XINGMINTS MTB-100A High Protective Multi Functional On-Board Intelligent Terminal Owner's Manual

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MTB -100E 113mm*100mm*43.4mm

Contents

MTB-100A High Protective Multi Functional On-Board Intelligent Terminal

MTB -100A
High-protective multi-functional on-board intelligent terminal

- Built-in 4G and GNSS, vehicle status real-time view
- BLE 5.0 communication, to realize the mobile phone Bluetooth control car
- Support a variety of wake-up ways, quick start
- Built-in IMU sensor that provides driving behavior analysis
- Front loading product quality, ISO / TS 16949 quality system certification

Product description

MTB-100 series on-board terminal is a highly protective 4G on-board terminal equipment independently designed and developed by INTEST, which gathers the general function needs of vehicle remote monitoring, and provides on-board intelligent network solutions with fast and flexible installation adaptation, stable and rich functions.The product is optimized for the two-wheeler market, improve the protection level to IP 67 and provides up to 11 I / O signal control, adapted to a variety of vehicle control solutions.

Product function

Major function	Function declaration
Platform communication	-Support for 2 / 3 / 4G data communication; -Support breakpoint continuous transmission. When the terminal locally caches the data when the communication condition is poor, the cached data is retransmitted after the communication is restored
CAN communication	-Support two high-speed CAN communication, port rate can be set, support CAN wake-up;
Data collection and storage	-The terminal collects and analyzes the original CAN message in real time, stores the original CAN message locally, and reports the resolved data to the TSP platform ; -Local data is stored in eMMC, supports automatic cycle storage, automatically overwrites the earliest data when full, and abnormal power off local data is not lost.In case of upload failure of the network, you should read from the local data and re-upload the data not successfully uploaded before;

Vehicle positioning Timing	-Support for GPS / BeiDou positioning; -Default provides speed, distance, latitude and longitude, direction, star search, GPS time, positioning scheme and other information;
Data serves you	-The terminal provides clock service, using local legal time, with the format as YYYY-MM-DD; -Support for GPS and cloud platform campus timing;
Power management	-The terminal supports working under 12VDC, providing normal operation, standby and two working modes.It can meet the needs of different business scenarios through the switching of different working modes.
Wake up signal management	-The terminal will enter the normal working mode after receiving the wake up signal. The wake up signal of this project includes CAN wake up, timing wake up, IMU wake up and Bluetooth wake up; -The terminal supports 7-way hard line wake-up signal and 3-way hard line highlevel signal output, realizing vehicle control through Yingxian signal;
Failure warning	-The terminal supports identifying vehicle fault code and upload fault code signal, and the TSP platform identifies fault code to trigger alarm;
Terminal selfinspection	-Real-time self-inspection after terminal power, and reported to the cloud; -Support for sending self-test fault codes to the CAN bus
Terminal Remote Settings	-Support the remote terminal setting through the TSP platform, including setting the default DBC file, setting the data reporting frequency, query the terminal status, restart, etc.;
BLE communication	-Communicate with the mobile phone APP via BLE 5.0; -Realize the Bluetooth virtual key function, including key sharing and Bluetooth unlock, locking, car search three control functions; -The terminal supports transmitting real-time data to the owner APP through the BLE at 25Hz during the vehicle driving;
Security function	-Support the collision alarm function, anti-theft alarm function, identify the vehicle posture and movement through the IMU sensor, and trigger the terminal to send an alarm signal to the TSP platform; -Support independent operation with backup battery, report location data to the platform, and provide anti-theft tracking;
Safe guarding	-Built-in independent security chip, scalable to support PKI / CA security scheme; -Support data secure storage and data secure communication;
FOTA	-Terminal supports to accept the upgrade of steamed stuffed bun upgrade issued by TSP; -The terminal supports receiving other ECU upgrade packages of the vehicle and transmitting them to the corresponding ECU self-upgrade. After the upgrade success / failure, the results are reported according to the FOTA process.

Configuration specifications

Electrical characteristics and the complete machine performance

- Operating voltage range 9~16V DC
- Current margin 300mA (12VDC)
- Standby current 5mA
- Clock error was ± 5s / 24h

Enviromental parameter

- Operating temperature-20 ~ + 70
- Storage temperature-40 ~85
- Relative humidity 5%~90%RH
- Level of protection: IP 67

CAN communication

- 2 High-speed CAN communication
- The CAN bus wave rate can be set and support a common wave rate like 125 / 250 / 500 / 1000kbps
- Support for the CAN wake-up

IMU, sensor

- Triaxial accelerometer: ± 2g, ± 4g, ± 8g, ± 16g
- Gyroscope: ± 250 dps, ± 500 dps, ± 1000 dps, and ± 2000 dps
- Data output frequency range: 0.781Hz ~1600H z

4G Communications (North America)

- Communication frequency band: LTE FDD: B 2 / B 4 / B 12 WCDMA: B 2/B 4/B5
- Communication rate of 50 / 50Mbps
- Built-in GNSS positioning module

Vehicle positioning

- Support for GPS positioning
- Positioning accuracy: <10m (CEP-50)
- Refresh frequency is 1Hz
- Hot start, 2s.5
- Cold start-up for 35s

BLE communication

- Bluetooth 5.0 Communications

- BLE data transmission frequency of 1Mbps

Back up power

- Nickel metal hydride battery capacity is 600mAh
- Independent working hours, 30min

FCC Statements:

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

Federal Communication Commission (FCC) Radiation Exposure Statement

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

RF exposure information: To maintain compliance with FCC RF exposure requirements, use the product that maintain a 20cm separation distance between the user's body and the host.

MPE limit for RF exposure at prediction frequency are 1.0mW/cm2 for WCDMA B2/B4, 0.558mW/cm2 for WCDMA B5, 1.0mW/cm2 for LTE B2/B4, 0.472mW/cm2 for LTE B12 and 1.0mW/cm2 for BT . The MPE for 0.079mW/cm2 for WCDMA B2, 0.079mW/cm2 for WCDMA B4, 0.050mW/cm2 for WCDMA B5, 0.071mW/cm2 for LTE B2, 0.071mW/cm2 for LTE B4, 0.040mW/cm2 for LTE B12 and 0mW/cm2 for BT. It satisfy RF exposure compliance.

FCC ID: 2A7NPMTB100A

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

IC: 28765-MTB100A

Documents / Resources

XINGMINTS MTB-100A High Protective Multi Functional On-Board Intelligent Terminal [pdf] Owner's Manual

2A7NPMTB100A, 2A7NPMTB100A, mtb100a, MTB-100A High Protective Multi Functional On-Board Intelligent Terminal, MTB-100A, High Protective Multi Functional On-Board Intelligent Terminal, Multi Functional On-Board Intelligent Terminal, On-Board Intelligent Terminal, Intelligent Terminal

References

Manuals+,