

TC88 IP68 Asset Tracker

General Description

The TC88 is a rugged, scalable tracking solution designed for high-value asset visibility and monitoring in any environment. Available in dedicated network versions (Satellite / 4G / CAT M / NB-IoT / LoRaWAN), it lets you choose the right connectivity for your region and use case.

Three hardware variants adapt to different power and update needs:

TC88-N (Non-rechargeable)– Ultra-long battery life for multi-year, maintenance-free deployments.
TC88-Q (Wireless rechargeable) – Supports frequent tracking updates with hassle-free wireless charging.
TC88-S (External power) – 24/7 real-time tracking with optional I/O ports

From cargo containers and heavy machinery to trailers and high-value equipment, the TC88 keeps your assets visible, secure, and under control 24/7.

Target Application

- Container & Cold Chain Logistics
- Heavy Equipment & Machinery Monitoring
- Trailers, Pallets & Freight Assets
- Rental & Leased Equipment Management
- Cable Reel Monitoring & Cable Usage Statistics
- Waste Bin & Hopper Fill Level Monitoring

Key Features:

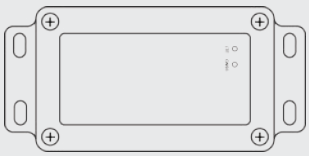
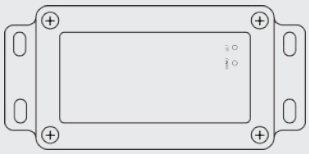
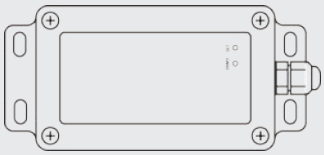
- Independent Satellite / 4G / LTE Cat-M / NB-IoT / LoRaWAN versions available
- 15+ years of ultra-long battery life (TC88-N, under typical usage)
- IP68-rated rugged design for harsh outdoor environments
- Built-in accelerometer for motion, tilt, and rotation detection
- Offline location data backup with automatic re-upload
- FOTA (Firmware Over-the-Air) upgrade without on-site intervention
- Optional temperature and humidity sensor for cold-chain applications
- Optional distance sensor for level and range measurement
- Optional radar sensor for human motion detection
- Optional rotation sensor for cable movement/usage monitoring



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Web: www.pretrace.com Email: info@pretrace.com Tel: +86 755 23156001

TC88 Specification

Model	TC88-N	TC88-Q	TC88-S
Shape	 Non-rechargeable	 Recharged by QI wireless	 Recharged by external power
Bands/Regoins			
TC88-N4/Q4/S4	4G LTE: Global		
TC88-NM/QM/SM	Cat M & Cat NB: Global		
TC88-NN/QN/SN	Cat NB2: Global		
TC88-NT/QT/ST	IoT NTN: L-Band(B255), S-Band(B256, B23)		
TC88-NL/QL/SL	LoRaWan: EU868 / US915 / AU915 / AS923 / KR920 / IN865		
GNSS			
GNSS Systems	GPS, BDS / GLONASS, Galileo, QZSS		
Sensitivity	160 dBm		
Position Accuracy	< 10m		
TTFF	Cold Start: < 28 Sec, Hot Start: 2 Sec		
Optional Sensors			
Temperature Humidity	Range: -40.0 ~ +85 ºC	Application: Environmental monitoring, Cold chain	
PT100	Range: -200.0 ~ +180.0 ºC	Application: Cryogenic refrigeration, Medical transport	
Distance	Range: 3~400 cm	Application: Tank/Containner/Trash Bin/Sewer level monitoring	
Microwave	Range: 5~400 cm	Application: Human detection, Hunting trap	
Rotation	Range: clockwise & anti-clockwise	Application: Cable Reel Monitoring	
Power			
Battery Capacity	3.6V 17000 mAh	3.7V 6000 mAh	3.7V 6000 mAh
Charger / Input Power	None	5V 500mA QI wireless charger	11.5-36V / 1A DC
Battery Life	>15 Years(1 Report / Day)	>22 Days(1 Report / 10 Minute)	No limitation @ external power
	>7 Years(2 Report / Day)	>130 Days(1 Report / Hour)	>130 Days(1 Report / Hour)
General			
Dimension	126*60*40 mm	126*60*40 mm	126*60*40 mm
Weight	265g	235g	245g
Operating Temperature	-40ºC ~ +85ºC	-40ºC ~ +85ºC	-40ºC ~ +85ºC
Working Current	30mA~100mA @3.6V	30mA~100mA @3.7V	10mA~35mA @12V
Sleeping Current	45μA	45μA	55μA
Protocol	TCP/UDP/MQTT	TCP/UDP/MQTT	TCP/UDP/MQTT
Log Saving	2000 pcs	2000 pcs	2000 pcs
SIM Type	Nano Sim	Nano Sim	Nano Sim
Interface	Optionnal	Optionnal	Digital / Analog inputs / RS485

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Email: info@pretrace.com Web: www.pretrace.com Tel: + 86 755 23156001

Address: 8A,Weiye Building,Minzhi Road,Longhua District, Shenzhen,China.518131

Specifications are subject to change without notice.

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