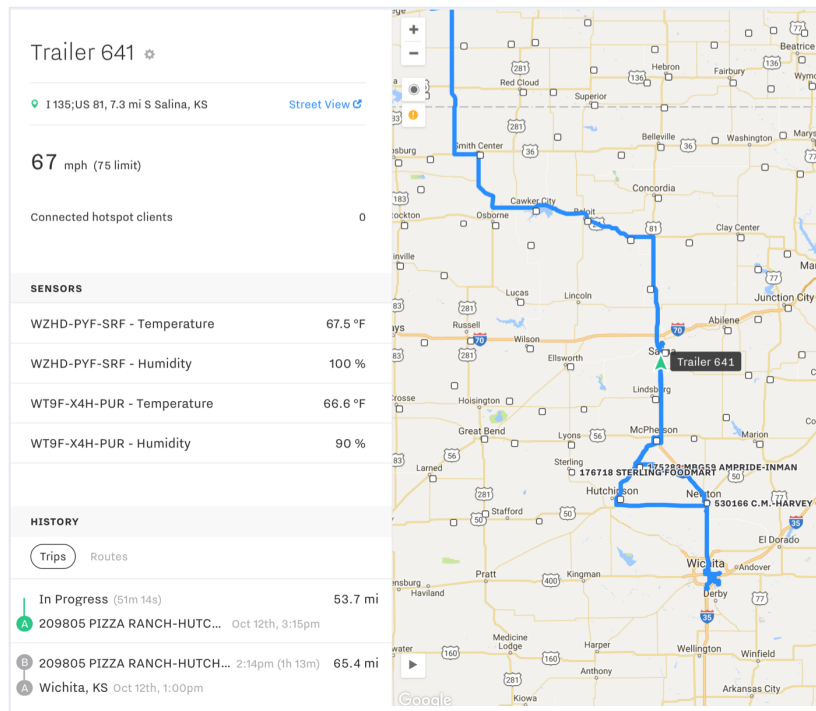
Generators



Intermodal Containers



Mobile Assets



Powerful, ruggedized tracking hardware



Samsara AG24 Asset Gateway

Ruggedized, weatherproof IoT gateway
with GPS and 4G LTE cellular

- Real-time visibility (live updates) when powered
- Built-in solar cell and 4-5 year battery for unpowered applications (periodic check-ins)
- Precise GPS location, plus data from:
 - Reefer units (2-way)
 - Equipment diagnostics (J1939)
 - Serial and discrete inputs
- Connects seamlessly with Samsara wireless sensors: temperature, cargo, door

Wireless design installs in minutes

Example semi-trailer deployment:

1. Install Gateway

- Mount to bulkhead, reefer cabinet, or roof with included mounting plate and self-drilling screws
- Connect power to 7-way and reefer using appropriate cable



2. Install wireless accessory sensors (optional)

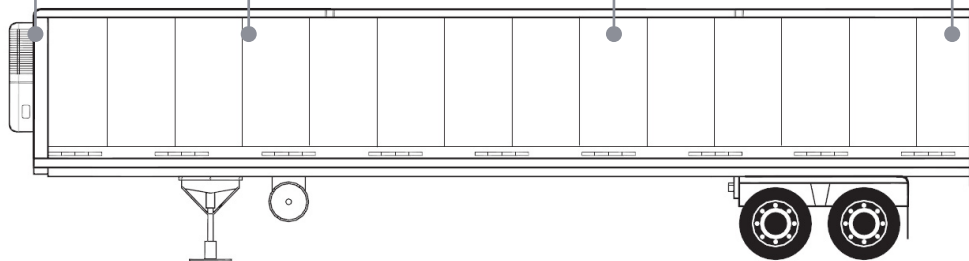
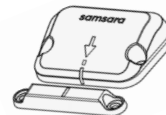
Temperature



Cargo Sensor



Door Sensor



Simple pricing, rapid payback



Asset gateway: \$249* MSRP
All-inclusive license: \$180 / year
Volume purchase and license
term discounts available

* Plus accessory cable, required for powered trailer (\$49)
and reefer installations (\$249)

Example ways to recoup investment (semi trailer use case)



Save 2 minutes of daily
yard hunt time per driver



Recover lost or stolen
trailers



Increase trailer utilization
utilization by 5%



Reduce temperature-
related loss claims

Live demo

Case study: How a nationwide carrier improved profitability with trailer tracking

Background



About the customer:

- Chicago based truckload and LTL carrier serving the lower 48 states
- Fleet of 300 dry-van trailers and 200 tractors

Challenges:

- Visibility: Real-time trailer visibility to improve customer service
- Efficiency: More efficient yard and dock operations
- Asset Utilization: Improve tractor to trailer ratio, grow business without adding trailers

More efficient dock and yard operations

Trailer 495

Channahon, IL [Street View](#)


SENSORS	
Cargo	Empty
Rear Door	Closed

B 5.2 mi ESE Channahon, IL 3:37pm (2h 25m) 89.8 mi

A West Blanchard Road, Waukeg.. Oct 11th, 1:12pm

B West Blanchard Road, Wauke... 12:26pm (23m 9s) 9.2 mi

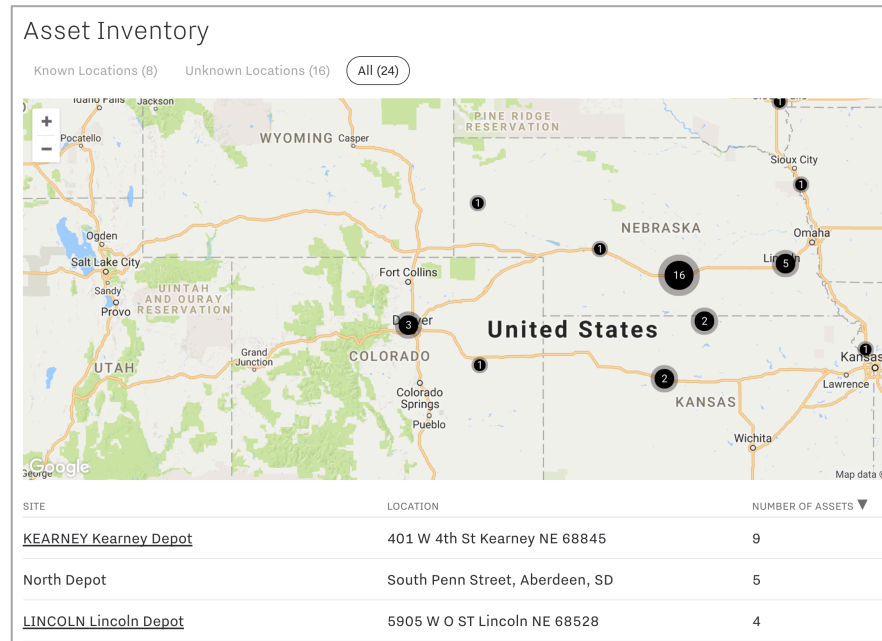
A I 41;I 94;US 41, 4.2 mi SSW Ple... Oct 11th, 12:02pm

An aerial photograph of a large trailer yard. Numerous white semi-trailers are parked in neat rows. A red rectangular box highlights a specific trailer in the middle row, which is labeled 'Trailer 1123'. To the left of the photograph is a sidebar containing information for 'Trailer 495', including its location in Channahon, IL, sensor data (empty cargo, closed rear door), and a list of recent trips with distances and times.

- GPS: eliminate driver hunts – both within and between yards
- Door & cargo sensors: dispatch drivers knowing they won't have to wait for loading

Accurate, real-time trailer inventories

- Grow revenue by transferring unused trailers to sites with higher demand
- Eliminate labor-intensive and error-prone manual yard reports
- Optimize asset pools and site inventory in order to manage capital expenditures



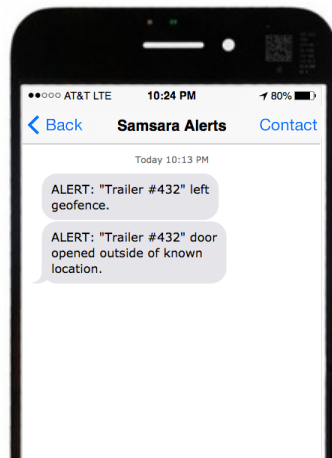
Improve utilization with dormancy analysis

Asset Dormancy			
ASSET	LOCATION	LAST ACTIVE	DORMANT (DAYS) ▼
Trailer 419	LINCOLN Lincoln Depot	4/21/2017	201
Trailer 538	Kearney, NE	5/25/2017	167.5
Trailer 536	1.6 mi SSW Kearney, NE	9/27/2017	42.5
Trailer 554	Aberdeen, SD	10/12/2017	27.5
Trailer 573	2.6 mi NNE Hays, KS	10/12/2017	27
Trailer 478	1.6 mi SSW Kearney, NE	10/27/2017	12

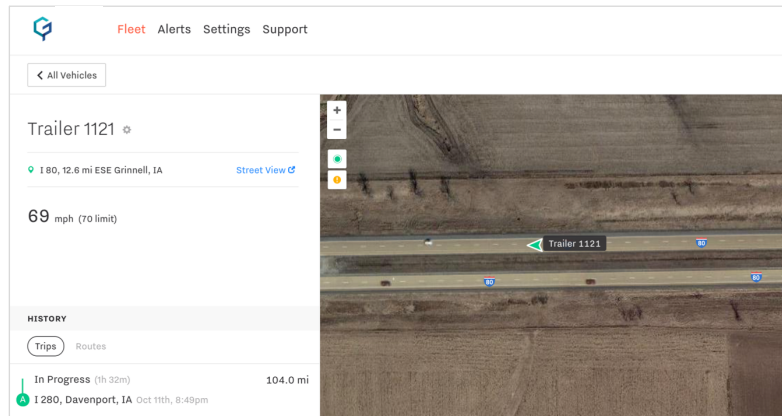
ASSET	UTILIZATION (HOURS)	UTILIZATION (TRIPS) ▼
Trailer 403	96	334
Trailer 611	112	330
Trailer 576	139	327
Trailer 572	110	306
Trailer 604	99	305

- Improve tractor-to-trailer ratio by identifying idle, unused, and lost assets
- Redeploy trailers from low-utilization sites to areas that need more trailers
- Identify heavily used trailers to identify maintenance needs and maximize asset rotations
- Expand revenue capacity without purchasing new trailers

Detect and recover stolen assets



Alert on unauthorized access and movement



Real-time “helicopter view” aids law enforcement in recovery

Case study: How Cash Wa Distributing increases cold chain efficiency

Background: Cash Wa Distributing



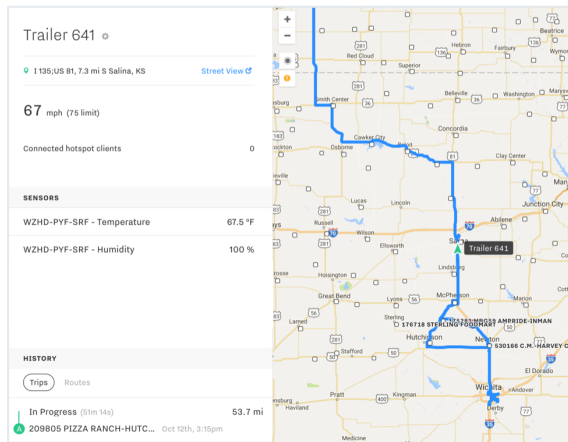
About the customer:

- Broadline foodservice distributor servicing the Great Plains states
- Fleet of over 200 refrigerated trailers and 175 tractors

Challenges:

- FSMA compliance: Meet temperature reporting requirements without added staff
- Reduce loss to temperature-related damages and claims
- Differentiate business in a competitive market


Automate FSMA compliance





TRIP	VEHICLE / TRAILER	SET POINT (START)	MAX TEMPERATURE
<div>B Ash Street, Chadron, NE 7:57pm (sh 8m)</div> <div>A KEARNEY Kearney Depot Sep 14th, 2:48pm</div>	641	40 F	42 F
<div>B Chadron, NE 12:51am (sh 5m)</div> <div>A Kearney, NE Sep 13th, 7:45pm</div>	732	0 F	12 F
<div>B West 3rd Street (182), Battlefield, MO 3:45am (4h 47m)</div> <div>A I 29, 12.7 mi ESE Nebraska City, NE Sep 13th, 10:57pm</div>	771	0 F	7 F
<div>B West 3rd Street (182), Battlefield, MO 3:44am (4h 47m)</div> <div>A I 29, 12.7 mi ESE Nebraska City, NE Sep 13th, 10:57pm</div>	792	n/a	38 F

- Automatic, centralized, wireless temperature logging
 - Eliminates manual temperature checks and paper logs
- Automates compliance with Food Safety Modernization Act (FSMA):
 - Records of temperature controls for shippers and receivers
 - Demonstrates pre-cooling of refrigerated compartments

Optimize operations with 2-way reefer control

Trailer #153 

 East 25th Street (CH 63), Hibbing, MN

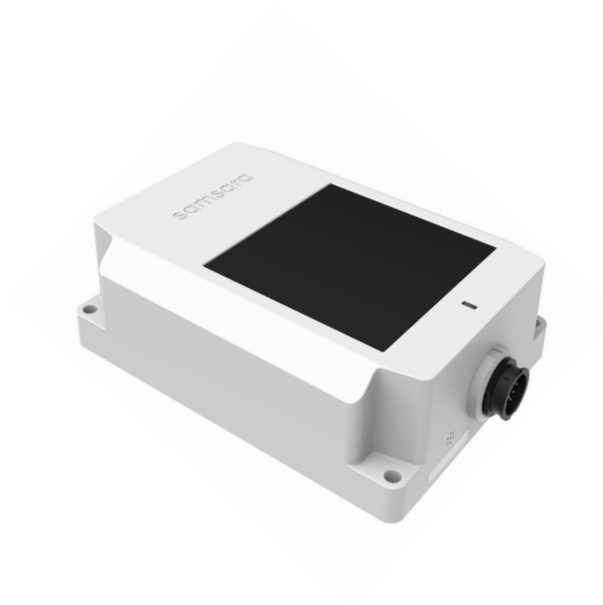
[Street View](#) 

Reefer Status	Active	Deactivate
Set Point	40° F	Set
Alarms	None	
Engine Hours	12,432	

- Remotely activate and deactivate reefer to correct mistakes and save on lost fuel costs
- Read and control reefer set point:
 - Activate and pre-cool remotely, before driver arrives to hook trailers
 - Ensure cooling is set correctly for a given load
 - Correct improper refrigeration in transit

Hardware overview

AG24 Asset Gateway



Connectivity

- 4G LTE cellular gateway
- 2-way reefer integration (Thermo King SR2, SR3, and SR4, Carrier APX)
- Real-time updates when powered

Power

- Powered assets: connects to trailer 7-way, reefer, and/or 12-28V DC power source
- Unpowered: Built-in solar cell enables ongoing operations

Mounting and Enclosure

- Ruggedized and weather-sealed for external applications
- Easy mounting with self-tapping screws or industrial-strength VHB adhesive
- Covert mounting configurations available
- 7-way, reefer, and unpowered asset cables available

Wireless accessory sensors



Temperature and
Humidity Monitor



Door Sensor
(Rollup + Swing)



Cargo Sensor
(available December 2017)

- 100% wireless design, automatically pairs with AG trailer gateways
- 5 year battery life (user-replaceable AA battery)
- Data logging (record data locally when gateway is without cellular connectivity)
- IP67 rated, tested for pressure washing



samsara