



IoTS IoT Sustainability

## Sol Chip Comm™ SCC-S433 WIRELESS SOLAR TAG

### Enabling Autonomous and Maintenance Free Wireless Sensors

SCC-S433 is an ultra-compact maintenance-free solar-powered wireless tag. SCC-S433 powers, controls, and wirelessly connects to the cloud a wide variety of sensors.

### The SCC-S433 Wireless Solar Tag Offers Many Advantages:

- Enables autonomous operation of your sensors – no batteries, no wires
- Solar-powered by Sol Chip's LightBattery™ unique technology
- Internal energy storage
- Multiple transmissions per day
- 10 years 24/7 continuous and maintenance free operation
- Small size (13x8x4cm)
- Simple out of the box installation and re-installation. No need for tooling, network technician, etc.
- All weather outdoor deployment
- Low cost
- Hundreds of SCC-S433 tags are wirelessly connected to a single Sol Chip Wireless Gateway over license-free 433MHz radio
- Wireless range up to 1,500m
- Automatic, periodical upload of sensors data to the cloud
- Supports all major sensors interfaces (digital, analog)



### The Ultimate Solution for IoT Applications that Require Autonomous Sensor Operation in Outdoor Wireless Sensor Networks, Including:

- **Precision Agriculture** – Soil moisture, air humidity and temperature, nutrients level, light radiation etc. – open fields and greenhouses
- **Smart Cities** – Smart parking sensors, smart waste bin sensors, occupancy sensors etc.
- **Asset Positioning and Tracking** – heavy machinery and construction equipment, airport equipment, containers etc.
- **Surveillance** – security and safety sensors: movement, volume, displacement, etc.
- **Environmental Monitoring** – gas sensors, fire sensors, pollution, pollen, floods detectors
- **Smart Grid** – power grid monitoring, water infrastructure monitoring, etc.
- **Oil and Gas** – pipe monitoring against corrosion, welding defects, and theft

"Sol Chip's SCC-S433 Wireless Solar Tags: Enabling the implementation of endless IoT applications by wirelessly connecting a single gateway to hundreds of sensors up to 1,500 meters range"



## Features and Specifications

### Energy

- Sol Chip's patented LightBattery™ technology, including the Saturn photovoltaic chip and unique energy harvesting circuitry
- Specialized rechargeable battery (for thousands of cycles)

### Non-Stop Operation

- Day and night all year round for at least 10 years
- Tolerate no-light condition for at least 1 month
- Multiple sensor readings and multiple transmissions per day

### Zero Maintenance

- No need to replace battery or service the device in any other way for at least 10 years

### Sensors Interfaces

2 analog: DC level  
1 digital: 1-Wire, I2C

### Mechanical and Environmental

- Wall, stem and pole mountable plastic enclosure
- Transparent window for the internal LightBattery™ chip
- Dimensions: 13x8x4cm
- Weight: 120gr
- Ingress protection: IP67
- Temperature range: -45 – 85C

### Tag – Gateway Wireless Communication

- Proprietary radio protocol
- Star topology – hundreds of tags connect to a single Sol Chip Wireless Gateway
- 433MHz ISM band
- Internal or external antenna
- Up to 1,500m range with long range external antenna

### Gateway Backhaul Options

- GPRS/3G/Ethernet/Wi-Fi

### Server Controlled Features

- Periodical sensor read at configurable rate
- Periodical sensor data upload to the cloud at configurable rate
- Battery level monitoring

### Field Controlled Features

- Reset/activate by a magnet (Reed switch)
- Technician access for setup and configuration via near field wireless radio

### Web Support

- Web applications, pre-integrated with the SCC system, are available via a variety of our partners in several IoT verticals, including Precision Agriculture, Smart City, and Smart Grid
- These applications provide sensor data storage, sensors real-time and historical monitoring, data processing, alerts, graphs, statistics, analysis, and actionable recommendations

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