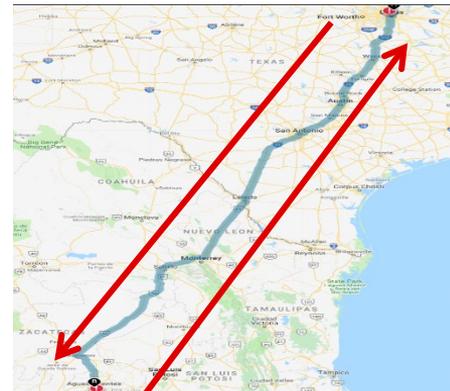


Texas Instruments Tracking Device Playbook

July 2025

Introduction

- Digital tracking devices provide real time visibility into TI shipments
 - GPS location (within 50 feet)
 - Shock (>15G)
 - Temperature
 - Humidity (>75%)
 - Geofencing (defined per shipment)
 - Light (package breach)
- This visibility allows TI to better manage our supply chain and reduce risk.
- TI began using digital tracking devices in 2016.
 - Time and time again these devices have proven their worth by providing notifications that inevitably avoided material scrap and shipment damage.
- TI currently requires tracking devices on all shipments of semiconductor manufacturing equipment with a value > \$250K traveling a distance greater than 50KM.
 - Value is determined as total shipment value.
 - Example: Shipment of a single tool >\$250K requires one tracking device
 - Example: Combined shipment of three tools with individual values of \$100K requires one tracking device.



Introduction Cont

- Tracking devices are attached on the exterior of crates
 - Having devices visible has driven better handling of our cargo
- Automatic alerts are sent to subscribers and can be adjusted
 - Parameters can be adjusted
 - Notification frequency can be adjusted (standard is 15 min)
 - Subscribers can be added at any time
 - Single Sign On is being explored with TI IT
- We use System Loco HGD4 which has an alkaline battery
- In 2020 we began using tracking devices for precious metal reclaim shipments
- Tracking devices may soon be used for high value raw material and semi-finished goods shipments
 - Tracking devices have been used to monitor temperature on Mold Compound shipments since 2016
- TI Capital Accounting is exploring the use of tracking devices on installed assets

HGD4



Process

1. Shipper contacts the TI Routing Center to book shipment:
 - [Routing Center | TI.com](#)
 - In addition to providing booking instructions and shipping guidelines the TI Routing Center provides a Tracking Device Order Form.
 - Fields in grey will be filled in by the TI Routing Center
 - Fields in yellow must be completed by the Shipper
 - Fields in tan will be filled in by TI's tracking devices provider (Cargo Signal)

2. Shipper completes the form and replies to the case number, copying both the **Command Center & Routing Center**.
 - Tracking devices must be ordered a minimum of 10 days before shipping date.

Request for tracking device	
Customer	Texas Instruments
TI PO# and Tool ID (if applicable)	
Supplier Ref# (SO#, INV#, Project# etc)	
Routing Center Reference (to be supplied by Routing Center)	
Mode (Ocean, Air, Truck)	
Monitoring Needs (Shock, Humidity, etc.)	
Address to send tracking device	
Address where tracking will end	
Scheduled Pickup Date/Time	
Name of contact person to receive device	
Phone number of contact person	
Email address of contact person	
TO BE COMPLETED BY CARGO SIGNAL	
Device number	
FedEx tracking	
Included	

Process Cont.

3. Cargo Signal will send a reply email confirming order:

4. When device is shipped a second email will be sent by Cargo Signal:

- FedEx tracking information
- Device activation instructions
- Device installation instructions
- Shipments to China will also receive CIQ information

5. Tracking device will arrive 5 days prior to cargo shipment

- The above can only be achieved if the tracking device is ordered 10 days before cargo shipment

Hello,

We acknowledge this order for one tracking device. We have recorded the order and will ship a device to arrive 5 days before your cargo ship date. Additional details will be provided when the device ships.

Cargo Signal

Office +1-206-834-8000

Email commandcenter@cargosignal.com

Cargo Signal | Global Headquarters
1015 Third Avenue, Seattle, WA 98104, USA
www.cargosignal.com

Placement Instructions: Use the provided bracket and four screws to attach the sensor 12-18 inches from the bottom of the crate as close to the edge as possible in the position shown below.



Process Cont.

6. Shipper attaches the tracking device

- Use the provided bracket and four screws to attach the sensor 12-18 inches from the bottom of the crate as close to the edge as possible in the position shown



7. Shipper will contact commandcenter@cargosignal.com 24hrs before shipment to conduct a device connection test

- Device HGD4 model (using alkaline battery) must push the button to activate before shipment
 - In an area of good cellular coverage, press the button on the corner of the device. The LED light will illuminate green for 3-5 seconds. The light will turn off, and there will be no other indicators. The device will attempt to connect to cellular network
 - The device is not rechargeable. Once activated, it cannot be shut down or deactivated.
- Connection test is to ensure communication link is optimal and that the device serial number is tied to that specific shipment

Process Cont.

8. Shipper ensures shipping paperwork is in order

- Important notes:
 - Most countries require some level of permitting/approval to use these devices
- TI and Cargo Signal have successfully used these devices on thousands of shipments across the globe.
 - Any questions regarding permitting, declaration, etc. should be directed to commandcenter@cargosignal.com
 - Cargo Signal has offices in Asia and US and provide support 24/7
 - Common concerns: Airline approvals, China CIQ requirements
 - » Cargo Signal maintains a library of all documents and approvals needed to ensure smooth shipping.
 - First time shippers have historically needed additional support from Cargo Signal and or TI however subsequent shipments have been very easy. Shippers are encouraged to leverage Cargo Signal's expertise as much as they need to.

9. TI's freight forwarder picks up shipment

10. Shipment is delivered to TI destination (unloaded on TI dock)

11. TI receiving team removes tracking device from crate

12. The HDG4 model (which has an alkaline battery) is a disposable device and does not need to be returned to the Command Center

Bulk Shipping Process

1. For shippers with >10 shipments in a one month period devices can be ordered in bulk
2. Bulk orders must be approved by TI personnel
3. The ordering process remains the same however the bulk quantity must be specified
4. Upon attaching a device to a shipment, shipper must contact Cargo Signal and provide the TI PO number, SO and the device ID number it was attached to

Shipments to China

- Shipping tracking devices into TI bonded zone in China requires additional effort
 - As of 4Q20 devices must be declared with a “CIQ” form

中文品名	数量	单位	制造日期	设计使用	合同单价 (USD)	总价 (USD)	货物所在地	原产国	税号	GPS ID
			(年/月)	年限 (years)						
Commodity Name	Qty.	Unit	Manufacture date (yyyy/mm)	Lifetime	Actual transaction unit price	Total Amount	Location	COO	HS code	
Calamp SC1004	1	Each	2021/03	10 years	150 USD	150 USD	MALAYSIA	UK	8526919090	72308628870380164

- Devices must be declared as “equipment”
 - Equipment must be classified as new or used
 - Used devices require customs inspection
 - Inspection adds 1-2 days to transit time
 - New devices are inspected 6-8% of the time
 - Lithium battery must be certified by the Shanghai Research Institute of Chemical Industry
- Returning devices from TI must also follow a specific process
 - Process has been developed by TICD team

Thank You

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