深圳市龙桥科技发展有限公司
SHENZHEN DRAGON BRIDGE TECHNOLOGYLIDE COMPANY

Application :Rental cars, insurance cars, trucks, buses

Wireless Fleet management Solution Innovator

GSM/GPRS/GPS Tracker

T4　Smart Video Terminal
V2.0

ROADRAGON
路特龙

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1. Product Introduction

The T4 smart video terminal is a vehicle-mounted terminal that integrates video, Android system, 7-inch display, RFID card, WiFi module, 4G network communication, and Beidou three-generation positioning, which is developed by our company. It has powerful software and hardware functions. The memory is upgraded to 2GB, the storage space is expanded to 16GB, and the APP runs smoother. It is widely used in taxis, online car-hailing, public transportation, freight and other industry applications. The main features are as follows:

➢ One-piece industrial structure design: suitable for tabletop installation.

➢ Operating system: Based on Android 7.1 operating system.

➢ 7-inch touch screen: the screen resolution is 1024*600.

➢ Support RFID, IC card driver information card.

➢ Support external taxi peripherals such as operating status display, taxi top light, meter, flop and so on.

➢ Wireless communication: Support 4G full Netcom.

➢ WIFI: Built-in WIFI hotspot, you can share the Internet.

➢ Support up to 4 channels of video and 1 channel of camera recording.

➢ Support VOIP voice call.

➢ Integrate iFLYTEK voice, support Chinese and English TTS speech synthesis.

➢ Support the installation of third-party applications and expand the application functions of the terminal industry.

➢ With battery over-discharge protection function; with over-voltage protection, if the limit voltage is exceeded, immediately cut off the external circuit protection terminal;

➢ Low power consumption. When the flameout detects that the battery voltage is low, it can enter the zero power consumption state. At this time, the working current is less than 2mA, which can effectively protect the car battery from over-discharge.

➢   Multiple protection of power supply, which can adapt to the complex power interference environment in the car.

➢   Provide secondary development SDK

2. Features

Application scenario	Native version	Used to provide customers for secondary development 1. Cut out unnecessary default applications and keep the main interface, phone, and browser 2. Provide secondary development SDK 3. Embedded 4-channel video preview interface (4 channels 720P) or 3 channels (2 channels 720P, 1 channel 1080P), 4. Support to start automatic dial-up Internet access, preset SDK test app, face input, face recognition APP
	Taxi industry application	Support electric recruitment, navigation, driver information display, standard 905/1076 functions, etc.
	Integrate third-party applications	stand by
System other	Local upgrade	Upgrade via TF card
	Online upgrade	Upgrade via WiFi or built-in 4G, connect to the cloud platform for upgrade. Support cloud guardian application upgrade.
	Differential upgrade	stand by
	Support peripheral upgrade	Support remote upgrade of peripheral programs such as meter, dome light, etc.
	Corporate Guardian	Support enterprise guarding platform
	Power saving design	Hierarchical power management to realize power saving design 1) Support to turn off the screen to run when ACC OFF 2) Support timing wake-up and report location information when ACC is OFF① 3) Support ACC OFF, the device shuts down when the battery is low, to avoid over-discharge of the battery
	Phone/SMS	Integrated Android standard phone/SMS program
	Take pictures	Can use the built-in camera

automatic	Automatic dial-up Internet	Configurable to open or close.
	Wireless AP	stand by
	Automatic time adjustment	Time calibration via mobile network or GPS, built-in RTC recording device time①
	SDK development kit	Provide SDK secondary development kit
	Online resources (optional)	Support integrated Himalayan car version
	Video storage	Support 1ch 1080P, 2ch 720P video storage, can be expanded to 4ch 720P
	Video view	Support real-time video and historical video retrieval and viewing
	Video export	The video is stored on the TF card, you can use the dedicated player to view the video by pulling out the TF card directly
	Video report	Support remote viewing of video on taxi platform. Support 1076 protocol
	Login to the platform	Support standard 905/808 protocol platform
	navigation	Pre-installed AutoNavi navigation car version
	TTS voice broadcast	Integrate Xunfei Yuji, support TTS
	Support face recognition	Used for driver login and driver identity authentication, supports offline recognition
	Driving behavior analysis	Support DSM function, realize driving behavior analysis and alarm display
	Media entertainment	Support music and video playback function
	Custom function	Boot image, animation, music, application UI can be customized

3.Technical parameter description

3.1.The main technical parameters

The main parameters	Operating Voltage	12V
	Operating voltage range	9-16V
	System startup time	Cold start≤25S, hot start≤2S
LCD screen	size	7.0 inch
	Resolution	1024X600
Video interface	Support a few roads	Support up to 4 channels
	Working voltage/current	12V
	Pixel (resolution)	2 channels 720P, 1 channel 1080P; can be expanded to 4 channels 720P
	recording function	1 camera with recording function②
	Connector model	T4 throwing line, aviation plug
Audio	Horn parameters	Built-in 1.5W speaker 8 ohm
	MIC	Voice recognition, call
GPS	Module model	Module built-in positioning function
	Frequency Range	Support BD/ GPS / GLONASS; compatible with A-GPS
	other requirements	Support positioning antenna open circuit and short circuit detection
		GPS module reserved on the motherboard ③
storage	FLASH	16GB ROM
	RAM	2GB RAM
	Expansion Card	TF card interface supports up to 128GB
wireless network	WIFI	Module	Module built-in WIFI
		supporting agreement	2.4G, 802.11b/g/n
		Antenna type	Built-in antenna
	4G	Full Netcom, support data card
button	Number of key types	7 buttons, can be customized
	Function definition	Home/Navigation/Video/Back/Satisfied/General/Unsatisfied. Button function customers can customize
	Privately printed content	Home/Navigation/Video/Back/Satisfied/General/Unsatisfied
IC card	IC card /RFID reader	
USB	Interface Type	Micro USB / cable jet head
	Functional	Support 2 USB ports, external USB mobile hard disk

	requirements	can be connected ④
Serial port	Functional requirements	4 peripheral serial ports, used to connect meter, dome light, driving status controller, etc.
	Peripheral power supply	not support
	Debug port	Pull out the debug serial port
I/O	High and low level signal	2 inputs, 1 relay control output, 1 emergency alarm
Acceleration sensor, gyroscope	Functional requirements	Support, used to detect impact, rollover, etc.
Positioning performance	GPS module	P1311
	Tracking sensitivity	-162dBm
	Positioning time	Cold start TTFF: ≤32s Hot start TTFF: ≤1s Recapture TTFF: ≤1s
	positioning accuracy	≤2.5m
	Speed accuracy	≤0.1m/s

3.2.Environmental parameters

Test item	Executive standard	Function level
Operating temperature characteristics	Working temperature: -20℃-70℃	Meet grade A
Storage temperature characteristics	Storage temperature: -40℃-85℃	Meet grade C
Humidity characteristics	Humidity: ≤95%	Meet grade A

3.3.EMC parameters

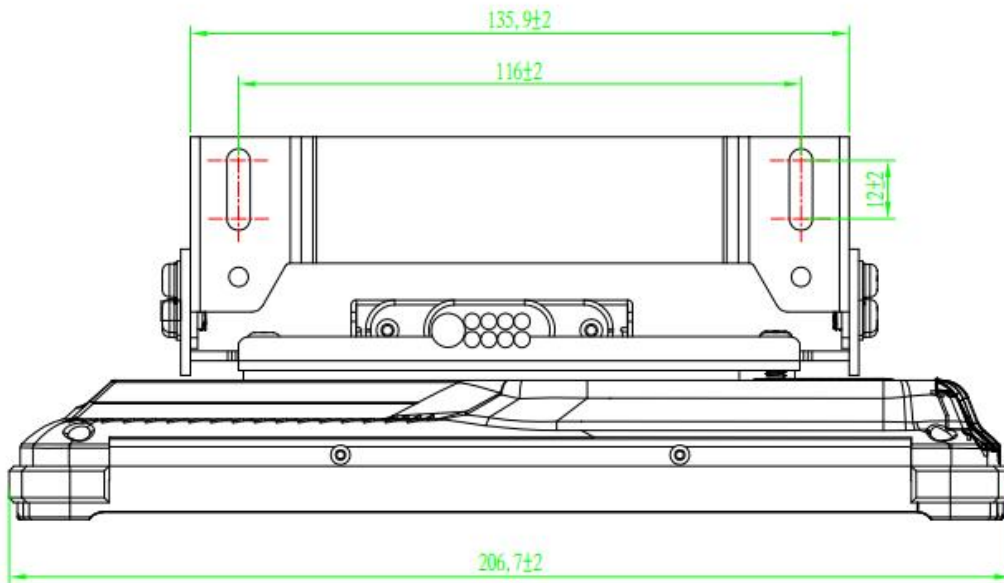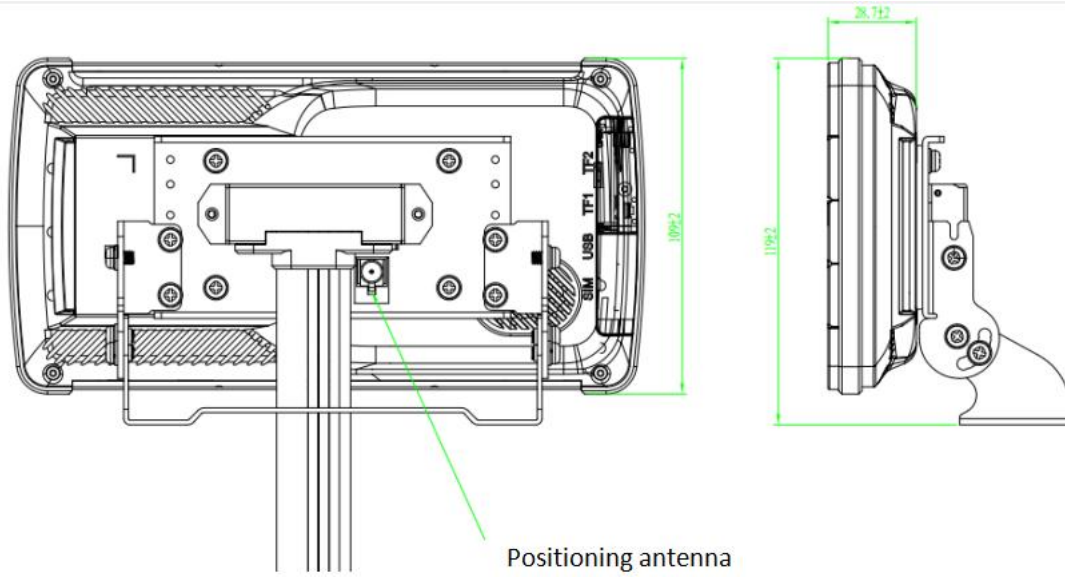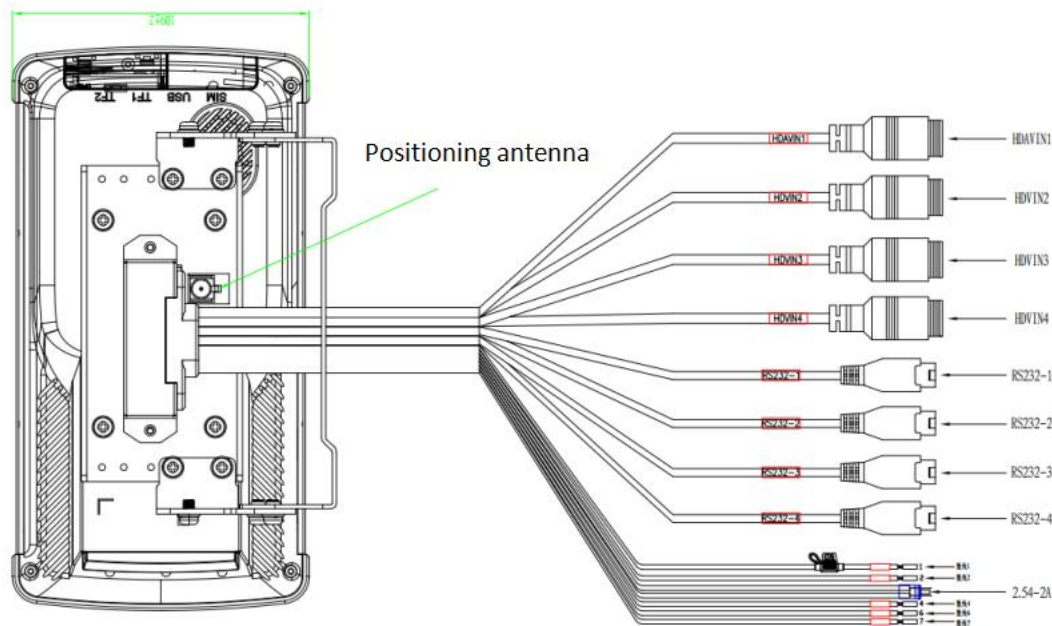| Test item	Executive standard	Function level
Anti-interference degree of automobile electric spark interference	GB/T19056	Meet grade A
Transient conducted interference along the power line	ISO7637-2	Comply with P2a, P3a, P3b, P5, A level Comply with P1, P2B, P4, C level
Conduction harassment	GB/T18655 conduction voltage method	Meet the requirements of level III

Radiation harassment	GB/T18655 anechoic chamber method	Meet the requirements of level III
Radiation immunity	GB/T17619 free field method	Comply with 24V/m, Class A
High current injection	GB/T17619 high current injection method	Comply with 48mA, A grade
Anti-static discharge ground	GB/T19951, power-on mode	Comply with contact discharge ±6KV, Class A complies with air discharge ±8KV, Class A
	GB/T19951, storage mode	Comply with contact discharge ±6KV, C level complies with air discharge ±15KV, C level

4. Appearance and wiring instructions

Positioning antenna

Positioning antenna

Interface definition description				
Connector label	Interface diagram	Pin NO.	Interface definition	Remarks
HDAVIN1	Connector model: 12M-4F	1	Camera power is positive	
		2	Camera power negative	
		3	audio signal	
		4	Video signal	
HDAVIN2 HDAVIN3 HDAVIN4	Connector model: 12M-4F	1	Camera power is positive	
		2	Camera power negative	
		3	air	
		4	Video signal	
RS232-1 RS232-2 RS232-3	Connector model: 5569-4	1	air	
		2	Send externally	
		3	External reception	
		4	Ground	
RS232-4	Connector model: 5569-4	1	power supply	
		2	Send externally	
		3	External reception	
		4	Ground	
2.54-2A		1	Emergency ground	
		2	urgent	
dispersion wire		1	Power is positive	red
		2	Power negative	black
		4	ignition	Orange
		6	enter	Yellow black
		7	Output	blue

5.Product configuration list

NO.	name	Quantity /set	Remarks
1.	Host (main screen)	1	
2.	Positioning antenna	1	
3.	Install the cable	1	Contains: power cable, RS232 serial cable, video output cable
4.	Mounting brackets	1	Bracket + fixing screw
5.	Driver card	2	
6.	Manual/certificate/warranty card	1	
7.	DSM camera	1	Optional
8.	emergency button	1	Optional
9.	Oil cut relay	1	Optional