



# iWaste

Waste Bin Sensor



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## Waste Bin Sensor

### Product Description

The **TST iWaste** sensor is designed for waste bin status, measuring fill levels and transmitting data for monitoring and clean up. Detecting the following scenarios...

- Full
- Almost Full
- Empty
- Fire risk
- Fall or Movement

Using the LoRaWAN® module, the iWaste sensor transmits the status of a given waste bin, via a gateway to the network and application server. The user monitors the status remotely. With the application software, the user can assign the collector resource work and route plan. Analyse task performance and find solution to improve. Finally the objective of high efficiency , good environment, and low cost are achieved. It is optional for different frequency, such as 923Mhz (Australia,New Zealand), 470Mhz (China), 868Mhz (Europe), 915Mhz(USA). As it is with algorithm of low power consumption, the internal battery can work for more than 5 years (at 4 hours upload intervals).

### Features



## Technical Specifications

DESCRIPTION	PARAMETER	VALUE
Overview	Dimension	H115 x W115 x D50mm
	Weight	150 g
	Colour	Black
	Material	ABS
Detector	Principle	Ultrasonic @112kHz
	Detection Range	200cm (Vertical)
	Accuracy of Height	3mm
	Blind area	15cm
	Accuracy of Temperature	2°C
	Angle Accuracy	2° (Optional)
	MCU	STM32, 32bit ARM® core controller
	LoRa Module	Semtech® 1276
Controller	Sensitivity	-137dbm@292bps (RX), 5~20dbm(Tx)
Radio	Frequency	LoRaWan® CN470/EU868/US915/AS923Mhz
	Working Mode	Class A
	Activation	ABP/OTAA activation
	Communication Distance	3km in view sight
	Power	Lifetime for one charge
Internal Battery		ER18505M non-recharged Lithium Battery 7000mAh @ 3.6V,
Current		<210mA@3.6V(uploading) <100mA@3.6V(normal)
Environment	Operating Temperature	-20 – +70°C
	Storage Temperature	-40 – +85°C
	Protection Level	IP66

## iWaste Bin Mounting



## Dimensions



## Installation

After removing the packaging, the battery is not connected to the sensor. Open the cover of sensor, connect the power connector. The sensor will then be powered on.

## Mounting

For waste bins with lid, fix the sensor with screws to the inside of the lid. The white sensor is mounted (transducer face downward).

To mount the iWaste it is necessary to drill hole and fasten with screws. Ensure the sensor is mounted vertically.





## TST iWaste is Compatible with Both large Industrial and Domestic Waste Bins

The **TST iWaste** sensor is designed for waste bins of all shapes and sizes from large industrial containers to smaller domestic bins and recreation, park bins. **TST iWaste** is a positive benefit for monitoring waste at venues and festivals.



## Monitoring the data through the TST SmartCity Platform



### Monitoring

A customized version of the TST monitoring is available based on customers requirements. Please contact with our sales team to discuss a customised version.

### Protocol

The protocol is available for the user who wants to develop their own application through their engineer team.

The protocol is disclosed only after NDA agreement is signed and order is placed. Please contact our sales team if you wish to discuss further.







## TST

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