

4G HARDWIRED GNSS TRACKER

PioneerX 101 ^{4G}

LTE Cat 1 + 2G wired tracker for hidden installation in any vehicle or machine powered at 7–100 V. Five I/O variants.



Key features

- Compact size
- Crash detection
- Geo-fences
- BLE 5.0
- 1-Wire (PN:03 variant)
- IP67
- Panic button
- Driving behavior monitoring
- Firmware over the air (FOTA)
- Motion detection
- RS232 (PN:04 variant)
- CAN reading (PN:05 variant)
- 3-axis accelerometer

WEIGHT
50 g (2.47 oz)

DIMENSIONS
102.6 × 42.6 × 13.0 mm

POWER SUPPLY
7 – 100 V DC

OPERATING TEMP.
-30 °C ~ +80 °C

Applications

CERTIFICATES (PLANNED)



Motorcycles and scooters



Delivery fleets

Technical specifications

Network						
Operating bands	LTE FDD Cat 1: B1/B2/B3/B4/B5/B7/B8/B12/B13/B17/B18/B19/B20/B25/B26/B28/B66 LTE TDD Cat 1: B34/B38/B39/B40/B41 GSM (2G): 850/900/1800/1900 MHz					
Data transmission	LTE-FDD: max. 10 Mbps (DL), max. 5 Mbps (UL) LTE-TDD: max. 8.96 Mbps (DL), max. 3.1 Mbps (UL) GPRS: max. 85.6 kbps (DL), max. 85.6 kbps (UL)					
GNSS						
GNSS chipset	All-in-one GNSS receiver					
Parallel GNSS	GPS + BeiDou + Galileo + QZSS (SBAS)					
Receiver type	24 tracking / 64 acquisition-channel GNSS receiver					
Sensitivity	Acquisition: -148 dBm Reacquisition: -159 dBm Tracking: -162 dBm					
Horizontal position accuracy	Autonomous: < 1.5 m CEP					
TTFF @ -130 dBm with (without) EASY™	Cold start: < 20 s (30 s) Warm start: < 2 s (2 s) Hot start: < 2 s (2 s)					
Interfaces – variants						
	PN:01	PN:02	PN:03	PN:04	PN:05	
Digital input*	–	1	1	1	1	
Digital output	–	1	1	–	1	
Configurable input**	–	2	–	–	–	
1-Wire power 3.3 V DC	–	–	1	–	–	
1-Wire data	–	–	1	–	–	
RS232 power 5 V DC	–	–	–	1	–	
RS232 TX / RX	–	–	–	1 / 1	–	
CAN-H / CAN-L	–	–	–	–	1 / 1	
Li-Polymer battery 3.7 V	200 mAh	200 mAh	200 mAh	300 mAh	200 mAh	
IP rating	IP67	IP67	IP67	IP41	IP67	
* Ignition detection: input range 0–32 V; ≥ 5 V: ignition on, ≤ 2 V: ignition off, 2–5 V: unstable status. ** Can be configured as a digital input, analog input (0–32 V) or negative trigger input.						
General						
Dimensions	102.6 × 42.6 × 13.0 mm (4.04" × 1.67" × 0.51")					
Weight	50 g (2.47 oz)					
Operating voltage	7 – 100 V DC					
Operating temperature	-30 °C ~ +80 °C (-22 °F ~ 176 °F)					

Technical specifications (cont.)

General (cont.)	
Storage temperature	-40 °C ~ +85 °C (-40 °F ~ 185 °F)
Internal memory	8 MB
Network, GNSS, BLE, WiFi antenna	Internal only
Indicator LED	Network and GNSS
FOTA	Yes
Temperature sensor	Internal
BLE 5.0	Yes
WiFi	2.4 GHz 802.11b (Rx)
Tracker configuration	USB-C connector
Waypoints	40,000 waypoints
Air interface protocol	
Transmit protocol	TCP, UDP, MQTT, SMS
Protocol check & encryption	MD5 / AES256
BLE accessory support	Yes
Scheduled timing / angle / distance report	Reports position and status at preset intervals
External power status alarm	Reports when external power is disconnected
Speeding alarm	Reports when speed exceeds the preset value
Remote control	Remote output control
Network jamming detection	Reports network jamming
Data roaming control	Avoids additional data consumption
Driving behavior monitoring	Aggressive driving detection, e.g. harsh braking and acceleration
Crash detection	Accident data collection for reconstruction and analysis
Certifications (planned)	FCC / CE / RCM / NBTC / TDRA / CITC / Anatel / IP67

Accessories (optional)



TSTH1-B BLE 5.0 wireless temperature and humidity sensor



TSDT1-B BLE 5.0 wireless door and temperature sensor



TSR1-B BLE 5.0 wireless relay



T-button BLE 5.1 key fob & panic button



T-sense BLE 5.1 IP67 temperature, movement & door sensor



T-hub BLE 5.1 I/O extension hub



T-one BLE 5.1 probe temperature or temp. & humidity sensor