

ROOTCLOUD

T-AMS PRO LI1520

Vehicle-mounted IoT Terminal

Highlights

- 4G Support
- OTA Upgrade
- Wi-Fi Hotspot
- Large Storage
- Data Recording
- Bluetooth Support
- Abnormal Alarm
- Low Consumption
- Precise Positioning
- Cloud Management
- Protocol Anti-Tamper

Introduction

T-AMS PRO, developed by IROOTECH, is a vehicle-mounted IoT terminal specifically designed for construction machinery . With an integrated 4G communication technology and ultra-low power consumption feature, it can implement the functions of vehicle information collection, storage, and data reporting.

Application Field

It is mainly used in construction machinery including cranes,excavators, mining trucks, and pump trucks.

Certifications

CE, FCC, REACH, RoHS, WEEE, IC.



Features

Time and Date	Automatic Time Calibration	Capable of automatic time calibration, keeping the time error within ± 5 seconds in 24 hours.	☉
	Time Synchronization	Supports obtaining time from the AWS platform and performing time synchronization.	☉
		Performs time synchronization on the ECU through the CAN network (requires support from the vehicle manufacturer protocol).	○
Positioning Service	GNSS	Supports GPS/GLONASS positioning, as well as combined positioning of any combination of multiple systems.	☉
		TTF (Time To First Fix) ≤ 325	☉
	Antenna Detection	With antenna open circuit detection and antenna short circuit protection.	☉
	Positioning Accuracy	Horizontal positioning accuracy is < 2.5 m under CEP50.	☉
Communication	Network Communication	<p>Frequency band information (International Version)</p> <p>LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28</p> <p>LTE-TDD: B38/B39/B40/B41</p> <p>WCDMA: B1/B2/B4/B5/B6/B8/B19</p> <p>GSM: B2/B3/B5/B8</p> <p>Maximum data transmission rate (International Version):</p> <p>LTE-FDD: 150 Mbps (downlink) / 50 Mbps (uplink)</p> <p>LTE-TDD: Max. 130 Mbps (downlink) / 30 Mbps (uplink)</p>	☉

Communication	Network Communication	DC-HSDPA: 42 Mbps (downlink) HSUPA: 5.76 Mbps (uplink) WCDMA: 384 kbps (downlink) / 384 kbps (uplink) EDGE: 296 kbps (downlink) / 236.8 kbps (uplink) GPRS: 107 kbps (downlink) / 85.6 kbps (uplink)	☉
	SIM Card	M2M SIM card	☉
	Cellular Wireless Communication	Multi-standard 4G all-network access (4G/3G/2G) / global modules.	☉
	Bluetooth Communication	Bluetooth BLE 5.0.	☉
	Wi-Fi	2.4G Wi-Fi.	☉
Data Acquisition	CAN	Collects data through 3-channel high-speed CAN.	☉
	RS485	Collects data through 2-channel high-speed RS485 (compatible/ optional).	○
	Digital Acquisition	Collects data through 2-channel digital input.	☉
Data Processing	Real-time Data Storage	16GB	☉
	Data Retransmission	Supports resumable transmission.	☉
	Data Interaction	Supports data export, parameter configuration, and local upgrades via USB. Supports parameter configuration via Wi-Fi, system LOG query, and local debugging.	☉

Power Management	Input Voltage	DC 9~36V	☉
	Rated Power	Normal operation: < 100mA@24V	☉
		Standby: < 10mA@24V (supports ACC, CAN, RTC wake-up)	○
		Sleep: < 20uA@24V (only supports ACC, RTC wake-up)	☉
	Working Mode	Minimum 2 working modes: working mode and standby mode.	☉
		Sleep mode is optional based on needs.	○
Terminal Management	OTA	Firmware can be remotely upgraded via OTA.	☉
	Remote Machine Lock	Supports remote unlocking/locking of vehicles via wireless network.	☉
	Anti-dismantling	The device can send a handshake protocol through the CAN network to prevent unauthorized dismantling (manufacturer's protocol needed).	☉
	Self-check	Self-check performed during device startup. The system enters normal operating mode after the self-check is completed. The self-check includes the status of the power voltage, memory, positioning module, communication module, real-time clock, etc.	☉

Note: "☉" represents standard configuration, "○" represents optional configuration.

Specifications

Dimensions (Length * Width * Height)	183.33mm * 80mm * 38 mm
Protection Level	IP67
Material	ABS (Plastic) + ADC (Die-cast aluminum)
Flame Retardant Rating	V0
Temperature	Working Temperature: -40°C ~ +85°C Storage Temperature: -40°C ~ +85°C
Humidity	Working Humidity: 5%~95%RH Storage Humidity: 0%~95%RH
Voltage	Working Voltage Range: 9~36V Nominal DC Power Supply: 12V/24V With low voltage cut-off and anti-polarity reversal function.