

REDUCE THE COST OF  
TRANSPORTATION



HOPECHART



# T-BOX HQT401

## TELEMATICS BOX FOR COMMERCIAL VEHICLES



HQT401 is designed to meet the needs of modern intelligent and connected vehicles.

Our product can deeply read the automotive CAN bus data through the automotive grade processing chip and new communication technology to achieve requirements based on the "automotive grade" reliability, working temperature, anti-interference etc.

Our product can be customized to select functions like intelligent vehicle data input, data acquisition, remote control, remote diagnosis, remote upgrade, national standard satisfaction and so on. With automotive information security protection which can solve the security authentication and data confidentiality problems of in-vehicle network and out-of-vehicle network equipment, our product can resist various network attacks against the Internet of vehicles, and can be widely used in commercial vehicles, passenger cars and new energy vehicles.



NETWORKING



POSITIONING



DATA  
ACQUISITION  
& STORAGE



VEHICLE  
ATTITUDE  
RECOGNITION



REMOTE  
UPLOAD



REMOTE  
COMMAND  
DISTRIBUTION



MEET  
STANDARD

# APPLIED SCENARIO



PERFORMANCE PARAMETER	
MCU	Cortex-M7, 160MHz
Storage	64Mbit
Communication Module	Mode: 4G LTE Cat.4 OPEN
	Operating frequency: TDD-LTE B38/B40/B41 FDD-LTE B1/B3/B5/B7/B8/B20
Bluetooth	BT 3.0, BLE 4.2
GNSS	Type: GPS/BD/GLONASS
	Positioning accuracy: ≤2.5m (CEP50) TTFF: Cold boot≤32s, Warm boot≤1.5S
RTC	External to the MCU, 24h±5s
EMMC	8G
SIM Card	Patch
Backup Battery	NI-MH battery, 110mAh
Operating Voltage	9-36V
Operating Current	< 150mA
Dormant Current	< 3mA
Quiescent Current	< 1mA
Operating Temperature	-30°C~+70°C
Storage Temperature	-40°C~+85°C
IP Grade	IP54
Material	PC+ABS
CAN	4x

PRODUCT FUNCTION	
Positioning	Support Positioning Anti-drift
Networking	Support connection to the enterprise platform Support up to 4 APN channel configurations
Time and Timing	External RTC, 24h±5s Synthetically compare GNSS timing with platform server timing, GNSS timing preferred
Data Acquisition	Support 4-way CAN acquisition, support CAN wake-up Support acquisition of external passive MIC Support monitoring audio information Support noise suppression Support 4-way switching data acquisition (excluding special defined switching data) Support special switching data such as ACC, IG, charging wake-up (low), E/I/B-CALL and so Support acquisition and report of main/backup voltage
Data Interaction	Support debugging/program updating via USB Support parameter configuration via RS232/RS485 for TBOX debugging/IHU connection/sensor docking Support collection and outgoing of CAN data Support 250Kbps, 500Kbps and 1Mbps baud rates Support access to the Internet via WiFi hotspot Support connection to vehicle WiFi hotspot
Power Management	Normal Operation Mode with Fully function enabled Deep Sleep/Static Mode:Support local wake-up (ACC/IG, vibration, CAN bus, timed wake-up) Off Mode:Directly turn off the power supply of motherboard (including backup power) The TBOX can still work with backup power after the external power supply is disconnected
Data Storage	Support storing data/files into Flash/eMMC Support CAN Raw Data Storage Support storage of switch, ACC signal and other types of data Support the storage of TBOX operation logs, networking logs and other logs Support data export through U disk (with adapter)
Human-computer Interaction	Support fault detection of module/antenna/SIM card/power supply/voltage/OTA, and representing by the indicator light
Program Upgrade	Support TBOX upgrade through enterprise platform or backend management server Support remote firmware refresh of ECU via CAN bus
Information Security	Hardware design satisfies R155 and R156

**15+** DEVELOPMENT HISTORY    
**700+** TOTAL EMPLOYEE    
**1500m<sup>2</sup>** EXPERIMENTAL SITE    
**27000m<sup>2</sup>** FACTORY SITE    
**3000000+** ANNUAL PRODUCTION CAPACITY    
**10000000+** CUMULATIVE SHIPMENT

Hangzhou HopeChart IoT Technology Co., Ltd. was established on June 11th, 2009, and landed in science and technology innovation board of Shanghai Stock Exchange on November 6th, 2019 (stock code: 688288), with a registered capital of 100,343,920 yuan. With the mission of "reducing the cost of transportation", Hopechart has continuously expanded the application fields of intelligent connected products for more than 10 years, and successfully promoted the connected products from commercial vehicle to many sub-fields such as new energy vehicle, non-road machinery, and motorcycle. Through independent R&D and manufacturing capabilities from design planning, development, mold making to production, we are committed to providing customers with intelligent network system and service based on hardware terminal and vehicle networking platform.

## OUR CLIENTS



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