

**DATASHEET:**

**SOLAR POWERED  
ASSET TRACKER**

# SOLAR SENSE



Solar Sense is an energy-harvesting LTE Cat 1 Asset Tracker that supports long-term, remote deployments without the need to replace the battery.

Solar Sense utilizes a high-efficiency solar panel to charge and maximize the operating life of the internal Lithium Ion battery. Customers who require frequent data for location, health, and monitoring of their remote assets can be assured that the Solar Sense will provide more frequent data for longer periods compared with other asset tracking devices.

This device supports configurable reporting frequency, event triggers and thresholds along with 16MB flash memory that supports up to 10K 11-point geofences. The internal 10 Ah battery is best-in-class, exceeding industry standards for charge and discharge temperature extremes, capable of more than 4000 life cycles by controlling and optimizing battery state of charge and depth of discharge.

It is rugged and designed to withstand various environmental factors, the Solar Sense is tested to meet IP67 rating. With a fully sealed, protective case the device can be deployed in marine and desert environments.

## KEY FEATURES

- Dual carrier LTE/HSPA+ Cat 1
- LED indicators for GPS lock, Cellular and WLAN
- Over-the-Air firmware upgrade
- Supports SMS, TCP, UDP, UDP/ACK, FTP
- 3-axis accelerometer and motion detector
- Internal temperature sensor
- Integrated GPS receiver and antenna
- Integrated LTE band antenna
- 10 Ah backup battery
- Optional Bluetooth®, ZigBee® and IO configurable with embedded antennas, 1-wire bus
- 16MB flash memory

## USE CASES

- Trailer and Chassis
- Rail Cars
- Intermodal
- Containers
- Heavy Machinery
- Transportation Equipment
- Mobile Signage
- Generators
- Mobile Lighting
- Agriculture
- Pipeline



# SOLAR SENSE SPECIFICATIONS:

## MECHANICAL

Dimensions	8.45" x 4.73" x 1.06" (21.5 cm x 12.0 cm x 7.0 cm)
Weight	24 oz. (680 g)
Case Material	PC+PBT
IP Rating	IP 67

## PHYSICAL CONNECTIONS

Harness Connector	8-pin circular bayonet
Serial Interface	RS232
Optional I/O	1 Dig. Input
	1 Dig Output
	2 ADC Inputs
Multi-function ON/OFF Switch	Wake/Wi-Fi/BLE pairing
Operating Temperature	-40 °F to 158 °F (-40 °C to 70 °C)

## POWER REQUIREMENT

DC Power	DC 8-24 V
Power Source	Internal 10Ah re-chargeable (via solar) battery

## GPS MODULE

GPS Module	(GPS)
Tracking Sensitivity	-157 dBm
Accuracy	+/- 2.5m CEP (50%, -130dBm, >6 satellites)
Certifications	FCC, PTCRB, IC, CE

## CELLULAR SPECS: 4G LTE- AT&T, VERIZON, VODA

MNO	AT&T, Verizon, Voda
4G LTE FDD Bands	1 <sup>1</sup> , 2, 3 <sup>1</sup> , 4, 5, 7 <sup>1</sup> , 8 <sup>1</sup> , 12 <sup>1,3</sup> , 13 <sup>1,2</sup> , 17 <sup>2</sup> , 18 <sup>1</sup> , 19 <sup>1</sup> , 20 <sup>1</sup> , 25 <sup>1</sup> , 26 <sup>1</sup> , 28 <sup>1</sup>
4G LTE TDD Bands <sup>1</sup>	38, 39, 40, 41
3G UMTS Bands	1 <sup>1</sup> , 3, 2, 4 <sup>1</sup> , 5, 6 <sup>1</sup> , 8 <sup>1</sup> , 3, 19
2G EGPRS Bands <sup>1,3</sup>	PCS (Band 2), DCS (Band 3), GSM (Band 5), E-GSM (Band 8)
Comm. Interfaces	4G LTE Cat 1, 3G UMTS, 3GPP release 13, 2G EGPRS
Power Class	4G/3G-Class 3 (23 dBm); GSM-Class 4; DCS/PCS-Class 1
SMS Support	MT/MO

