DEVELIT

4G Router Specs V2.0

Bluetooth 5.0 + LTR Cat1 4G

Catalog

1. Specification parameters

Parameters		
Hardware specifications	BLE Chip	AC6328A2
	BLE Version	BLE 5.0
	Supply voltage	12V
	Battery	1000mAh
	Charge time	10h
	Battery Life	4 days
	Size	88 * 61 * 29 mm
4G parameters	Protocol	MQTT/FTP
	GNSS	GPS/ GLONASS/ Galileo/ BDS/ QZSS
	USIM interface	eSIM/NANO SIM
	Operating Temperature	-20°C to +75 °C
	LTE-FDD	B1/ 3/ 5 / 7/ 8/ 20
	GSM	B3/ 8
	Region/ Operator	Europe/ Asia
	LTE-FDD Data Rate (Mbps)	10 (DL)/ 5 (UL)
	GPRS Data Rate (kbps)	236.8(DL)/236.8(UL)

2. Size

Size: 88 * 61 * 29mm

61 mm

29 mm

88 mm
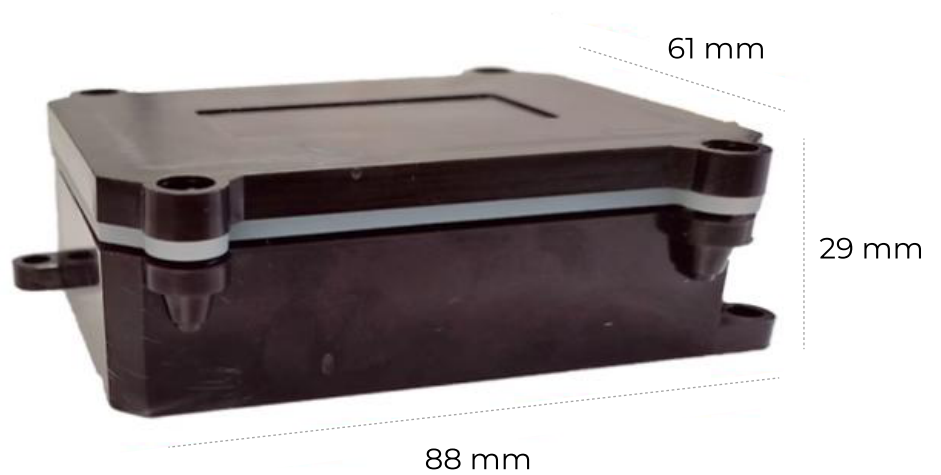
3. User Guide

Default parameter

Parameters		Value	
4G Upload interval	Charging	Vehicle speed <= 30km/h	30 second
		30km/h < Vehicle speed < 70km/h	20 second
		Vehicle speed >= 70km/h	10 second
	Uncharged	Vehicle stalling	60 minutes
Working current	Charging	Backup battery charging: 300mA Equipment power consumption: 65mA	
	Uncharged	1 hour interval: 5mA	
Network Protocol		MQTT	
Config method		By FTP	
Update firmware method		By FTP	

Configuration method

1. Connect FTP server

2. Obtain configuration file content

3. Update firmware configuration parameters

Configuration file name:

4G Router Mac.txt   e.g. 19115810606.txt

Configuration file format:

{"host":"MQTT_Host","port":"MQTT_Port","topic":"Topic","un":"Username","pwd":"Password","mac1":"Binding Bluetooth beacon MAC","mac2":"Binding Bluetooth beacon MAC"}

e.g.

{"host":"mqtt.bconimg.com","port":"1883","topic":"AB123","un":"123","pwd":"456","mac1":"080605080606","mac2":"080605080607",}

Upgrade Steps

1. Modify the firmware version file

   File name: **version.txt**

   File content: **VERSION: 8.41**

2. Upload new firmware to the FTP server file directory: /trackers/ubuntu/

   File name: **rttherad.bin**

3. The application has detected a new firmware version, download the new firmware, and perform a firmware upgrade.

4. JSON data protocol format and resolution

Example of the uploaded data

{"mac":"19115810606","qccid":"898604B81022C1275462","v":7.26,"battery":91,"
curtime":"230817085959","gpsdata":[{"time":"230816085959","local":1,"lon":"22.
60791","lat":"113.86043","spd":35,"direction":100,"nsat":10,"csq":25,"acceler": 0,0,0}],"devices":
["420822080606AB64","420822080605A964"]}

Gateway acquisition and data analysis

Name	Describe
mac	Device ID
qicid	moden identifier
v	version of the firmware
battery	level of the tracker battery
curtime	curtime UTC
gpsdata	Historical latitude and longitude arrays
devices	array of BLE devices with MAC, RSSI and BATTERY LEVEL (last 4 chars, HEX encoded, two chars each)

Devices array data parsing

Name	Digital	Descriptive
TIME	230816085959	GMT 08/16/23 08:59:59 pm
local	1	Position marker: 0 invalid position, 1 effective positioning
lon	-22.60791	Longitude Unit: degrees preceded by a "- " sign is the western meridian
lat	113.86043	Latitude Unit: degrees preceded by a "-" sign are south latitudes
spd	35	unit km/h
direction	100	True North is 0 range 0-360
nsat	10	Number of satellites
csq	25	Network signal strength range 0-31
acceler	0, 0, 1000	Acceleration value of three axes (X,Y,Z) unit: mg