



TAG-N-TRAC

The Total Pharma Cold Chain Solution Continuous Monitoring as a ServiceSM

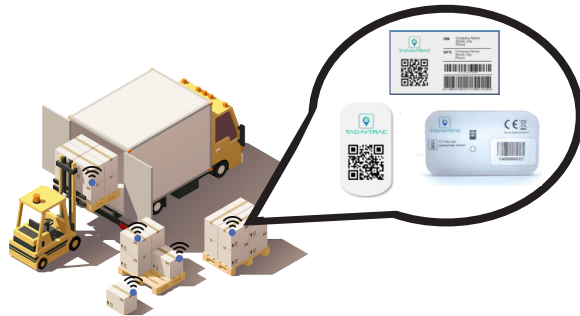
- Proprietary, Patent Approved & Pending Cellular, Bluetooth & RFID Solutions
- Intuitive Visibility & Traceability RELATIVITY™ Platform
- Flexible & Scalable Data Acquisition with Actionable Analytics

Pharma Cold Chain

Sourcing



Our Pharma Cold Chain solution continuously monitors the location and temperature of globally sourced Active Pharmaceutical Ingredients shipments to unlock operational efficiencies, assure product quality and streamline regulatory compliance.



- 1 Use Smart Labels, Asset Tags & Temperature Loggers to track Active Pharmaceutical Ingredients (APIs) with a specific focus on APIs requiring special transport or storage requirements.
- 2 Identify and quickly respond to any temperature excursions or unanticipated shipping delays.

Key Benefits

- Unlock operational efficiencies by increased visibility into critical API shipments
- Drive better decision-making using predictive insights
- Increased product quality and security
- Quicker intervention via excursion alerts
- Enhanced traceability in the event of a product withdrawal or recall
- Streamline regulatory compliance

Key Industry Statistics

- 25% of vaccines reach their destination in a degraded state due to incorrect shipping.
- ~20% of temperature-sensitive health care products are damaged during transport due to broken cold chains.
- 7 out of 10 of the top pharmaceuticals used in the U.S. require temperature-controlled shipping. A slight change in temperature, even of just 2 degrees, can ruin pharma products.
- 75% of pharma product thefts occur when products are on the road.

Pharma Cold Chain

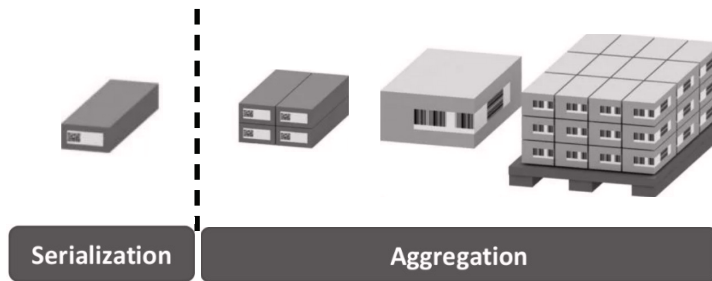
Manufacturing: Serialization & Aggregation



Tag-N-Trac provides a patent-approved, GS1-based Serialization & Aggregation capability, combined with continuous condition monitoring, to ensure traceability and compliance with the Drug Supply Chain Security Act (DSCSA) throughout the pharma cold chain.

- 1 Smart Labels can be affixed to primary, secondary and tertiary packs, cases and pallets.
- 2 Smart Labels, embedded with temperature sensors, now combine Serialization & Aggregation with Traceability. This combination allows fragmented systems to be combined into a single system.

- 3 Smart Labels provide location and continuously monitor the condition (temperature, shock, location insights) of products transported from manufacturing facilities to distributors.



	Items	Packs	Cases	Pallets
GS1 Code	GLN	SSCC		SSCC+GRAI



	Manufacturer	Transport	Distributor
GS1 Code	GLN	SSCC+GRAI	GLN

Since our labels are compatible with industrial thermal printers with built-in/add-on camera attachments and with vision systems on the manufacturing line, deploying Smart labels requires no new system integration.

Pharma Cold Chain

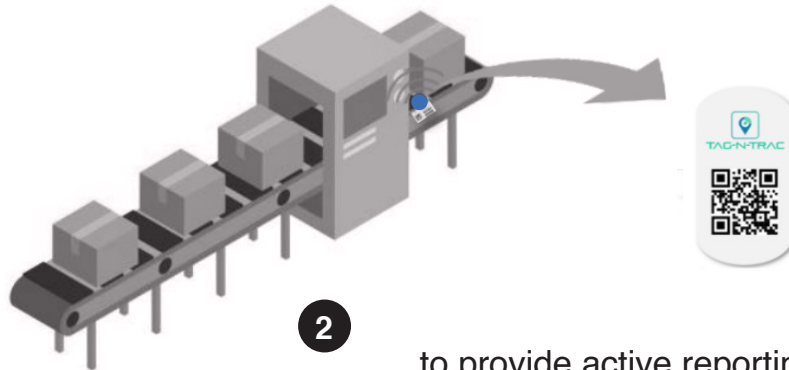
GMP & GDP (Cold Chain Warehouse Management)



Our Smart Labels and FlexDot™ products, combined with Bluetooth access points, enable new capabilities at your warehouse facilities including continuous inventory tracking, improved traceability, and secured cold chain custody.

1

FlexDot™ Tags and Smart BLE Labels are affixed to individual packages...

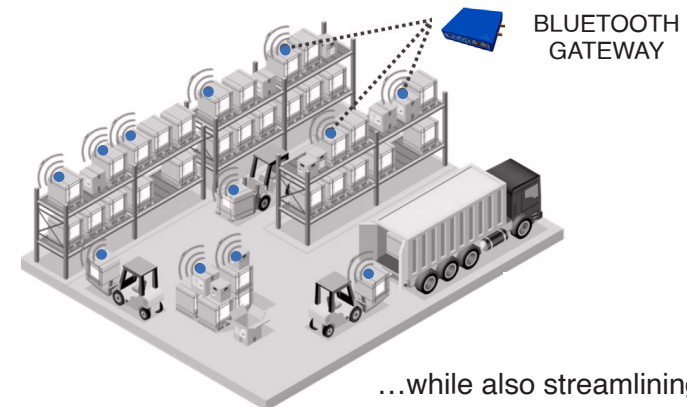


2

...to provide active reporting at a range of 60m (200') from Bluetooth Gateways and WiFi access points.

3

FlexDot™ Tags and Smart BLE Labels, coupled with Bluetooth Gateways, expedite inventory stock checks by eliminating the need to manually scan packages...

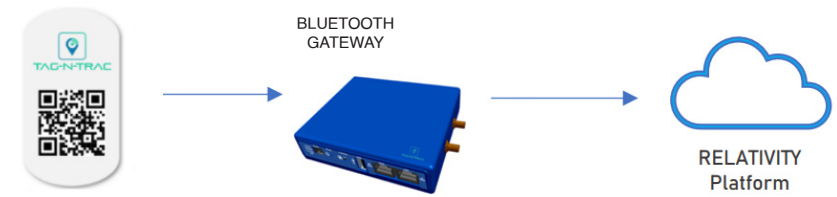


...while also streamlining shipping activities by enabling warehouse teams to easily identify the specific location of packages.

Key Benefits

- Increase operational efficiencies with faster inventory counts and shipping cycles
- Enhances planning accuracy
- Improves traceability by identifying dates processed & shipped and prior warehouse location of all packages by zone

Bluetooth Solution Overview



Pharma Cold Chain

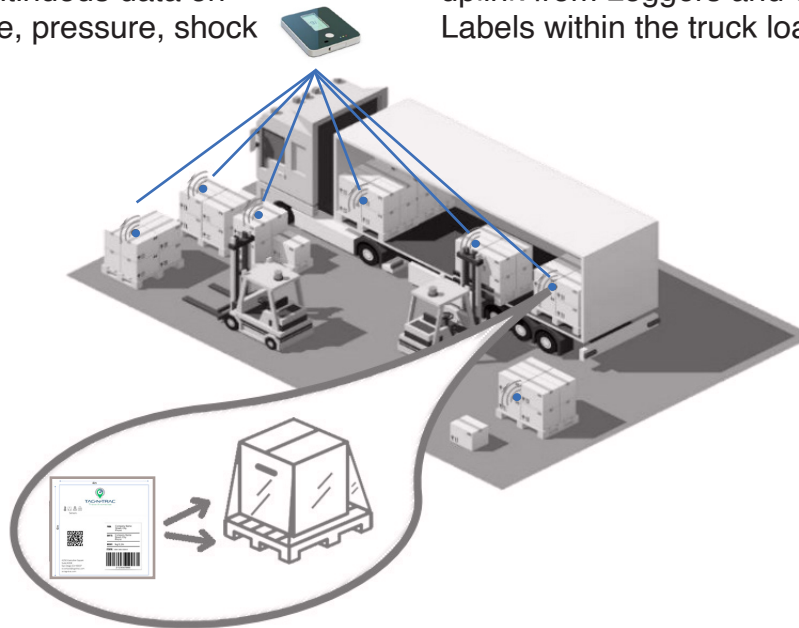
Distribution & Delivery



Tag-N-Trac provides complete visibility & traceability throughout the pharmaceutical cross-modal transport ecosystem. Our RELATIVITY™ platform, using advanced analytics, drives improved decision-making via actionable cold chain insights, proactive communications with key stakeholders, and compliance with regulatory and internal requirements.

Trailer Monitoring

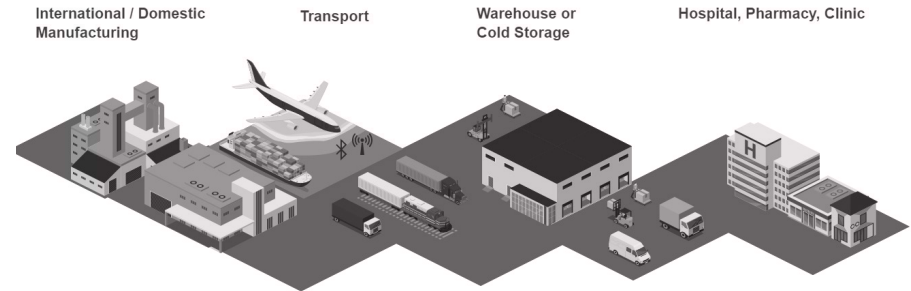
Bluetooth 5.1 provides range throughout the trailer to provide continuous data on temperature, pressure, shock and motion



Cloud Access

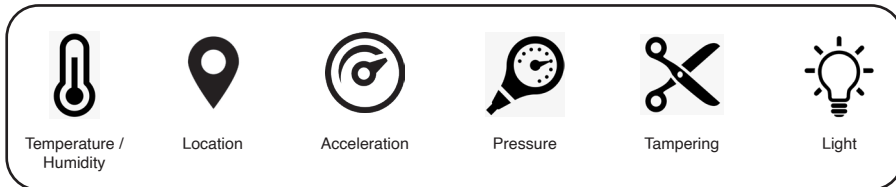
ST300 operates as a gateway to provide the mobile data uplink from Loggers and Smart Labels within the truck load

Cross-Modal Transport



Key Benefits

- Increased visibility down to the package, case, pallet level during transport
- Improved OTIF (On-Time, In-Full) rates by continuous monitoring of location, temperature, and other critical sensor data
- Proactive communications to customers on any temperature excursions or shipping delays
- Maintain FDA compliance via cloud-based recordkeeping & storage
- Actionable shipment performance insights by provider, mode & destination

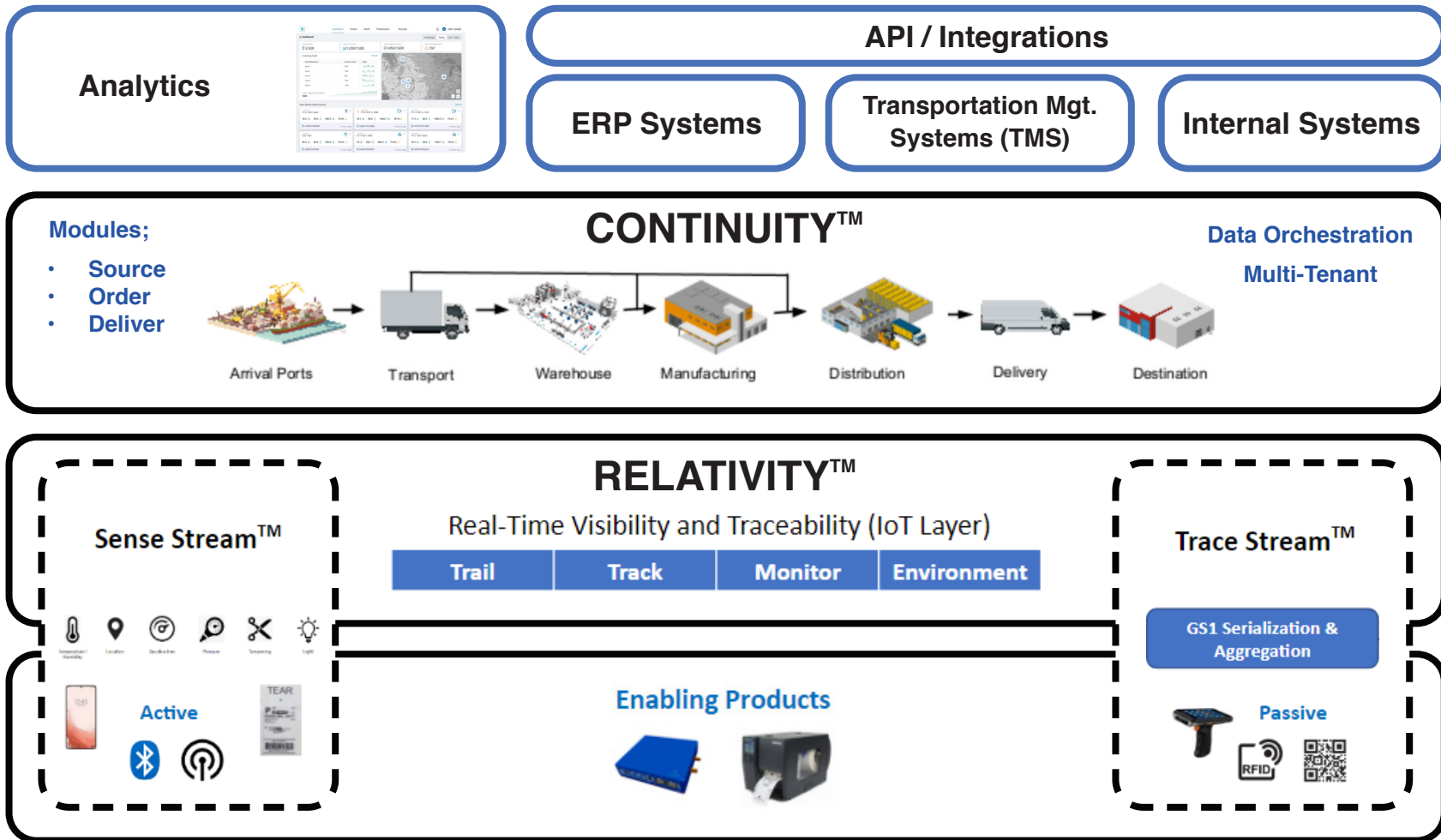


RELATIVITY™ Platform



Supply chain visibility & traceability combined with operational execution into a single platform.

The RELATIVITY™ platform provides continuous visibility & traceability to deliver the business intelligence required to optimize your supply chain, quickly respond to temperature excursions or shipping delays, and streamline regulatory compliance. We provide REST APIs and webhooks for seamless integration into internal and external (TMS, ERP) systems.

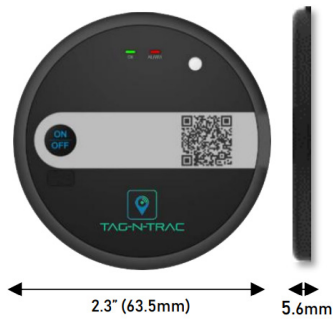


Product Suite

Tags, Loggers & Trackers

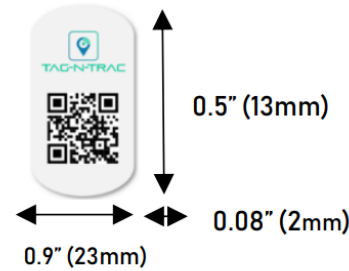


ASSET TAG (ST100) PUCK



Enclosure	Impact-resistant materials, IP65
Connectivity	Cellular (LTE Cat-M1, NB-IoT)
Sensor Data	Temperature, Pressure, Shock, Light, Humidity & Motion
Port	USB Micro-B
Battery Life	Up to 1 month (30-minute scans with 2-hour reporting)
Battery Weight	1 oz. (22g)

FLEXDOT™ ASSET TAG (FAT100)



Enclosure	Proprietary impact-resistant materials, IP65
Connectivity	BLE (Bluetooth 5.1)
Sensor Data	Temperature
Battery Life	Up to 36 months (30-second scans)

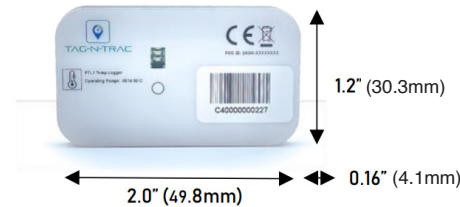
Reusable via Adhesive Pouches

ASSET TAG (SAM500)



Enclosure	IP68 Rugged
Connectivity	Cellular (LTE Cat-M1, NB-IoT) with 2G fallback
Sensor Data	Temperature, Light, Humidity & Motion
Battery Life	5- to 10-years depending on scanning frequency

FLEXDOT™ TEMPERATURE LOGGER (FTL1)



Connectivity	BLE (Bluetooth 5.1)
Sensor Data	Temperature, Humidity; Up to 8,000 recordings
Temperature Ranges	Operating: -30° C to 60° C; ±0.3° C (max) Storage: -40° C to 125° C
Battery Life	Up to 12 months (30-second scans)
Traceability	NIST Traceable

TRACKER (ST300)



Enclosure	IP65
Connectivity	Cellular (LTE Cat-M1, NB-IoT) with 2G fallback
Sensor Data	Temperature, Light, Humidity & Motion
Battery Life	Rechargeable; up to 4 weeks (15-minute scans with hourly reporting)

ASSET TAG (SMM300) CANDYBAR



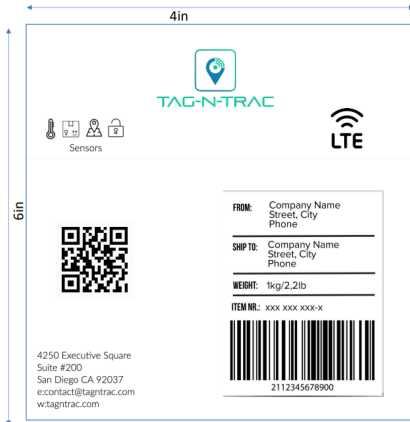
Enclosure	Impact-resistant materials, IP65
Connectivity	Cellular (LTE Cat-M1, NB-IoT)
Sensor Data	Temperature, Pressure, Shock, Light, Humidity & Motion
Port	USB Micro-B
Battery Life	Up to 3 months (30-minute scans with 2-hour reporting)

Product Suite

Labels: Cellular, Bluetooth, & RFID

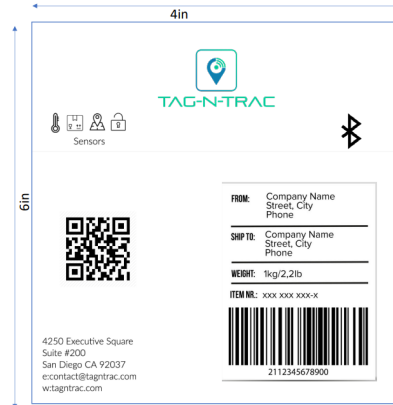


SMART LABEL: CELLULAR (SL100)



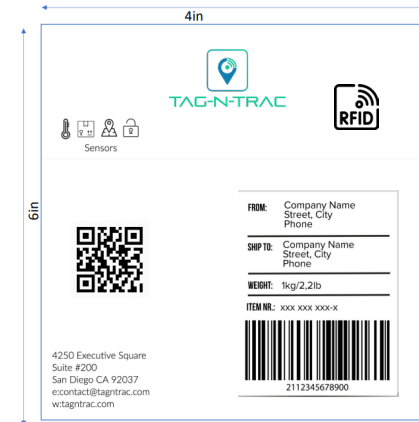
Enclosure	Proprietary, impact-resistant materials, IP65
Connectivity	Cellular (LTE Cat-M1, NB-IoT)
Sensor Data	Temperature, Pressure, Shock, & Motion
Battery Life	Up to 6 months (2-hour scans with 2-hour reporting)

FLEX LABEL: BLE (FLS-006)



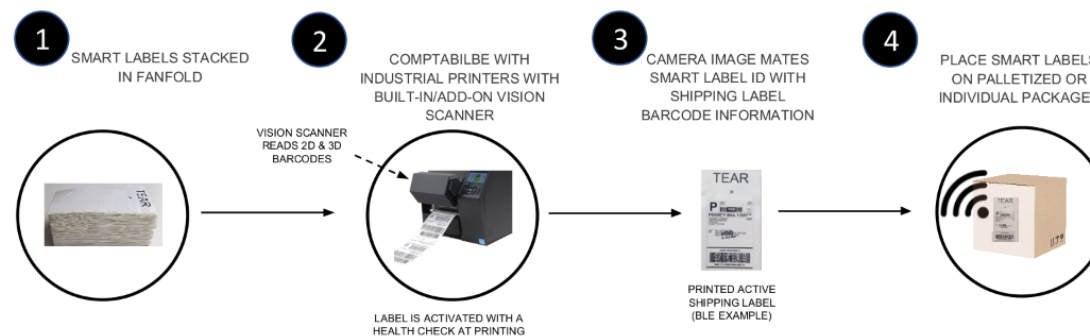
Enclosure	Proprietary, impact-resistant materials, IP65
Connectivity	Cellular (LTE Cat-M1, NB-IoT)
Sensor Data	Temperature
Battery Life	Up to 6 months (30-second scans)

DUAL RFID LABEL



Enclosure	Proprietary, impact-resistant materials, IP65
Connectivity	RFID, NFC
Sensor Data	Temperature; Up to 20,000 recordings
Battery Life	Up to 6 months (2-hour scans with 2-hour reporting)

Smart Labels: Printing to Package Process





TAG-N-TRAC

Proprietary Technology with Industry-Leading Total Cost of Ownership (TCO)
Intuitive Visibility & Traceability RELATIVITY Platform
Data Acquisition + Analytics

Tag-N-Trac industry partners:



Tag-N-Trac leading industry recognition:



To learn more about our solutions please visit our website, contact us by email or phone using the information below:



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