

DOLPHIN CONNECT T-BOX

Dolphin Telematics Box is an in-car module that is installed on vehicles in the automotive production line. This device is offered to answer the challenges of car manufacturing companies and establish integration with in-car equipment such as ECU. The T-Box device sends various information including ECU parameters, vehicle errors, driver behavior parameters, ADAS parameters, vehicle health status and other items to the vehicle manufacturer via 4G platform. For this reason, this device must support various inputs such as CAN, USB, Ethernet, etc.



This device also has the capability to establish eCall communication with medical centers and police stations

MECHANICAL SPECIFICATIONS:



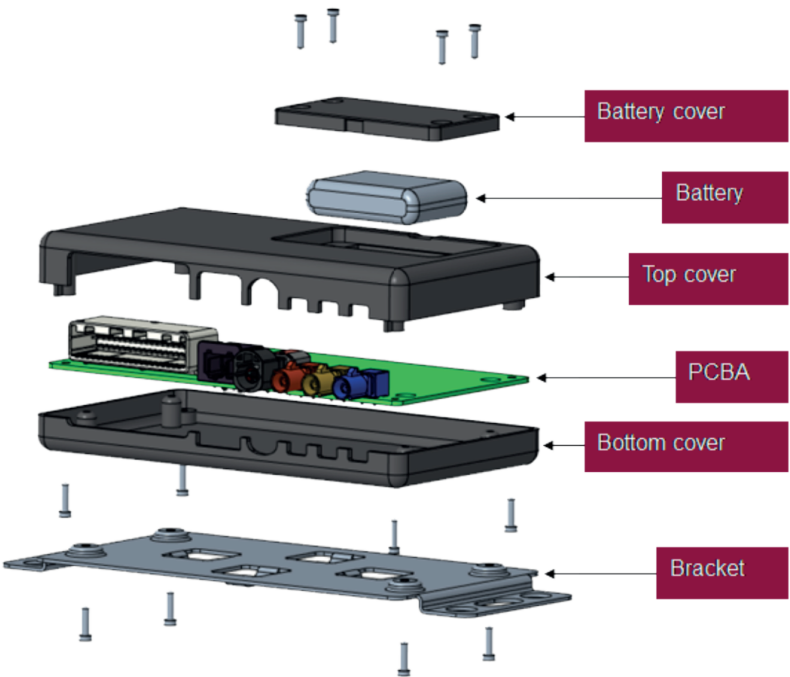
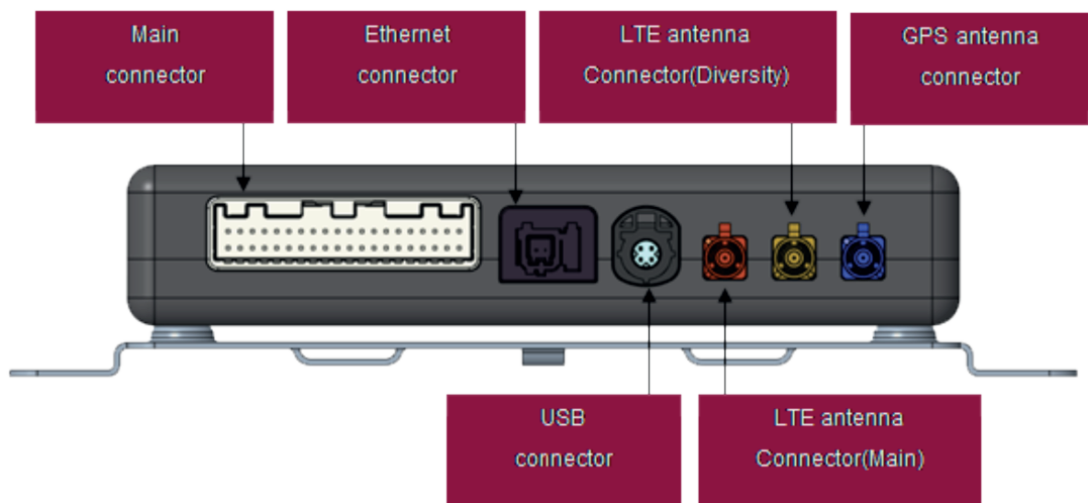
Due to the implementation of eCall in this device, the body is constructed from sturdy materials such as PC+ABS, providing both lightweight and high strength to withstand accidents.



For compatibility with various vehicles, the device includes a bracket separate from the casing, allowing easy installation on any vehicle.

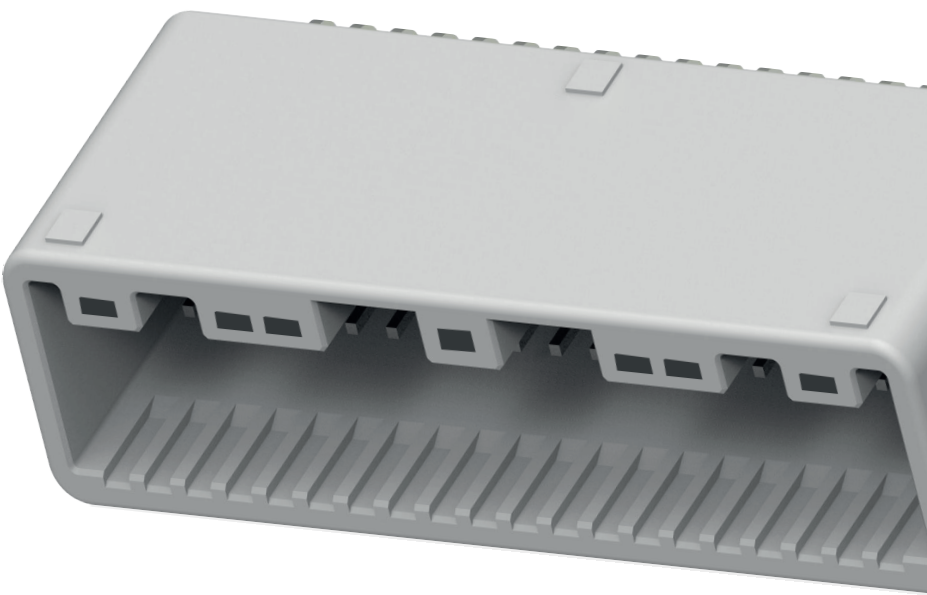
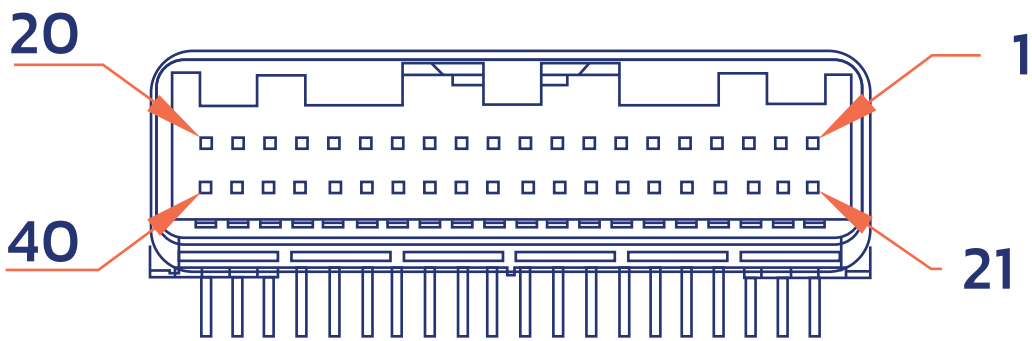


To protect the battery and electronic board, the casing includes a separate compartment for the battery.



EXTERNAL CONNECTOR COMBINATION

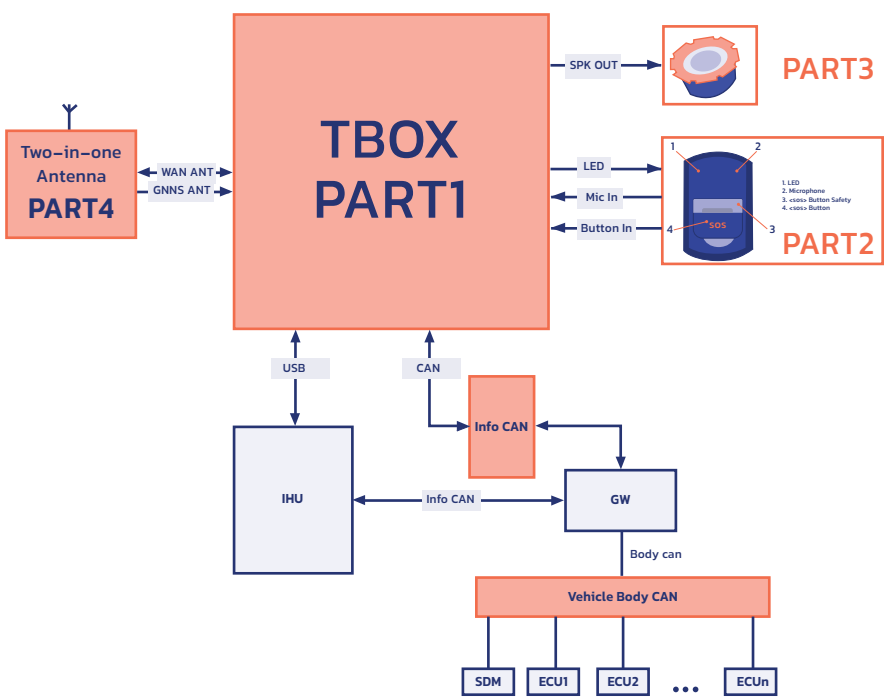
Part Number:TE 2-1318384



EMERGENCY CALL SYSTEM

The emergency call system, or eCall, enables immediate communication with medical emergency services in the event of an accident when passengers require emergency assistance.

Apart from voice calls, the vehicle's location will be automatically transmitted to the emergency center. In addition to manual call availability (via SOS key), calls can also be automatically initiated through ECU data.



The eCall system consists of four parts:

- Part 1 T-Box
- Part 2 SOS key and microphone (accessible to vehicle occupants)
- Part 3 Speaker (used for communication with the eCall operator)
- Part 4 GSM module antenna and positioning module

TECHNICAL SPECIFICATIONS

Physical

Product Size	31.8 x 97.9 x 140 mm
Protection Level	IP52
Operating Temperature	-40 to +85°C (Excluding the battery)
Storage Temperature	-40 to +90°C
eMMC	8GB

Interface

USB	USB 2.0
CAN	CANFD x 1;CAN x 1

Power

Voltage	9~36V
Current	<300mA
Standby Current	<3mA

Network

Mobile Communication	LTE FDD: B1/B3/B5/B8; LTE TDD: B34/B38/B39/B40/B41; WCDMA: B1/B5/B8; GSM/GPRS/EDGE: 1800/900 MHz
ETH	1000/100 Base-T1
GNSS	GPS/GLONASS/BeiDou CEP50 < 2.5m, Update frequency: 1Hz; Cold start:35s; Hot start:2.5s;

Other Specifications

SIM	Nano/eSIM
HSM	AES-128,AES-192,AES-256, SHA-1,SHA-2,HMAC,RSA, X.509,SSL/TLS

APPLIED CURRENT

Power Mode	Description	Wakeup	Current Avg
Run	T-Box is in a running state, but when the CPU is idle (without interruption, all tasks are blocked), the clock frequency can be reduced or even stopped, and the peripheral device can continue to work.	N/A	≤300mA
Standby	The application processor (AP) in the 4G module is in low-power standby mode; The communication processor (CP) is in a low-power working state (capable of receiving text messages);The MCU is in a sleep state (but can be awakened by GPIO, button interrupts, CAN, etc. of the MPU).	SMS/PhoneKey/CA N/ACC/HMI/USB G-Sensor (optional, configurable sensitivity)Airbag signal	≤2mA
Voltage anomaly protection	The MCU is in normal working mode, and the application processor (AP) in the 4G module is in low-power standby mode; The communication processor (CP) is in a low-power working state (capable of receiving text messages);	MCU detects voltage return to normal	≤100mA
Deep Sleep	The 4G module is in a closed state; The MCU is in deep sleep (but can be interrupted by buttons, awakened by CAN, etc.).	Key/CAN/ACC/HMI G-sensor (optional, configurable sensitivity)Airbag signal	≤1mA

T-Box Mode	Description	Entry Mode
Normal	T-Box is in normal working/power management	Diagnostic Tools
Factory	Used for T-Box production testing	Diagnostic Tools
Transport	The T-Box is at its lowest power consumption when the car is transported from the host factory to the 4S store	Diagnostic Tools