Intelligent Central Control

C39_MS_CAN_VCU

V2.1

LIST

1. Product Overview and Appearance

1.1 Product Overview

The product is a VCU used in intelligent electric vehicle. It communicates with electric vehicle motor controller, instrument, BMS and other components by CAN, 485 or ISDN and obtains battery power, driving range and vehicle condition and fault data.The VCU controls the vehicle by instruction including anti-theft function.

Users can ask for vehicle information and control the vehicle power on and off, car searching(double flash), switching the lock, vehicle Settings,etc by mobile APP. When the vehicle is crashing, falling, low battery and exceeding the electronic fence, the informations can be received.

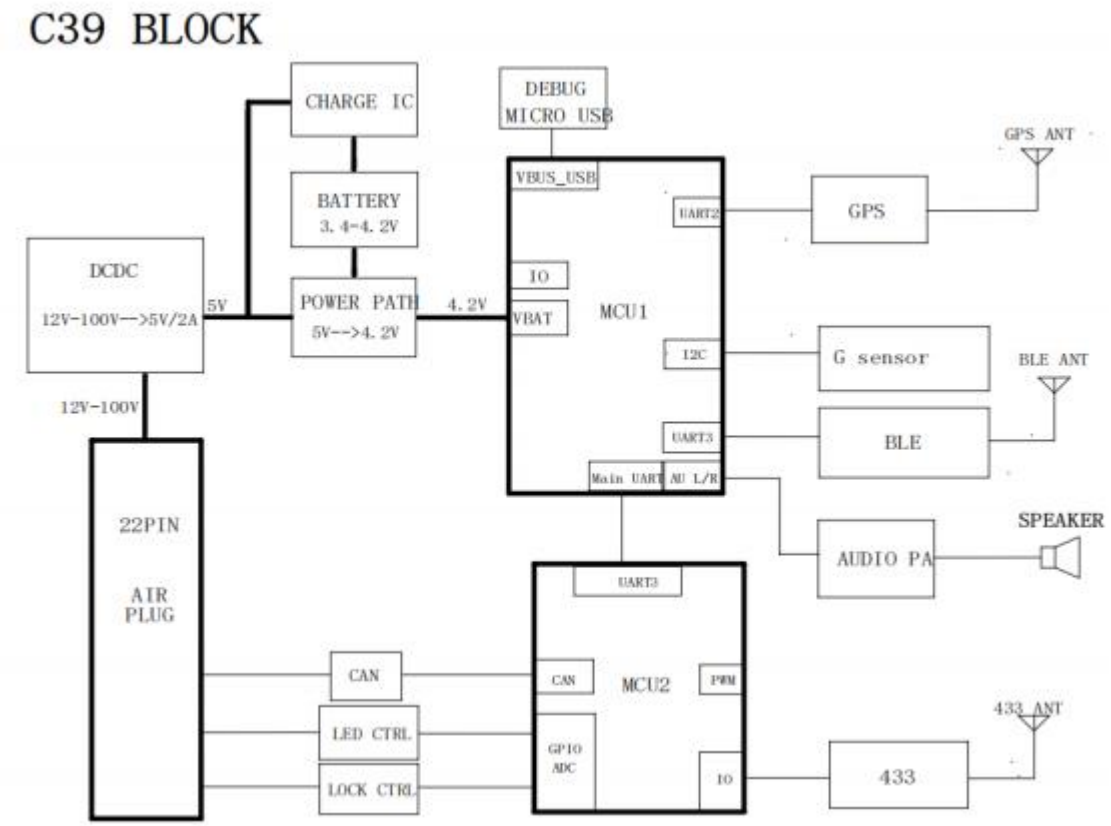
The VCU build in dual-mode Bluetooth.After user's mobile phone is tied to the vehicle,the user can realize the function of close defection and far from fortification, and can play stereo music and car audio on the mobile phone by classic Bluetooth.

The product acts as the central control unit of the vehicle（VCU）:

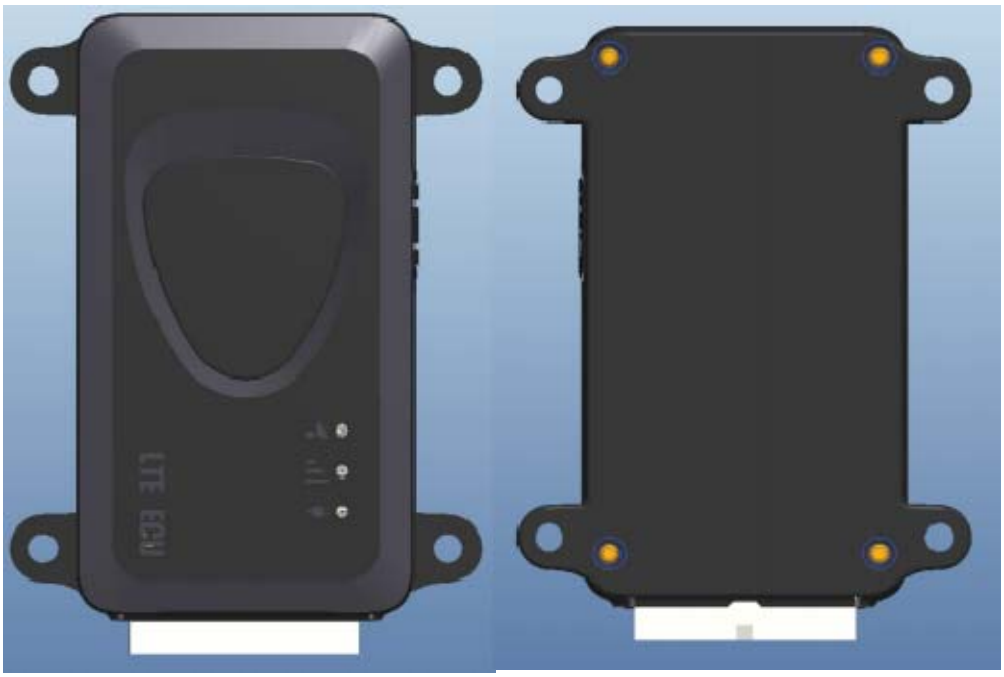
：GPS Beidou high-accuracy position chip
：485 or CAN bus chip
：315/433 Mremote switch lock（supplied key or universal key)
：APP remote switch lock
：Dual mode Bluetooth
：Driver lock option（electric drive, trunk lock, seat lock, etc)
：Light control - left and right turn signal function

Product Name：Intelligent Central Control
Product Type：VCU
Product Size：109.40*58*26.9mm

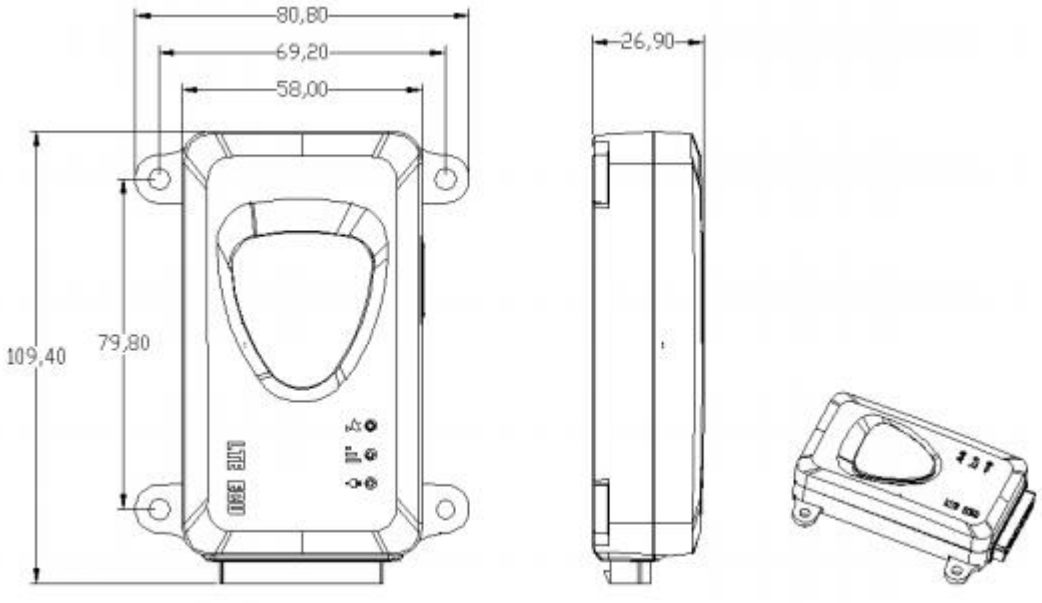
1.2 Logic Block Diagram



1.3 Product Appearance



1.4 Product Size



2 Product Parameter

2.1 Product Parameter List

Item	specification parameter	
BT	Dual-mode Bluetooth	Version 5.2
MCU1	UIS8910DM	
MCU2	Cortex-M3 32bit	
Operating Voltage	12-120V	
Power Dissipation (Internal Battery)	Maximum Operating Current	1A/4V(Internal Battery)
	Average Operating Current	less than 45mA
	Standby Current	less than 3mA
Size	109.40*58*26.9mm	
Weight	120g	
Waterproofing Grade	IP65	
Position	Positional Mode	GPS+GLONASS or GPS+ BD
	Positional Accuracy	5-10m (open field)

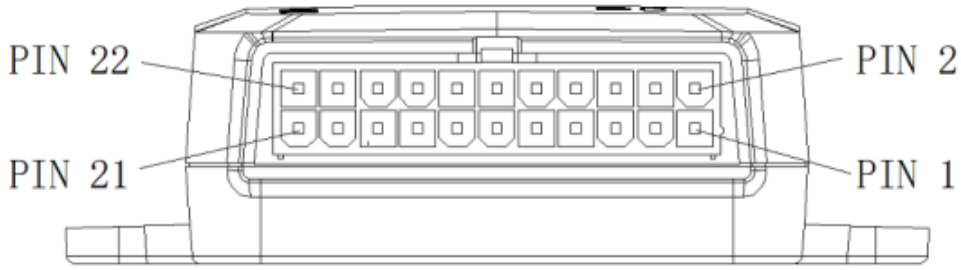
	Fixed start time	Hot Boot: 3s Warm Boot: 30s Cold Boot: 45s (open field)
Performance	Operating Temperature Range	-20℃ ~ +70℃
	Operating Humidity Range	5%-95%non-solidifying
	Internal Battery Capacity	450m Apolymer Battery
	Stand-by Time	More than 2 days
Peripherals	Accelerometer	3-axis
	Gyroscope	6-axis(compatible)
	Bus Interface	485 or CAN
	USB Interface	Micro 5pin
	Indicator LED	Three LEDs, RGB
	SIM Card	Nano Card or ESIM

2.2 LED Description

Green LED (GPS signal)	Meaning
OFF	Positioning
Slow Flash	Positioned
Red LED (ACC)	含义
OFF	Disconnect External Power

Quick Flash	ACC is Off, Vehicle Communication is Failure
Slow Flash	ACC is On, Vehicle Communication is Failure
ON	Vehicle Communication is Successful
Quick Flash Three Times	Vehicle Communication is Successful and ACC state switch

2.3 Definition Of Interfaces On the Mainboard:



PIN	IN/OUT	Definition	Descriptions	Level Range	Drive Capability
1	IN	Right Turn Switch Signal	Combine With GND	0~0.7V	0.2A
2	OUT	5V Power Output	5V Power Output	5V	2A
3	IN	NFC ISDN Input Signa (match Jaway RBOX)	ISDN Input	0~3.3V	0.2A
4	IN/OUT	ELOCK_MOTO_OUT-	Elock Moto Power Supply Negative	12V	1.5A
5	IN	Elock Microswitch Signal	With GND	0~0.7V	0.2A
6	IN/OUT	ELOCK_MOTO_OUT+	Elock Moto Power Supply Positive	12V	1.5A
7	IN/OUT	CANH	CANH	5V	
8	IN	Left turn switch signal	Combine With GND	0~0.7V	0.2A
9	IN/OUT	CANL	CANL	5V	
10	IN	Parking switch signal	Combine With GND	0~0.7V	0.2A
11	IN/OUT	TRUNK_MOTO_OUT-	Trunk Lock Moto Power Supply Negative	5V	1.5A
12	IN	Double Flash Switch Key Input	Combine With GND	0~0.7V	0.2A
13	IN/OUT	TRUNK_MOTO_OUT+	Trunk Lock Moto Power Supply Positive	5V	1.5A
14	IN	BMS ISDN Input Signal	ISDN Input	0~5V	0.2A

15	OUT	RIGHT_LED_12V	Right Turn Signal 12V	12V	2A
16	IN	PHASE	Phase Rotation signal	3.3~100V	
17	OUT	LEFT_LED_12V	Left Turn Signal 12V	12V	2A
18	OUT	LOCK	Security Signal&End of Speed Limit Signal	3.3V	0.6A
19	IN	DCDC12V_IN	DCDC Output 12	12V	
20	IN/OUT	ACC_ IN/OUT	ACC Signal	48~100V	10A
21	OUT	GND	GND	GND	
22	IN	VIN	VIN	20-100V	

3.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.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

The device has been evaluated to meet general RF exposure requirement, The device can be used in portable exposure condition without restriction. Federal Communication Commission (FCC) Radiation Exposure Statement Power is so low that no RF exposure calculation is needed.

FCC ID:2BAAA-JW01VCU