



InSight
 SkyBitz InSight solutions.
 Fleet efficiency at your fingertips.

Cargo
 Platform
 Specifications

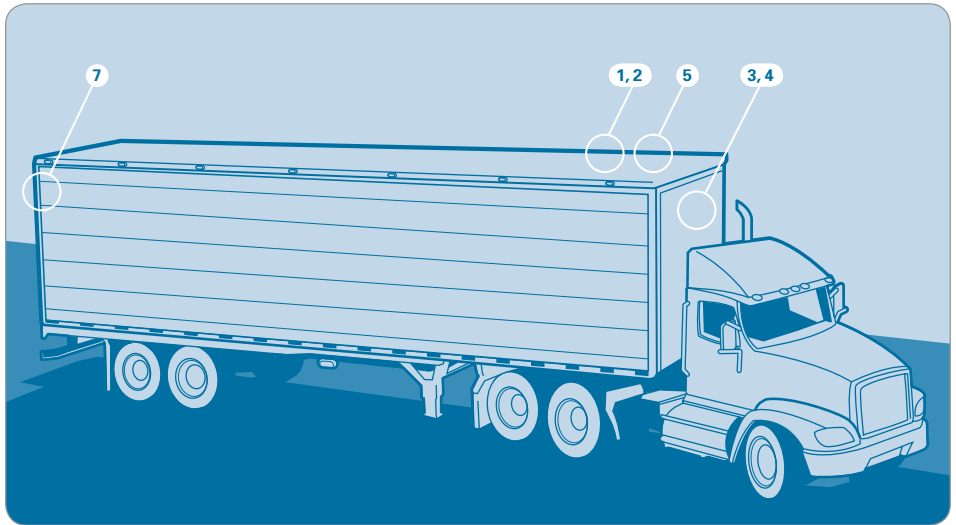
Package Components

Standard

1. Mobile Terminal
2. Mobile Terminal Mounting Bracket
3. Cargo Sensor
4. Cargo Sensor Mounting Bracket
5. Mobile Terminal Interface Module (MTIM)
6. Installation Kit

Options

7. Door Sensor
8. Auxiliary Battery Pack



Mobile Terminal

Frequency of Operation	L Band transmit and receive
Transmit EIRP	1 W
Dimensions	9 5/8" x 7" x 1" 244.48 mm x 177.8 mm x 25.4 mm
Power	Batteries: Internal—8 "AA" lithium primary cells, External—Regulated 6 V vehicle power Automatic sensing and switching to external power
Weight (w/batteries)	3 lb
Operating Temperature	-40 degrees C to 70 degrees C
Storage Temperature	-55 degrees C to 85 degrees C
Vibration	2 G rms, MIL-STD-810D, Method 514.4
Shock	30 G, MIL-STD-810D, Method 516.3, Procedure I
Salt Fog	General Motors Engineering Standards Corrosion Test, GM-9505P for duration of five weeks
Humidity	100% condensing
Water Immersion	1 meter, 30 minutes
Interface	15 pin connector, 2 open/closed switch connections, 2 open/closed control lines, RS-485 Interface
Mounting	Stainless steel mounting bracket bonded to trailer roof with 3M VHB tape

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Cargo Sensor

Electrical	
Signal Interface (9.6 KBps)	IEA/TIA RS-232
Supply Voltage (from host)	3.6 to 8.0 VDC (absolute min/max)
Supply Ripple	125 mV peak/peak (max)
Operating Current	≤ 50 mA (average)
RFI/EMI	EN55022, Class B or better
ESD	2 kV, Human body model (all pins)
Mechanical	
Dimensions	Face: 3.45" x 5.40", Overall mounted depth: 2.50"
Mounting	Aluminum bracket bonded to the front inside trailer wall with 3M VHB tape
Environmental	
Operating Temperature Range	-30 degrees C to +60 degrees C
Storage Temperature Range	-40 degrees C to +85 degrees C
Operating Vibration	1.82 G rms (10 Hz to 1 kHz)
Non-operating Vibration	5.20 G rms (10 Hz to 1 kHz)
Shock (half sine)	20 G, 11 mS duration
Humidity	0-95%, non-condensing
Target Detection (under all environmental conditions)	<p>1. Flat target 3' x 3' in area, oriented normal to and in the center of the sensor's transmission beam. The target will have the hardness and stiffness of 3/4" plywood, or better. Detection will be 97% at target distance from zero to nineteen feet, six inches (0-19'6").</p> <p>2. Flat target 8' x 4' in area, oriented horizontally below the sensor, which is corner mounted in a trailer. The target will have the hardness and stiffness of 3/4" plywood, or better. Detection will be 97% at target distances from zero to three feet (0-3').</p> <p>Manufactured under license from QUALCOMM Inc.</p>

Mobile Terminal Interface Module (MTIM)

Functions	Cargo Sensor power supply, mobile terminal RS-485 data to cargo sensor RS-232 data conversion, door switch interface, auxiliary battery power interface
Internal Power	6 VDC supply to Cargo Sensor and Interface—Internal pack of 4 "AA" lithium primary cells
Dimensions	2.5" x 5" x 1"
Weight (w/batteries)	1 lb
Operating Temperature	-40 degrees C to 70 degrees C
Storage Temperature	-55 degrees C to 85 degrees C
Vibration	2 G rms, MIL-STD-810D, Method 514.4
Shock	30 G, MIL-STD-810D, Method 516.3, Procedure I
Salt Fog	General Motors Engineering Standards Corrosion Test, GM-9505P for duration of five weeks
Humidity	100% condensing
Water Immersion	1 meter, 30 minutes
Interface	15 pin connector, 2 open/closed switch connections, 2 open/closed control lines, RS-485 interface
Mounting	Bonded to trailer roof with 3M VHB tape
Communication	Input: RS-232, Output: RS-485
Control I/O	Binary input—Door Switch

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Door Sensor

Type	Ferrous Proximity—Senses the presence of ferrous metal
Operation	Normally closed with door open
“Make” Contact Distance	1/2” typically
“Break” Contact Distance	5/8” typically
Hysteresis	3/64” typically
Bounce Time	1.5 mS max
Operating Life	10,000,000 operations
Temperature	-40 degrees C to 125 degrees C
Shock	30 G max
Mounting	Stainless steel pop rivets—Internal mount to door header

Auxiliary Battery Pack

Power/Capacity	7.2 V/19 AMP HRS
Dimensions	4.5” x 3.2” x 1.5”
Weight	12 oz
Temperature	-40 degrees C to 60 degrees C
Vibration	2 G rms, MIL-STD-810D, Method 514.4
Shock	30 G, MIL-STD-810D, Method 516.3, Procedure I
Salt Fog	N/A
Humidity	0-95% non-condensing
Water Immersion	N/A, splash resistant
Mounting	Bonded to the front inside trailer wall with 3M VHB tape
Control I/O	N/A