Two-wheeled Intelligent Product WD-295

WD-295 is a GPS positioning terminal system for intelligent control of high-end e-bike. It has the functions of CAN bus /UART communication, 4G

LTE-CAT1/CAT4 network remote control, GPS real-time positioning, Bluetooth communication, vibration detection, anti-theft alarm and other functions.

GPS terminal interacts with data of the background and mobile app terminal through LTE and Bluetooth respectively, and control e-bike and upload the

real-time status of the e-bike to the server.

Functions:

--4G LTE-CAT1 /CAT4 network Remote Control

--Mobile phone control e-bike

--Keyless start

--burglar alarm

--Vibration detection

--CAN bus/ UART/485 communication

Specifications:

Unity machine parameters		
Dimension	(111.3.±0.15)mm × (66.8±0.15)mm × (25.9.±0.15)mm	**Input voltage range** 12V-72V
Waterproof level	IP67	**Internal battery** Rechargeable lithium battery：3.7V, 600mAh
Sheathing material	ABS+PC,V0 fire protection grade	**Working temperature** -20 ℃ ～ +70 ℃
Working humidity	20 ～ 95%	**SIM Card** Dimensions: Medium card (Micro-SIM card)
Network performance		
Support model	LTE-FDD/LTE-TDD/WCDMA/GSM	

Maximum transmit power	LTE-FDD/LTE-TDD：23dBm	Frequency range	LTE-FDD:B1/B3/B5/B8
	WCDMA:24dBm		LTE-TDD:B34/B38/B39/B40/B41
	EGSM900:33dBm;DCS1800:30dBm		WCDMA:B1/B5/B8
			GSM:900MH/1800MH

GPS performance			
Positioning	Support GPS,Beidou	Tracking sensitivity	< -162dBm
Start time	Cold start 35s, hot start 2s	Positioning accuracy	10m
Speed accuracy	0.3m/s	Base station location	Support, positioning accuracy 200 meters (related to base station density)

Bluetooth Performance			
Bluetooth version	BLE4.1	Receiving sensitivity	-90dBm
Maximum receiving distance	30 m, open area	Loading Receiving Distance	10-20m, depending on installation environment

Functional Description

Function list	Features
Positioning	Real-time positioning
Lock	In lock mode, if the terminal detects a vibration signal, wheel motion signal, and ACC signal.it generates a vibration alarm, and when the rotation signal is detected, a rotation alarm is generated.
Unlock	In unlock mode, device won't detect the vibration, but the wheel signal and the ACC signal are detected. No alarm will be generated.
433M Remote	Support 433 M remote, can adapt to two remotes.
Uploading data in real-time	The device and the platform are connected through the network to transmit data in real time.
UART/CAN	Through UART/CAN to communication with controller,get controller running state and control.
Vibration detection	If there is a vibration, device would send out a vibration alarm, and buzzer speak-out.
Wheel rotation detection	The device supports the detection of wheel rotation.When the E-bike is in lock mode, the wheel rotation is detected and

	the alarm of wheel movement will be generated.At the same time, the e-bike won't be locked when the wheeling signal is detected.
ACC detection	The device supports detection of ACC signals. Real-time detection of the vehicle's power-on state.
Lock motor	The device send a command to the controller to lock the motor.
Battery lock	The device support switch battery lock, lock battery to prevent battery theft
Gyroscope (optional)	The device equipped with built-in gyroscope chip, can detect e-bike attitude.
Helmet lock/back wheel lock (optional)	Reserved helmet lock circuit, support external joint lock, or rear wheel lock.