



Statement: THINKCAR owns the complete intellectual property rights for the software used by this product. For any reverse engineering or cracking actions against the software, THINKCAR will block the use of this product and reserve the right to pursue their legal liabilities.

1

Product Overview

1.1 Product Profile

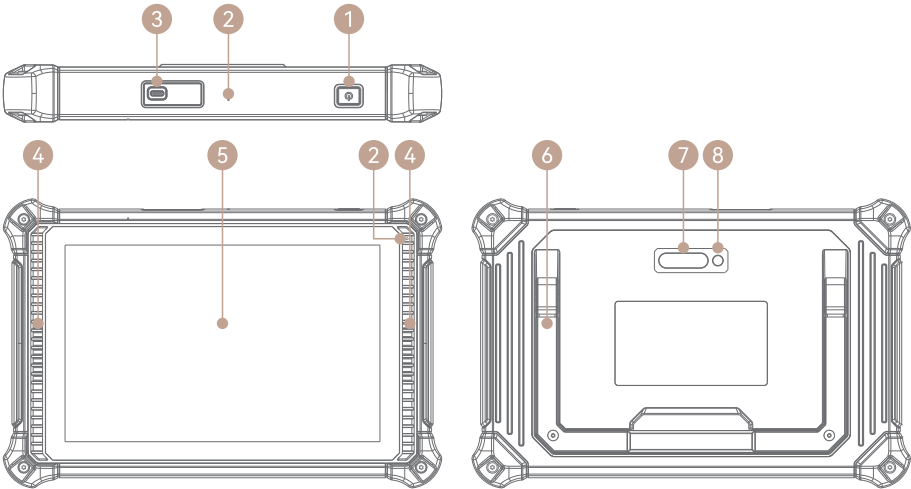
THINKTOOL 391 Series is an intelligent diagnostic device independently developed by THIINKCAR in 2024.

It adopts a new ID design style. Suitable for various complex automotive maintenance environments. TCOS system adopts a new UI design concept, with a stronger sense of interface hierarchy and higher smoothness.

It uses high-end hardware configuration, the host is equipped with MT8788 high-performance processor, 10.1-inch 1280*800 HD screen, 4GB RAM+128GB ROM, rear 13 million camera and flash. VCI is equipped with 256MB RAM+8GB ROM, 2.8-inch 240*320 resolution screen.

1.2 Components & Controls

1.2.1 Host device -- THINKTOOL 391



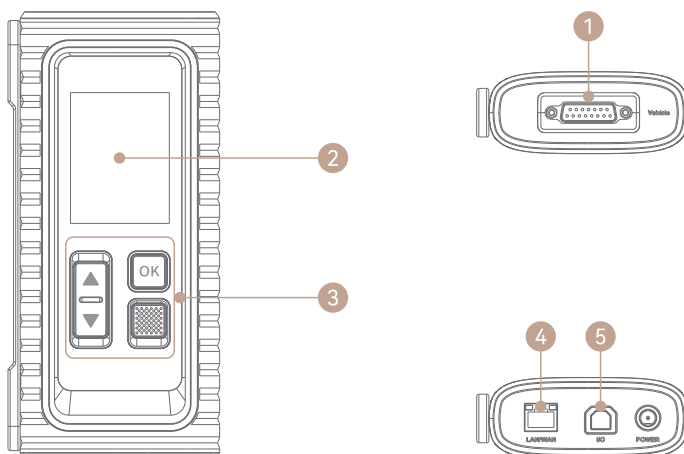
NO.	Name	Descriptions
1	Power Button	<div><div>· Short press to turn off or wake up the screen.</div><div>· Long press for 3 seconds to turn on/off the device, and for 8 seconds to force to restart the device.</div></div>
2	Microphone	Used to receive sound.
3	Type-C Port	Used for charging and data transmission.
4	Loudspeaker	Convert an audio signal into a corresponding sound.
5	Screen	10.1 inch and 1280*800 resolution screen.
6	Adjustable Stand	Able to keep the device standing on the desk, or hang the device on the steering wheel.

7	LED light	Used for illumination and supplementary lighting.
8	Rear camera	13 million pixel rear camera.

Parameters

Operating System	TCOS	Processor	MT8766
Screen	10.1 inches	Resolution	1280*800
Size	302*199*36.5mm	Weight	1.54kg
Memory	4G	Storage	128G
Battery	12,600mAh/3.8V	Charging	5V/2.5A
Working Environment	14°F~122°F(-10°C~50°C)	Storage Environment	-4°F~140°F(-20°C~60°C)

1.2.2 VCI -- THINKLINK LITE



NO.	Name	Descriptions
1	Diagnostic port	Communicate with the vehicle through the Diagnostic Connection Cable.
2	Screen	2.8 inch and 240*320 resolution screen.
2	Buttons	Support up, down, confirm, and return operations.
3	Ethernet port	Provide network to devices through Ethernet cables.
4	I/O data Port	Type B USB port is designed for building stable communication when performing ECU Programming or IMMO Key Programming.

Parameters

Operating System	LINUX	Working Voltage	9-18V
Memory	256M	Storage	8G
Screen	2.8 inches	Resolution	240*320
Working Environment	14°F~122°F(-10°C~50°C)	Storage Environment	-4°F~140°F(-20°C~60°C)

2 Quick to Use Guide

2.1 First Time to Use

The following settings should be made when you initially use the device.

2.1.1 Turn on The Machine

After pressing the power button, images will be shown on the screen as follows.



2.1.2 Language Setting


Select the target language from the languages displayed on the interface.

2.1.3 Choose Time Zone

Choose the time zone of the current location, then the system will automatically configure the time.

2.1.4 Connect Wi-Fi

The system will automatically search all available Wi-Fi networks. Please connect to the trusted Wi-Fi.

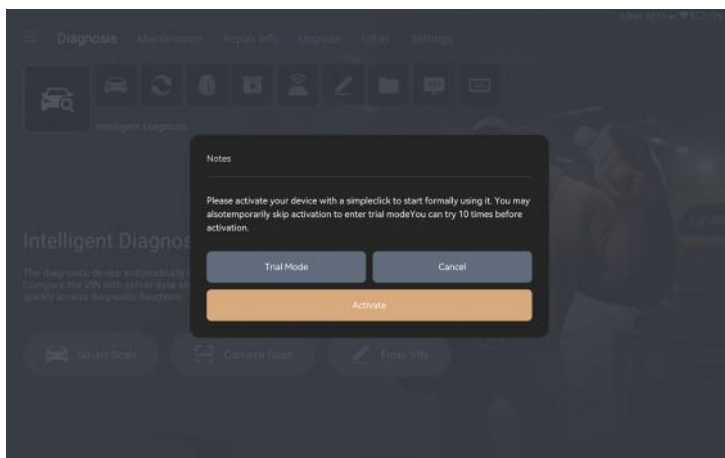
 *Tips: Wi-Fi must be set. If there is no Wi-Fi network is available nearby, you can try "Portable Mobile Hotspot".*

2.1.5 Register term

Please read all the terms and conditions of the user agreement carefully. Choose "Agree to the above terms", and tap "Next".

2.1.6 Activate Device

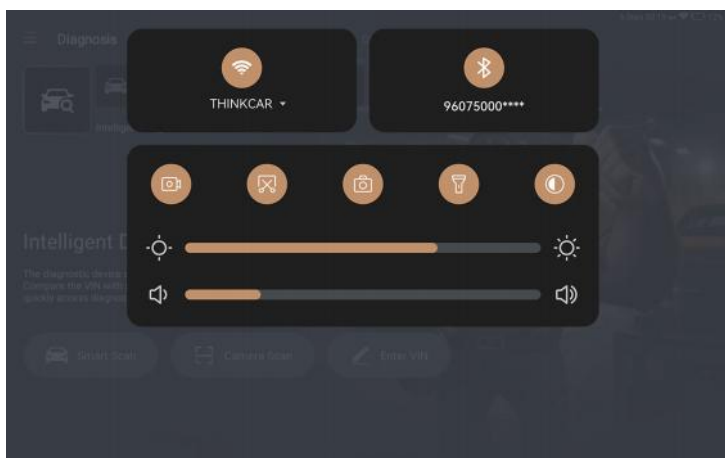
If you are first time to use, you will be prompted whether to activate device. You can choose [Trial Mode], you can try Diagnosis function 10 times. If you choose [Activate], the device will be activated and using all function normal.



2.2 Usage Tips

2.2.1 Common Function Window

Swipe down from the top of the screen to open a pop-up window for commonly used functions.



Clicking on the WiFi icon can turn device WiFi on or off. Long press the WiFi icon or click on the WiFi name and location to redirect to the WiFi settings interface.



Turn Bluetooth on or off.



Turn on or off the shortcut actions of screen recording.



Turn on or off the shortcut actions of screenshots.



Click to enter the camera function.



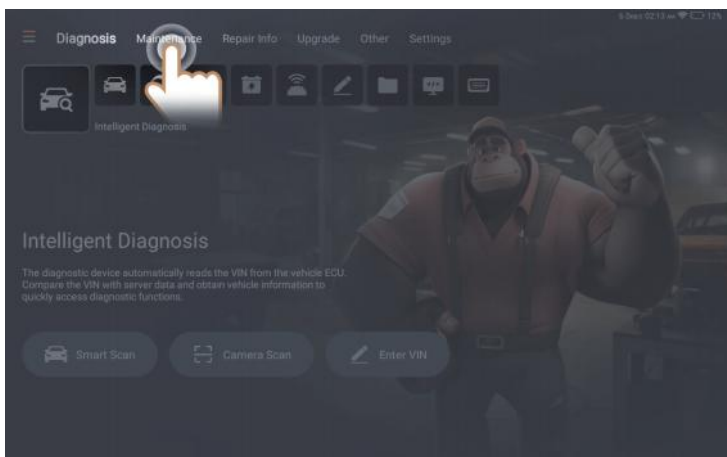
Click to turn the LED light on or off.



Click to switch the theme between DARK MODE and LIGHT MODE.

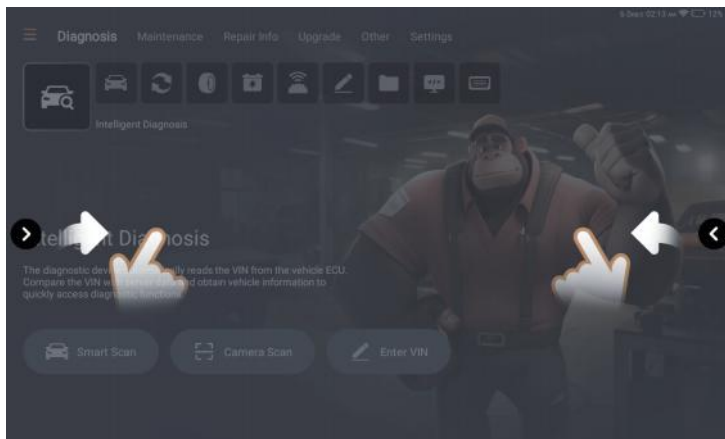
2.2.2 Function Switching

Click on the top menu to switch between functional interfaces. You can switch functions by swiping left/right, or clicking on the function icon. You can view the description of this function on the function interface.



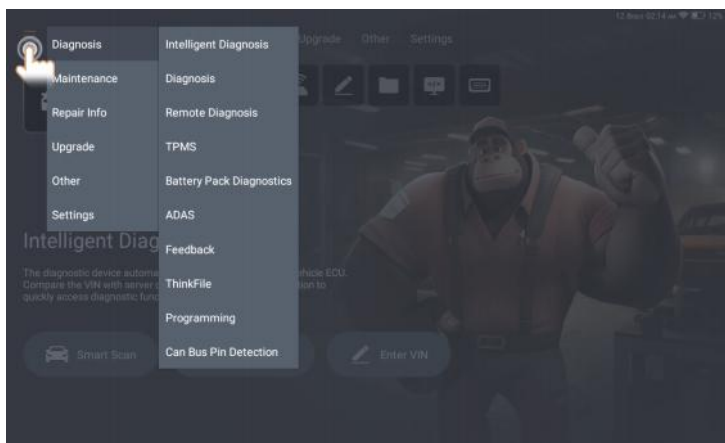
2.2.3 Quick Return Operation

On any interface, the operation to return to the previous interface can be triggered by swiping left/right.




2.2.4 Shortcut Menu


Click the button in the upper left corner of the homepage to quickly view all the function menus, and click to open the functions.



2.3 Charging

Follow the steps below to charge the device:

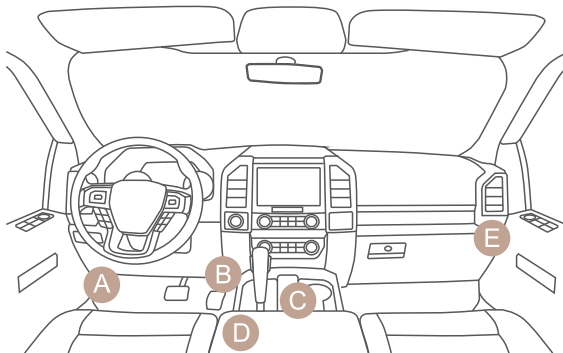
- Use the charger to connect the device and the power socket to charge.
- When the battery status displays  the device is charging.

When it displays  , the charging process has been completed and you shall disconnect the device.

2.4 VCI Connections

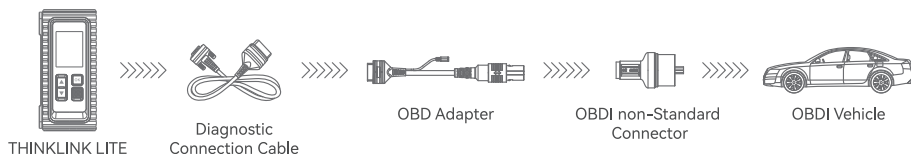
2.4.1 For OBDII standard vehicle

Connect the THINKLINK PRO VCI to OBDII port of vehicle through the OBD Diagnostic Cable. The vehicle OBDII port is usually located under the dashboard, on the driver's side above the pedals. Below are five locations for the most common OBDII ports.



2.4.2 For OBDI standard vehicle

Please refer to the following diagram for detailed connection:



! Tips: For the types of OBDI connectors for , please refer to the Packing List.

3 Diagnosis

3.1 Intelligent Diagnosis

The Intelligent Diagnosis function compares the current vehicle's VIN information with the server's database. To obtain vehicle information for rapid diagnosis. Compared to the past, Intelligent Diagnosis solves the problem of slow speed and easy selection errors by only selecting menus based on the vehicle model level by level.

There are currently three ways to do this:

- **Smart Scan:** The diagnostic device is connected to the vehicle and reads the VIN code from the vehicle ECU.
- **Camera Scan:** Use a camera to take photos of the vehicle's VIN and automatically recognize it.
- **Enter VIN:** Manually enter the vehicle VIN.

3.2 Diagnosis

Support manual selection of vehicle brand and model for diagnosis.

3.2.1 Manually Selecting Vehicle

Enter the Diagnosis vehicle software interface and click to select the software icon for the vehicle that needs to be diagnosed. After successful communication with the vehicle, it is necessary to select information such as model, year, and displacement based on the vehicle information. The diagnostic selection menu may vary for different vehicle models. After completion, you will enter the diagnostic function interface. THINKTOOL 391 Series supports diagnostic topology map functionality.



3.2.2 Diagnostic function

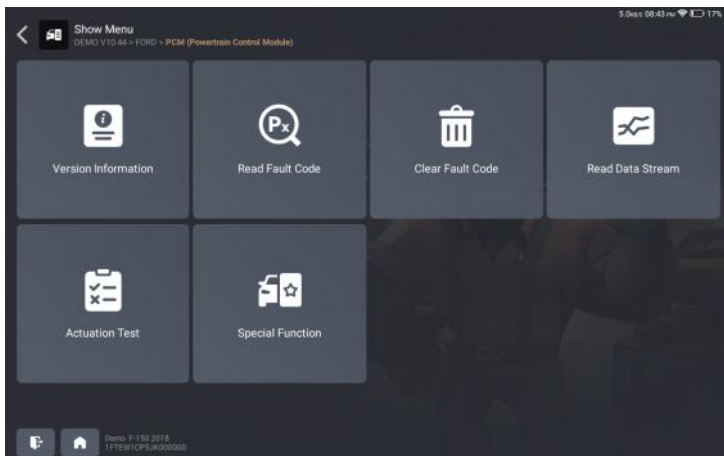
- **System Topology:** Display the distribution of lines in the automotive system in the form of a topology diagram. Can visually see the distribution of the system.
- **System List:** Display car systems in a list format.
- **Other function:** Special functions, programming, ADAS Calibration, and other functions can be accessed at the top. The functional menus of different car models may vary.
- **High speed Scan:** Scans all systems in a concurrent manner, greatly improving efficiency.

! Tips: Currently, only some models support High speed Scan, and there is a probability that the system may be missed during the scan.

- **Smart Scan:** It enables you to quickly access all the system of the vehicle and generate a detailed report about vehicle health.
- **System Scan:** To check how many systems the car is equipped with.
- **Choose to Scan:** Choose the target automotive electronic control system to scan.

3.2.3 System and Function

- Click the ECU module, and the screen will enter the function selection interface.
- Click to select the function to perform.



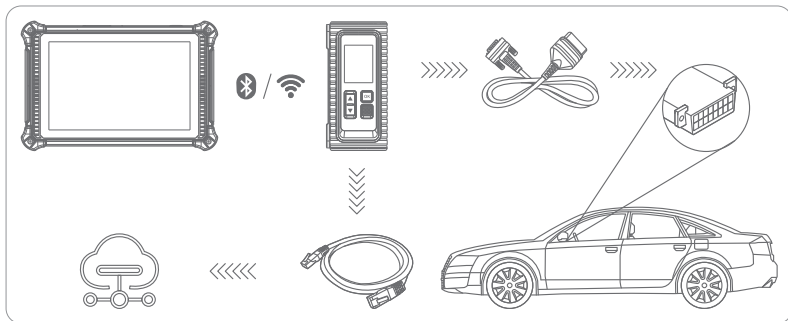
- 1) **Version Information:** Read the current version information of the automotive ECU.
- 2) **Read Fault Code:** Read the DTC in the ECU memory to help maintenance personnel locate the cause of the failure.
- 3) **Clear Fault Code:** The system will automatically delete the existing fault codes.
- 4) **Read Data Stream:** View and capture (log) real-time live data from ECUs.
- 5) **Actuation Test:** Used to test whether the execution components in the electronic control system can work normally.
- 6) **Special Function:** Used for data writing operation of electronic control unit. They all belong to this category, such as ECU data calibration, ECU Programming etc. Some maintenance functions are also included in this part.

3.3 Remote Diagnose

THINKCAR remote diagnostic service can provide functions such as remote diagnosis, remote programming, remote anti-theft configuration, remote ADAS calibration, remote troubleshooting and answering. The platform is based on a safe, stable and efficient cloud data channel to quickly solve customers' car maintenance problems that cannot be completed locally. Currently, it supports CAN, CAN FD, DOIP, J2534 and other protocols, covering many mainstream car series such as Mercedes-Benz, BMW, Volkswagen Audi, and General Motors.

The remote diagnostic process is as follows:

a. Connect your device to your vehicle



b. Publish order requirements

1) Get vehicle information

You can use [Intelligent Diagnosis] or [Manual selection] to obtain vehicle information.

2) Fill in the order information

Select the service type and service time, and fill in the service details you need.

c. Communicate service needs

After the expert technician receives the order, you can communicate your needs with the expert technician through messages.

d. Start remote diagnostic service

After ensuring that the devices on both sides are connected, start the remote diagnostic service. During the remote connection process, please turn on the vehicle ignition switch to keep the wired network open.


e. Complete order and evaluation

After the expert technician completes the order, please provide your valuable suggestions and opinions.

3.4 TPMS

THINKTOOL 391 Series supports communication with THINKCAR TPMS Tool for tire pressure sensor activation, reading, diagnosis, learning and programming functions.

- Read the tire pressure sensor ID, pressure, temperature, battery status.
- Activate the tire pressure sensor of THINKCAR, can achieve the original factory level function.
- Able to cover more than 98% of car models.

 *Tips: THINKCAR TPMS Tool is optional. If you need to purchase it, please contact your local dealer.*

3.5 Battery Pack Diagnostics

Conduct professional-level diagnostic testing for battery packs and battery modules of new energy vehicles, and provide multi-mode diagnosis: OBD interface diagnosis, fast charging port diagnosis, battery pack low-voltage interface diagnosis.

It can help users accurately locate battery faults through real-time analysis of important battery cell data such as voltage, temperature, and pressure difference, and provide battery diagnosis and maintenance guidance.



Tips: The THINKTOOL 391 Series is equipped with this feature for two years and the software is free of charge. It can be diagnosed through OBD interface. If you need to purchase other interface accessories, please contact the dealer to purchase.

3.6 ADAS

Advanced driver assistance systems (ADAS) is an electronic component in vehicles that include a variety of vehicle safety functions such as automatic emergency braking (AEB), lane departure warning(LDW), lane keeping assistance, blind spot elimination, night vision cameras, and self-adaptive lighting.

The static calibration function of ADAS defaults to the disable status. It need to be used with ADAS calibration tool of THINKCAR for activation. It is mainly for calibrating driver assistance systems such as cameras and radars, e.g. front-facing cameras for lanes departure warning systems, radar sensors for ACC (self-adaptive Cruise control) or cameras for self-adaptive headlights.



Tips: If you want to purchase ADAS calibration tool, please contact your dealer to purchase it.

3.7 Feedback

If you encounter an unresolved problem or diagnostic software bug during diagnosis, you can revert the most recent 20 test records to THINKCAR Team. When we receive your feedback, we will analyze and troubleshoot it in a timely manner, to improve the quality of our products and user experience.

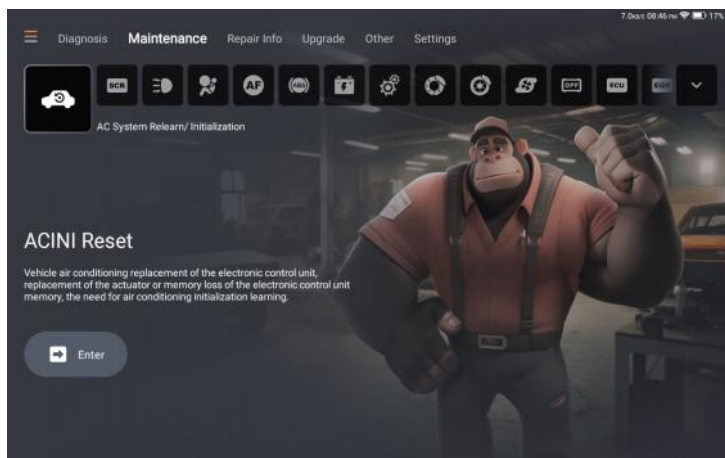
3.8 ThinkFile

It is used to record and establish the file of the diagnosed vehicles. The file is created based on the vehicle VIN and check time, including all VIN-related data such as diagnostic reports, data stream records and pictures.

3.9 Can Bus Pin Detection

Pin Detection is used to detect the voltage and supported protocol types of the OBD-II diagnostic socket pins in vehicles. If the detection results do not match the actual vehicle configuration, there may be a fault with the corresponding pin.

4 Maintenance



 *Tips: You can click on  to display all function icons.*

THINKTOOL 391 Series currently supports 41 common maintenance functions:

- **AC: AC System Relearn/ Initialization**
Vehicle air conditioning replacement of the electronic control unit, replacement of the actuator or memory loss of the electronic control unit memory, the need for air conditioning initialization learning.
- **ADBLUE: AdBlue Reset**
Reset urea after the diesel exhaust treatment fluid is replaced or filled up.
- **AFS: Adaptive Front Lighting System Reset**
Initialize the adaptive headlamp system.
- **SRS: Airbag Reset**
Resets the airbag data to clear the airbag collision fault indicator.
- **A/F: Air/Fuel Ratio Reset**
Set or learn Air/Fuel ratio parameters.
- **ABS: ABS Bleeding**
Help exhaust the air.
- **BMS: Battery Matching**
Register the battery after replacement.
- **GEARBOX: Gearbox Learning**
Relearn Crank Position Sensors.
- **EPB: Brake-pad Reset**
Help replace and reset the brake pad.
- **CLUTCH: Clutch Matching**
Clutch pedal position or switch learning. This function learns the contact and position where the clutch starts to transmit engine torque after an electronic control unit replacement, transmission replacement/removal, or clutch replacement, and is applicable to

adaptive clutches.

- **ECB: Electronic Water Pump Starting**

Use this function to activate the electronic water pump before venting the cooling system.

- **DPF: DPF Regeneration**

Specially works for diesel particulate filter system with DPF regeneration, DPF component replacement teach-in and DPF teach-in after replacing the engine control unit.

- **ECU: ECU Reset**

The ECU reset service can be used to command the ECU to perform a self reset through diagnostic commands. There are various forms of reset, distinguished by sub-function parameters.

- **EGR: EGR Adaption**

Learn the exhaust gas recirculation valve after being cleaned.

- **PB: Engine Power Balance Monitoring**

During the power stroke of each cylinder, the power balance monitors the crankshaft acceleration to determine the relative power provided by each cylinder.

- **ETS: Electronics Throttle Adaption**

Initialize the throttle actuators to the default state.

- **FRM: FRM Matching**

When replacing the battery, the starter switch is not turned off, the battery terminals are overlapped, and some other non-professional battery operations are prone to cause damage to the FRM module. The general result is that the CPU data on the circuit board is lost, and there is a control failure of the lights, doors and windows. If the data is lost, then you just need to rewrite the exact same set of data into it to fix it.

- **GW: Gateway Module Data Calibration**

After replacing the gateway control unit, there may be inconsistencies such as VIN, so calibration is required.

- **GEAR: Gear Learning**

The crankshaft position sensor learns crankshaft gear machining tolerance and saves to the computer to more accurately diagnose engine misfires.

- **GPF: Gas Particulate Filter Regeneration**

Particle traps will cause an increase in fuel consumption and a decrease in engine output after a long period of use, at which time the GPF needs to be replaced or regenerated.

- **HVB: High-Voltage Battery Diagnostics**

Used for high voltage battery diagnostics and status information detection. Most hybrid vehicles have this feature.

- **ICCS: Intelligent Cruise Control System**

Used for vehicle intelligent cruise module replacement and matching after repair.

- **IMMO: Anti-theft/Key Matching**

Disable any lost keys and add new keys. ONLY for cars with easy IMMO system.

- **INJEC: Injector Coding**

Write the new injector code into the car system for correct cylinder injection quantity.

- **LANGUAGE: Language**

Change vehicle system language.

- **MAPS: Motor Angle Calibration**

Deviations between the rotor position detected by the motor's angular position sensor and

the actual rotor field position require calibration of the motor angle.

- **NOX: NOx Sensor Reset**

Reset catalytic converter learned value stored in ECU.

- **ODO: ODO Meter Reset**

Copy, write or rewrite the kilometer value.

- **OIL: Oil Reset**

Allows you to perform reset for a new calculation of engine oil life system once changed the oil, clear the oil light.

- **PROG: Immobilization Programming**

Car anti-theft matching programmer for key matching/copying, car anti-theft chip reading/writing, car computer reading/writing and other functions that require reset operation after completion.

- **RLS: Rainfall Light Sensor Settings**

The rain sensor is used to adjust the wiper frequency, and the light sensor adjusts the light intensity of the automatic headlights according to the ambient light and darkness. This function allows for adjustment of the initial parameters.

- **SAS: Steering Angle Reset**

Reset the steering angle to zero to keep the car running straight.

- **SEAT: Seat Calibration**

Calibrate the memory in replaced or repaired seats.

- **START/STOP: Stop/Start Settings**

Set up the automatic start-stop function in ECU.

- **ROOF: Sunroof Initialization**

Initialize the sunroof when locked off or closed.

- **SUS: Air Suspension Matching**

Adjust the vehicle body height sensor for level calibration.

- **TPMS: TPMS Reset**

Reset the tire pressure.

- **TRANSPORT: Transport Mode**

Deactivate the transport mode.

- **TURBO: Turbocharging Matching**

Learning after booster system component replacement, or resetting turbocharger learning value.

- **TYRE: Tyre Size Adjustment**

Set the size parameters of the modified or replaced tire.

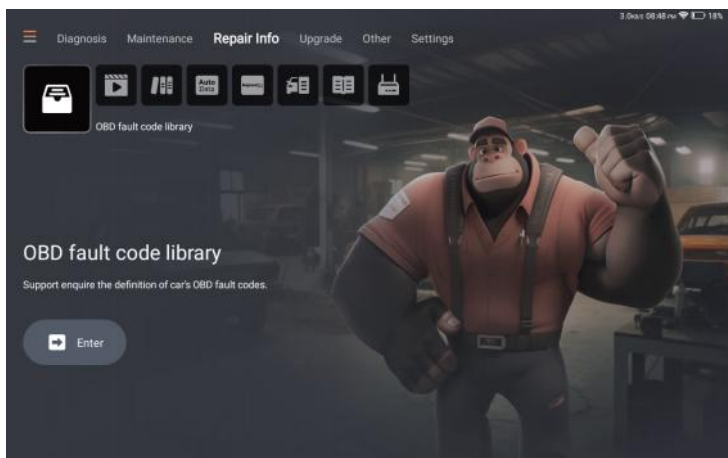
- **WINDOW: Windows Calibration**

Perform door window matching to recover ECU initial memory.



Tips: The maintenance function software may increase with the software release, please pay attention to the software update instructions.

5 Repair Info



5.1 OBD Fault Code Library

Support enquire the definition of car's OBD fault codes.

5.2 Video

Watch videos of the product(continuously updated).

5.3 Learning Materials

You can view the operation playback of the special functions of each brand model, to help users study the operation of the special functions online without connecting the vehicle.

5.4 Auto Data

Enter the Autodata Library.

5.5 HaynesPro

THINKCAR has reached a cooperation agreement with HaynesPro. Support database queries on device or PC. If you need to subscribe, please contact the dealer to make a purchase.

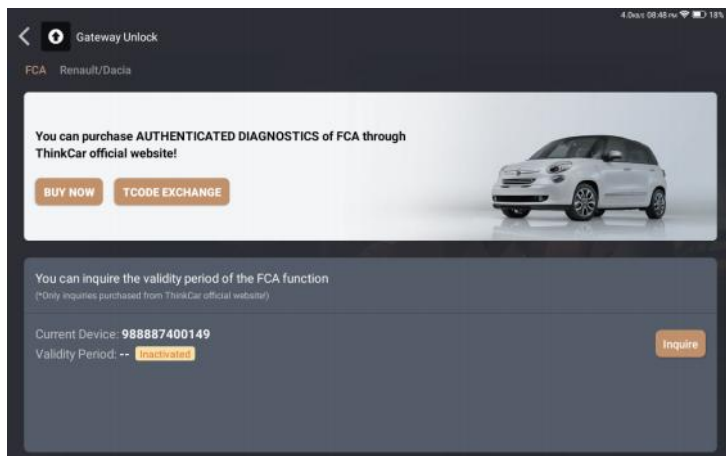
5.6 Coverage List

You can enter the Vehicle brand, model, year and other information to enquire the support functions and diagnostic system.


5.7 User Manual

You can find the E-Manual in here.

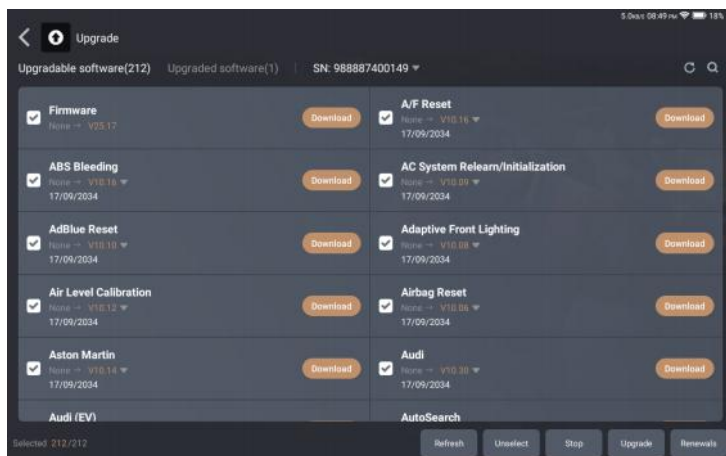
5.8 Gateway Unlock



For some car brands, gateway unlocking is required to perform more diagnostic functions. If you need to subscribe, please contact your dealer to purchase.

 *Tips: Currently, THINKCAR has completed integration with FCA Maserati, Renault/Dacia. The unlocking function of more brands in the future will also be centrally managed here. Please pay attention to software updates.*

6 Upgrade



Obtain updated information on device support software in Upgrade. In order to experience better features and upgrade services, we recommend that you periodically upgrade your software.

- Upgradable software: A list of software that can be upgraded.
- Upgrade software: List of downloaded software.



Tips: During the upgrade process, please maintain a normal network connection. Upgrading many software may take some time, please wait. If you need to delete certain software, you can perform software deletion in [Settings] → [Diagnosis Settings] → [Diagnostic Software Clear].

- Renewals: If the software validity period of the device has expired, only the software version before the expiration can be downloaded. Please contact your dealer in a timely manner to purchase T-Code renewal software.

7 Other

7.1 Applications List

- **System Applications**
Supports Album, File Manager and more.
- **External Applications**
Supports Chrome, Teamview, and more.

7.2 Module

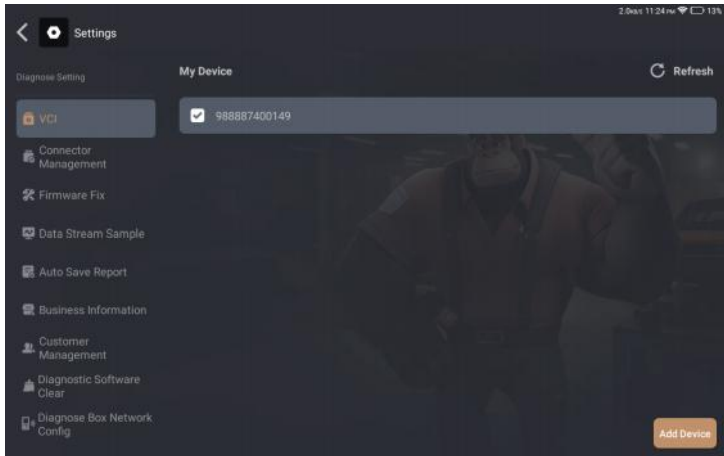
The modules supported by THINKTOOL 391 Series:

- **THINKTOOL Video Scope:** Ultra long custom coil pipeline design, flexible bending with durable materials, suitable for a variety of complex environments. Supports 720P HD image. With 6auxiliary lights for brighter light, it is easy to use in dark environment.
- **THINK Scope Box:** Equipped with 4 channels 100MHz bandwidth, sampling rate reaches up to 1GS/s. Combined with the device screen to achieve full touch control operation.Special automatic maintenance and detection menu and high-definition waveform display make it more convenient to use.
- **THINK Battery Tester:** Detect the battery voltage, resistance service life, current and other battery information. Combined with the high-resolution screen of the device and high-precision data monitoring to make the detection efficiency greatly improved.”
- **TKey 101:** THINKCAR TKey 101 key programmer is designed to program blank keys for different vehicle brands and models. It's widely used for locksmiths or car mechanics to read and write the program and do anti-theft matching.



Tips: The supported module hardware is optional, please contact the dealer to purchase.

8 Setting



8.1 Diagnose Setting

8.1.1 VCI

Support viewing bound device information.

8.1.2 Connector Management

Support switching VCI communication methods.

8.1.3 Firmware Fix

Support fixing VCI firmware and remote firmware. If there are abnormalities in the diagnostic or remote functions, you can try to repair them.

8.1.4 Data Stream Sample

This feature allows you to manage the recorded data stream sample files.

8.1.5 Auto Save Report

The Auto Save Report function can save user information in the diagnostic report in advance. After the function is enabled, it can generate car diagnostic reports faster and avoid repetitive filling actions.

8.1.6 Business Information

Add the information of the workshop, to which the tool belongs, and it will be displayed to customers in the diagnostic report.

8.1.7 Customer Management

Manage information of all customers, who did vehicle diagnostic on this equipment and display in turn.

8.1.8 Diagnostic Software Clear

This option can clear some cache files and free up the storage space.

8.1.9 VCI Network Config

Operate as VCI to connect to WiFi on the host device.

8.1.9 Diagnostic General Settings

Support diagnostic unit switching, enabling or disabling Sline Update function, and adjusting Font Size.

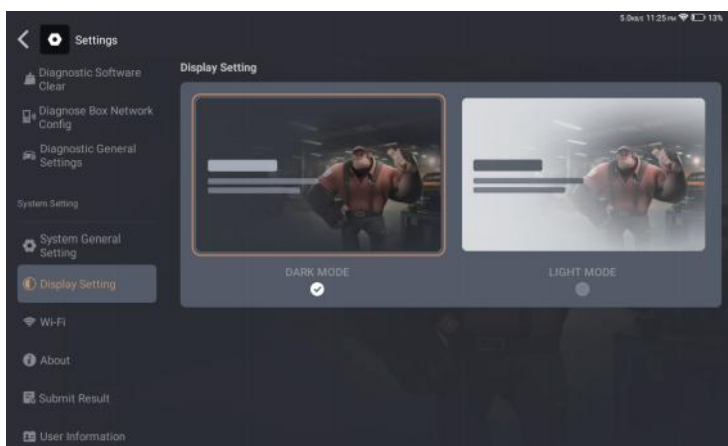
8.2 System Setting

8.2.1 System General Setting

Support switching between diagnostic Time Format, operating Clear Data, and performing Restore Factory Settings.

8.2.2 Display Setting

Switch the theme between DARK MODE and LIGHT MODE.



8.2.3 Language

Switch system language.

8.2.4 Time Zone

Switch system time zone.

8.2.5 Wi-Fi

Set up WiFi on the tablet.

8.2.6 About

View current device information, detect upgrades, screen idle time, view privacy agreements, etc.

8.2.7 Submit Result

If you have problems during use the device, you can use this function to upload app logs. We will help you solve problem.

8.2.8 User Information

Support viewing or modifying current user information.

9 FAQ

Q: Can I use the same type of charger to charge the tablet?

A: No, please use original charger. Our company is not responsible for any damage and economic loss caused by using charger, which is not provided by THINKCAR.

Q: How to save power?

A: Please turn off the screen while the equipment isn't used, set a shorter standby time, and decrease the brightness of the screen.

Q: The tablet cannot be turned on after charging

Passible reasons	Solution
The equipment has not been used for a long time, and the battery loss	Charge it for more than 2 hours before turning it on
Problem of Charger	If there is a quality problem, please contact the dealer or after-sales service of THINKCAR.

Q: What should I do if the device overheats during use?

A: THINKTOOL 391 Series. It is recommended to use it in a cool indoor environment. If exposed to outdoor environments or prolonged exposure to sunlight, overheating may occur. TCOS system will automatically adjust power consumption. Please stop using and turn off the screen or shut down the device. Place the device in a cool place until the temperature returns to normal.

Q: There is no power in the VCI dongle after connecting to the vehicle's DLC port.

Passible reasons	Solution
Poor contact of vehicle's DLC port	Plug out the VCI dongle, and then plug it in again
Too low voltage of the vehicle battery	<ul style="list-style-type: none"> · Recharge the vehicle battery. · Replace the vehicle battery if it is damaged.
Damage of the VCI dongle	Contact THINKCAR after-sales service to get support

Q: There is no power in the VCI dongle after connecting to the vehicle's DLC port.

Passible reasons	Solution
Poor contact of the VCI dongle	<ul style="list-style-type: none"> · Plug out the VCI dongle, and then plug it in again · Perform the VCI Bluetooth pairing again
The firmware is damaged	Enter the settings and tap "Fix Connector Firmware/System" to fix the firmware

Q: How about non-standard OBDII VCI connector

A: There is a several non-standard adapters in the box. Follow the instructions to connect.

Q: Communication error with vehicle ECU?

A: Please confirm:

Whether the VCI is correctly connected and whether the vehicle ignition switch is ON.
If all are normal, send vehicle production year, model and VIN number by Feedback feature.

Q: Failed to enter into vehicle ECU system?

A: Please confirm:

Whether the vehicle is equipped with the system,whether the VCI is correctly connected, and whether the vehicle ignition switch is ON.

Q: What to do if the connector is missing

A: Contact THINKCAR after-sales service or regional sales.

12 Warranty Terms

This warranty applies only to users and distributors who purchase THINKCAR products through normal procedures. Provide free warranty within one year. THINKCAR warranty including electronic products for damages caused by defects in materials or workmanship. Damages to the equipment or components caused by abusing, unauthorized modification, using for non-designed purposes, operation in a manner not specified in the instructions, etc. are not covered by this warranty. The compensation for dashboard damage caused by the defect of this equipment is limited to repair or replacement. THINKCAR does not bear any indirect and incidental losses. THINKCAR will judge the nature of the equipment damage according to its prescribed inspection methods.

SIMPLIFIED EU DECLARATION OF CONFORMITY

Hereby, THINKCAR TECH CO., LTD. declares that this equipment is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: https://h5.mythinkcar.com/update_app/productlist

THINKCAR

LEADING TECH IN DIAGNOSTICS