# HARCOR®

iSPOT®

The Secure, Efficient and Scalable Solution For Electronic Cargo Tracking & Fleet Management

iSPOT®

THE PLATFORM

iSPOT® is a globally patented solution that allows clients to achieve both Electronic Cargo Tracking (ECTS) and Fleet Management (FMS) with the use of one set of hardware. Utilizing the iSCOUT®, the iSENSOR and the IVM, it offers customers a scalable solution depending on their needs.

With the rise of new threats to cargo security, it becomes increasingly vital for companies to deploy electronic cargo tracking solutions to increase security and efficiency in their logistics operations. The iSPOT® platform is perfect for ensuring the security and visibility of containers, trucks and other assets in transit at all times, and in high risk environments where cargo is prone to pilferage and theft, the iSPOT® allows clients to receive real-time alerts when cargo is tampered with.

iSPOT®

ELECTRONIC CARGO TRACKING SYSTEM

FLEET MANAGEMENT SYSTEM
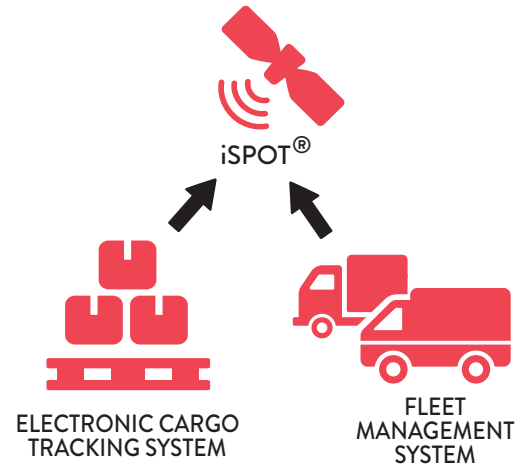
THE PRODUCTS

iSCOUT® is a standalone, plug and play device with an adjustable live fibre core wire making it extremely flexible in its application. It gives immediate asset visibility and security status to clients, is built to military specs and can withstand tough conditions on long journeys.

GPS TRACKING | SECURITY TAMPER ALERT | ROUTE DEVIATION | LONG BATTERY LIFE

IVM (In Vehicle Monitoring unit) is able to give clients full view of how their fleet is being utilised to obtain maximum efficiency. It can also be paired with the iSENSORS to perform electronic cargo tracking.

GPS TRACKING | IGNITION REPORTS | FUEL MANAGEMENT | MONITOR DRIVER BEHAVIOUR

iSENSOR is the lighter version of the iSCOUT® and is not a standalone device. Paired with either the iSCOUT® or the IVM, it is ideal for tracking explosive and hazardous cargo. It can also be used to detect environmental changes to prevent spoilage or damage of goods.

MUST BE PAIRED | SECURITY TAMPER ALERT | DETECT ENVIRONMENTAL CHANGES | INTRINSICALLY SAFE

YOUR CARGO SECURITY, OUR PRIORITY.

USAGE EXAMPLES

Container fitted with iSCOUT® for electronic cargo tracking.

iSCOUT®

Transit vehicles fitted with multiple iSCOUTS® for individual tracking.
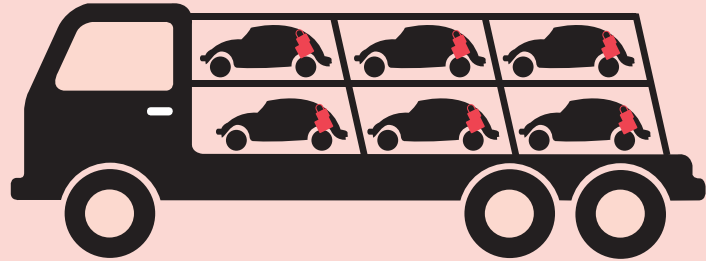
iSCOUT®   iSCOUT®   iSCOUT®

Bulk liquid container fitted with multiple iSENSORS and paired with the iSCOUT® for GPS tracking. (Non-owned Vehicle)
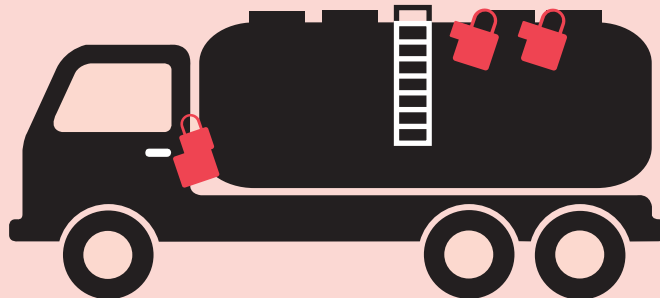
iSCOUT®   +   iSENSORS

Bulk liquid container fitted with multiple iSENSORS and paired with the IVM for GPS tracking. (Owned Vehicle)

IVM   +   iSENSORS

HARCOR®

iSCOUT®
(POWERED BY iSPOT®)

WHAT IS THE iSCOUT®?

The iSPOT® iSCOUT® (iSPOT® IS-800) is the latest innovation for tracking ISO shipping containers and conveyances using active RFID, GPRS and GPS technology. More than a simplistic inspection automation system, the iSPOT® IS-800 enables shippers, carriers and logistics service providers to actively monitor the security and integrity of shipments as their containers move throughout the global supply chain. The iSPOT® IS-800 provides security tampering sensor to detect potential theft and prevent terrorist threats. Coupling with iSPOT® iSensors, it detects environmental changes to prevent spoilage or the damage of goods.

HOW IT WORKS

iSPOT® IS-800 offers a cable locking mechanism to monitor ISO shipping containers and conveyances. The iSPOT® IS-800 reports its GPS location upon detection of any unauthorized opening of the container, alerting security personnel immediately of problems. With iSPOT® iSensors monitoring the environmental conditions inside the container as it moves through the ports, terminals and key transportation routes, any change in temperature and humidity inside the container will cause the iSPOT® IS-800 to report its position and collected data to alert the security personnel.

USES & BENEFITS

The iSPOT® IS-800 design includes:

· Continuous monitoring and detection of security tamper.
· Continuous environment monitioring.
· Performance of constant GPS acquisition.
· Sending of wireless reports over GPRS cellular infrastructure.

iSPOT®

SPECIFICATIONS

Physical Characteristics	Height	210mm
	Width	195mm
	Depth	40mm
	Weight	1.25kg

Environment	Temperature	-20°C to +60°C operating
	Humidity	95% non-condensing
	Altitude	Maximum altitude = 40,000 feet (12,192m); MIL-STD-810F Method 500.4, Procedure I

GSM/GPRS Radio Module	GSM Radio	Quad Radio
	Frequency	850MHz and 1900MHz (US Cellular Network); 900MHz and 1800MHz (Int'l Cellular Network)
	Modulation & Data Coding	As per GSM standard
	SIM Card	Supports dual SIM cards

GPS Radio Module	Frequency	1575MHz
	Modulation & Data Coding	As per GPS communication standard

Shock and Vibration	Shock	Mechanical Shock & Transit Drop Test MIL-STD-810F Methods 516.5 Procedure IV (4 ft, 1.22m)
	Vibration	Vibration & Loose Cargo Test MIL-STD-810F Method 514.5 Procedure I

Power	Battery Type	Li-ion rechargeable, Non-replaceable
	Battery Life	45 days between charges
	Diagnostics	Reports low tag battery status, diagnostic data

Sensors	Security Sensor	Detect if there is any security breach

Environmental Sensors	Temperature	Senses and samples temperature with adjustable sample period
	Humidity	Sense and samples humidity with adjustable sample period

Regulatory Approvals	FCC Part 15, CE

Memory	On-board non-volatile memory for recording GPS locations

Protection Type	IEC 60529 requirements for IP-65 intrusion protection from dust or water ISO 17712 requirements for a high security seal

Mounting Type	Cable -Works on ISO 668 Dry Van Shipping containers and other conveyances -Mounts within seconds - No tools required & no modification to conveyances -No handheld computer is required

ASCENT

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iSENSOR
(POWERED BY iSPOT®)

WHAT IS THE iSENSOR ?

The iSPOT® iSensor is the latest innovation for tracking ISO shipping containers and conveyances using active RFID, GPRS and GPS technology. More than a simplistic inspection automation system, the iSPOT® iSensor enables shippers, carriers and logistics service providers to actively monitor the security and integrity of shipments as their containers move throughout the global supply chain. It is equipped with security tampering sensors to detect potential theft and prevent terrorist threats. It can also be used to detect environmental changes to prevent spoilage or the damage of goods.

HOW IT WORKS

iSPOT® iSensors offer a cable locking mechanism to monitor ISO shipping containers and conveyances. It works together with either the iSPOT® iSCOUT® or the iSPOT® IVM to report its GPS location upon detection of any unauthorized opening of the container, alerting security personnel immediately of problems. With iSPOT® iSensors monitoring the environmental conditions inside the container as it moves through ports, terminals and key transportation routes, any change in temperature and humidity inside the container will cause the iSPOT® iSCOUT® or iSPOT® IVM to report its position and collected data to alert the security.

iSPOT®

iSensors paired with
the iSPOT® IVM

SPECIFICATIONS

Physical Characteristics	Height	155mm
	Width	145mm
	Depth	40mm
	Weight	0.7kg

Environment	Temperature	-30°C to +70°C operating
	Humidity	95% non-condensing
	Altitude	Maximum altitude = 40,000 feet (12,192m); MIL-STD-810F Method 500.4, Procedure I

Wireless	Frequency	ISM 2.4GHz QFSK modulation
	Active Transmission Power	<18dBm (<100mW)
	RX Sensitivity	-100dBm
	Range	400m L.O.S
	Air Data Rate	250kbps

Shock and Vibration	Shock	Mechanical Shock & Transit Drop Test MIL-STD-810F Methods 516.5 Procedure IV (4 ft, 1.22m)
	Vibration	Vibration & Loose Cargo Test MIL-STD-810F Method 514.5 Procedure I

Power	Battery Type	Li-ion rechargeable, Non-replaceable
	Diagnostics	Reports low tag battery status

Sensors	Security Sensor	Detect if there is any security breach

Environmental Sensors	Temperature	Senses and samples temperature with adjustable sample period
	Humidity	Sense and samples humidity with adjustable sample period

Regulatory Approvals	FCC Part 15, CE

Protection Type	IEC 60529 requirements for IP-65 intrusion protection from dust or water ISO 17712 requirements for a high security seal

| Mounting Type	Cable -Works on ISO 668 Dry Van Shipping containers and other conveyances -Mounts within seconds -No tools required & no modification to conveyances -No handheld computer is required

HARCOR®

IVM
(POWERED BY iSPOT®)

WHAT IS THE IVM?

The iSPOT®IVM (In Vehicle Monitoring unit) is the latest innovation for tracking ISO shipping containers and conveyances using active RFID, GPRS and GPS technology. Besides operating like a conventional In Vehicle Monitoring unit, it also works with iSPOT® iSensors to secure the doors of the conveyance enabling shippers, carriers and logistics service providers to actively monitor the security and integrity of shipments during transportation.

The iSPOT®IVM will constantly report its GPS location upon detection of any unauthorized opening of the container, alerting security personnel immediately of problems.
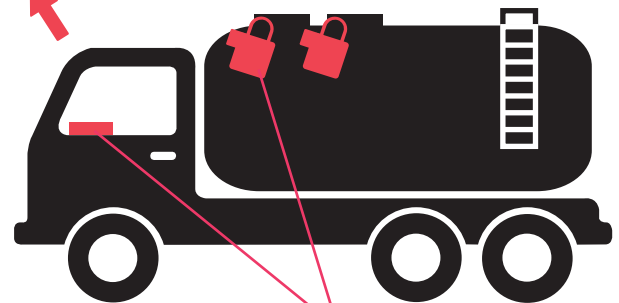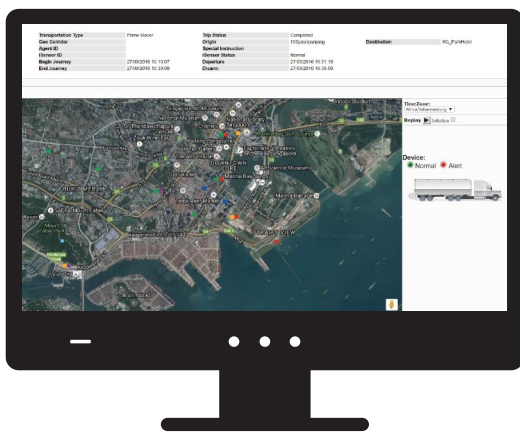
iSPOT®

iSensors paired with
the iSPOT® IVM

SPECIFICATIONS

Physical Characteristics		
	Height	131mm
	Width	85mm
	Depth	25mm
	Weight	0.24kg
Environment	Temperature	-30˚C to +70˚C operating
	Humidity	95% non-condensing
	Altitude	Maximum altitude = 40,000 feet (12,192m); MIL-STD-810F Method 500.4, Procedure I

GSM/GPRS Radio Module	GSM Radio	Quad Radio
	Frequency	850MHz and 1900MHz (US Cellular Network); 900MHz and 1800MHz (Int'l Cellular Network)
	Modulation & Data Coding	As per GSM standard
	SIM Card	Supports dual SIM cards
GPS Radio Module	Frequency	1575MHz
	Modulation & Data Coding	As per GPS communication standard
Wireless	Frequency	ISM 2.4GHz QFSK modulation
	Active Transmission Power	<18dBm (~100mW)
	RX Sensitivity	-100dBm
	Range	400m L.O.S
	Air Data Rate	250kbps
Power	Input Voltage Range	+8VDC to +30VDC
	Backup Battery Type	Built-in rechargeable 3.7V, 1050mAH Lithium Polymer
	Diagnostics	Reports low tag battery status
Inputs/Outputs	Analog	2 Analog Inputs
	Digital	5 Digital Inputs & 3 Digital Outputs
	Sensor	Supports 3D Accelerometer
Others	LEDs	Red, Blue & Green
	Memory	Supports MicroSD card
Regulatory Approvals	FCC Part 15, CE	
Protection Type	IP-54 Rating (Water and Dust Resistant)	