

VCX-FD

Instructions



Product Overview

VCX-FD is an intelligent vehicle diagnostic interface designed by Allscanner, representing the next generation of diagnostic technology. The product adopts a newly upgraded dual core high-speed processor, fully supports multi-channel CAN-FD/DolP and traditional diagnostic protocols, and is compatible with more original diagnostic software. VCX-FD also supports local and super remote dual-mode diagnostics, providing users with an excellent diagnostic experience.

Product Features

Ultimate performance vehicle diagnostic interface

Dual core architecture collaborative work, stronger communication performance

- The 550MHz ARM protocol processor implements CAN-FD and all traditional vehicle bus protocols.
- Implementation of DolP Super Diagnostic Gateway with 560MHz MIPS Network Processor. Dual core processors communicate through 100Mbps Ethernet, with high bandwidth and low latency.
- The diagnostic communication speed is several times faster than the previous generation product.

Concurrent dual operating systems for more stable software operation



The RTOS real-time operating system ensures multitasking and high concurrency communication of vehicle bus protocols.



The OpenWrt network operating system flexibly connects multiple network interfaces and vehicles.

Support more comprehensive vehicle bus protocols

- Integrated OBD intelligent protocol multiplexer chip, all pins can intelligently switch any protocol.
- Supports 3-channel CAN-FD multi-channel concurrent communication, with a maximum support of 5MBps high-speed communication.
- Supports ISO-13400 standard dual DolP interfaces Option 1 and Option 2.

Flexible and easy-to-use connection method

- The host communication interface supports multiple connections such as USB/RJ45/WLAN, making it flexible and easy to use.
- Built in wireless routing mode, the diagnostic computer can connect directly to devices wirelessly.
- Supports wireless workstation mode, devices can connect to wireless LAN, and any computer can connect devices.
- Support mapping vehicle DolP Ethernet to WLAN for wireless DolP diagnosis.

Brand new exterior design

- Adopting an integrated design with OBD-II interface, it is convenient for plug and play.
- The Type-C interface with reinforced design can prevent shaking and detachment, making the connection more reliable.

More powerful vehicle diagnostic equipment

More comprehensive factory vehicle diagnosis

- VCX-FD is now compatible with 17 original diagnostic vehicle brands.
- After the hardware update, it fully supports new vehicle models and original factory diagnostic software based on CAN-FD and DolP.

- Various advanced diagnostic and programming functions have reached the original factory level, with speeds even exceeding those of original equipment.
- Support one click installation, uninstallation, and upgrade of original factory supported drivers, easy to use.

Updated international standard API interface

- SAE-J2534-1/2 PassThru V04.04 & V05.00
- ISO-22900 D-PDU API for MVCI
- RP-1210A/B/C API for VDA
- Can provide API interfaces for all platforms (Windows/Linux/Android)
- J2534 original factory level ECU programming function
- ECU software upgrade and calibration.
- ECU replacement flashing and programming.
- J2534 controllable programming voltage (5-20V) output.

Dual mode intelligent remote diagnosis

- Super remote diagnosis only requires device networking to achieve original factory online diagnosis.
- Compatible with remote diagnosis, it can support remote diagnosis of various special function devices. The device supports one click distribution network function and quickly connects to the remote diagnostic platform.

Supported original vehicle diagnostic functions

| Brand | | Vehicle model | Original diagnostic software | support |
|---|---------|---|------------------------------|---------|
|  | BENZ | Maybach Smart, FUSO | XENTRY Diagnosis & DAS & DTS | ✓ |
|  | BMW | BMW, Rolls Royce MINI | ISTA-D/P & E-Sys & INPA | ✓ |
|  | VW | Volkswagen, SEAT, Skoda, Bentley, Lamborghini | ODIS & ODIS-Engineer | ✓ |
|  | AUDI | Audi | ODIS & ODIS-Engineer | ✓ |
|  | PORSCHE | Porsche | PIWIS-2 | ✓ |
|  | PT3G | Porsche 3 | PIWIS-3 | ✓ |
|  | JLR | Jaguar, Land Rover | JLR SDD | ✓ |
|  | JLR | Jaguar, Land Rover | JLR SDD | ✓ |
|  | VOLVO | VOLVO | Volvo VIDA | ✓ |
|  | GM | Chevrolet, Buick, Cadillac, Opel, Holden | GM GDS2 & Tech2Win & RDS | ✓ |
|  | FORD | FORD | FORD IDS | ✓ |
|  | MAZDA | MAZDA | MAZDA IDS | ✓ |
|  | TOYOTA | Toyota, Lexus, Scion | TOYOTA Techstream TIS | ✓ |

| | | | | |
|---|---------|------------------|-----------------------------|---|
|  | HONDA | Honda, Acura | HONDA Diagnostic System HDS | ✓ |
|  | SUBARU | SUBARU | Select Monitor SSM3/SSM4 | ✓ |
|  | NISSAN | Nissan, Infiniti | Consult-III Plus | ✓ |
|  | RENAULT | Renault, Dacia | Renault CAN Clip | ✓ |
|  | PSA | Peugeot Citroen | PSA Diagbox | ✓ |

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technical specifications Hardware specifications

| | Item | Describe |
|--|--------------------------------|--|
|  | Network Processor | 32bit 560MHz MIPS 32MB FLASH 128MB DDR |
|  | Protocol processor | 32bit 550MHz ARM 1MB FLASH |
|  | Diagnostic interface (vehicle) | SAE-J1962 standard OBD-II diagnostic interface |
|  | DoIP interface (vehicle) | ISO-13400-4 Option1/2 Ethernet |
|  | Wired interface (PC) | USB TYPE-C |
|  | Network Interface (PC) | USB TYPE-C to RJ-45 Ethernet |
|  | Wireless interface (PC) | WLAN 802.11 b/g/n wireless network |
|  | KEY | Fn function key: Press and hold for 3 seconds to enter super remote mode |
|  | LED Lights | Power, wireless, communication, vehicle, and remote. |
|  | Power | Vehicle power supply: DC 9V -36V (compatible with 12V and 24V) |
|  | Power consumption | 2W |
|  | Size | L x W x H = 138 x 47 x 21 (mm) |
|  | Weight | Equipment weight: 0.3Kg Packaging weight: 0.8Kg |
|  | Shell | Reinforced plastic shell |
|  | Operation temperature | -20～+70 ° C |
|  | Storage temperature | -40～+85 ° C |
|  | Standard certification | EU: CE US: FCC |

Indicator light

| | Describe | Color | Meaning |
|---|------------------------------|------------|--|
|  | Equipment working status | Red | Breathing flickers when starting normally Flash quickly during hardware failure |
|  | Wireless network status | Blue | Wireless network status flashing rapidly during wireless communication Slow flashing during wireless network distribution |
|  | Host communication status | Two colors | Blue flashing during USB communication Green flashing during LAN communication |
|  | Vehicle communication status | Two colors | Blue flashing during traditional protocol Green flashing during DoIP protocol |
|  | Remote diagnostic status | Green | Slow flashing after remote connection Quick flashing during remote diagnosis |

Supported vehicle bus protocols

|  |  |
|---|---|
| ISO-13400 DoIP Option1/2 | VAG TP20 CAN (SAE-J2819) |
| ISO-15765 CAN / CANFD | VAG TP16 CAN |
| ISO-11898-2 CAN | VAG KW81 (SAE J2818) |
| ISO-11898-3 FT CAN | SAE-J2610 SCI (Chrysler) |
| SAE-J2411 SWCAN (GMLAN) | SAE-J1567 CCD BUS (Chrysler) |
| ISO-9141 K-Line | SAE-J2809 HONDA DIAG-H |
| ISO-14230 K-Line | NISSAN DDL UART with CLOCK |
| ISO-17987 LIN BUS | BMW DS2 |
| SAE-J1850-PWM (FORD SCP) | FORD UBP |
| SAE-J1850-VPW (GM Class2) | BENZ KWFB |
| SAE-J2740 GM ALDL | BENZ MB-ISO |

OBD-II pin bus protocol coverage

| PIN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| BAT+ | | | | | | | | | | | | | | | | ● |
| GND | | | | ● | ● | | | | | | | | | | | |
| DoIP-1 | | | ● | | | | | ● | | | ● | ● | ● | | | |
| DoIP-2 | ● | | | | | | | ● | ● | | ● | ● | | | | |
| CANFD1 | | | | | ● | | | | | | | | | ● | | |
| CANFD2 | | | ● | | | | | | | ● | | | | | | |
| CANFD3 | ● | ● | ● | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| SWCAN | ● | ● | ● | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| PWM | | ● | | | | | | | | ● | | | | | | |
| VPW | | ● | | | | | | | | | | | | | | |
| J1708 | | | | | | | | | | | ● | ● | | | | |
| K-LINE | ● | ● | ● | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| UART | ● | ● | ● | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| IO | ● | ● | ● | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ADC | ● | ● | ● | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| VPROG | | | | | | ● | | ● | ● | | ● | ● | ● | ● | ● | ● |

Product attachments

| | Describe | Specifications |
|--|---------------------------|---|
|  | VCX-FD | 138 x 47 x 21 (mm) |
|  | RJ45 conversion interface | USB-C to RJ45 Ethernet port, 0.2 meters |
|  | USB-C communication cable | USB-C to USB-A, 2 meters |
|  | Box | 175 x 130 x 45 (mm) |

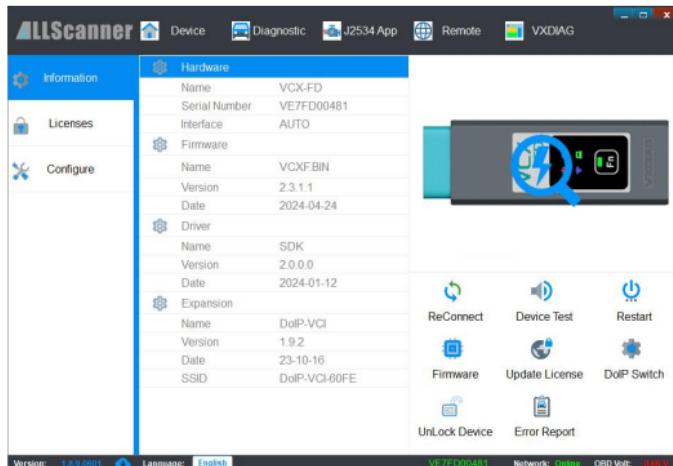
Software installation

Get installation program

Before starting car diagnosis with the device, the VX Manager management tool and driver must be installed on the PC, which is included in the product CD-ROM or you can download the latest version of the installation program through the following link:

<http://www.allscanner.com>

<http://www.vxdiag.net/#download>



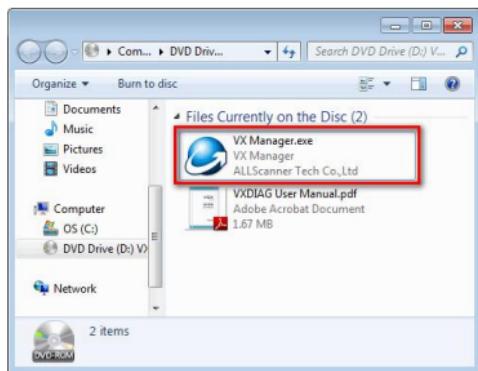
Software installation requirements

- Processor: 1.6 GHz or faster.
- Memory: DDR 4GB or above.
- Hard drive: 80GB or above.
- Network interface: LAN 100/1000M.
- Communication interface: USB 2.0 or USB 3.0.
- Wireless network: 802.11a/b/g/n WiFi.
- Operating System: Windows 10/8/7.
- Browser: Internet Explorer 11 or later.
- The DoNet remote diagnostic component requires the use of Internet Explorer 11 or later versions.
- Windows 7 system requires upgrading IE browser to the latest version.
- Download Internet Explorer 11 (32-bit)
- Download Internet Explorer 11 (64 bit)
- Attention: Windows XP system has stopped supporting!

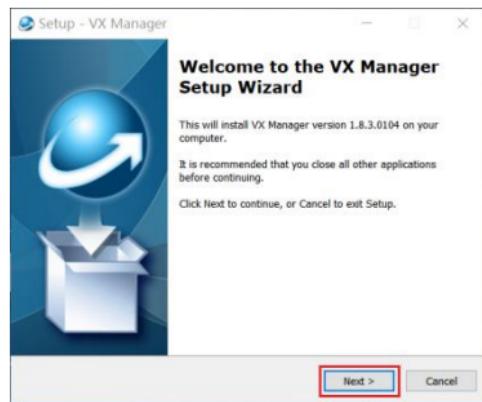


Please disable or close antivirus software and run the installation program with administrator privileges.

1.
Run the installation program, double-click to run the VX Manager installation program.



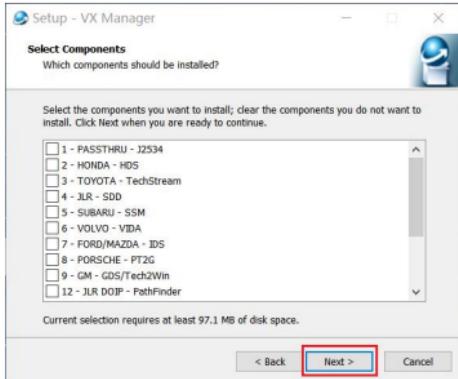
2.
Start installation
Welcome to the installation interface, click [Next] to continue.



3.

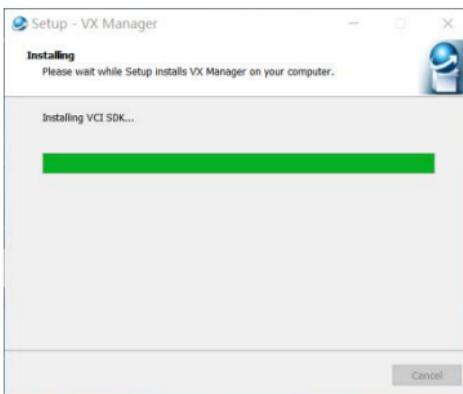
Select installation components

During this process, you can select the original diagnostic driver to be installed, or use VX Manager to freely install the required original driver after installation.



4.

Installation in progress
The installation process may take several minutes, please be patient.



5.

Installation is complete
On the installation completion interface, click [Finish] to complete.

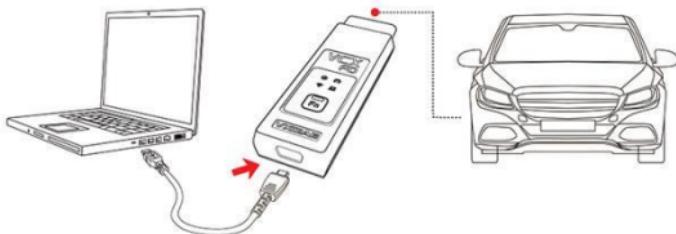


Start using

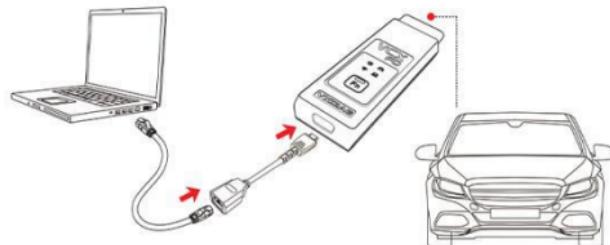
Hardware connection

Before starting to use the device, it is necessary to connect the hardware correctly: the vehicle end of the device is connected to the vehicle through an OBD-II diagnostic cable, and there are three ways to connect the device to the PC end:

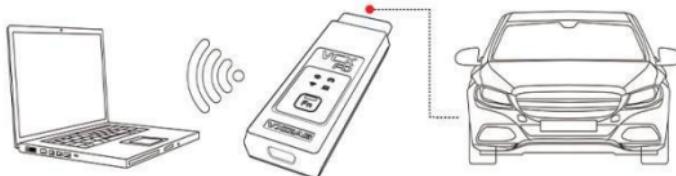
The PC end of the device is connected to the PC via a USB communication cable;



The PC end of the device is connected to the PC through a LAN network cable;



The device is connected to the PC via Wi Fi



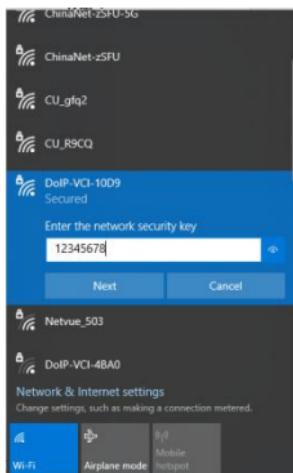
WIFI connection

The device is connected to the vehicle's power supply and starts normally.

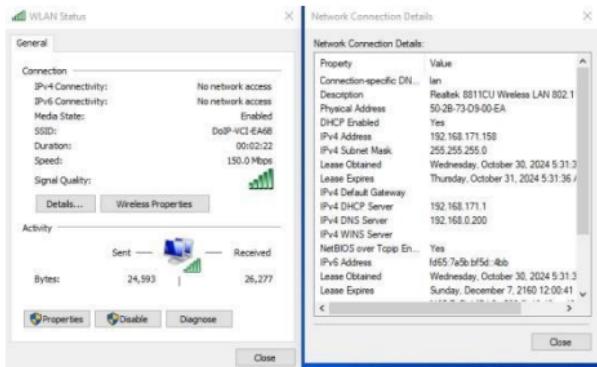
Search for wireless network on the computer: DoIP-VCI-XXX, select Auto Connect, and then click Connect.



Enter the wireless network password: 12345678, click next.



After a successful wireless network connection, the following wireless network information can be seen in the Windows network connection:

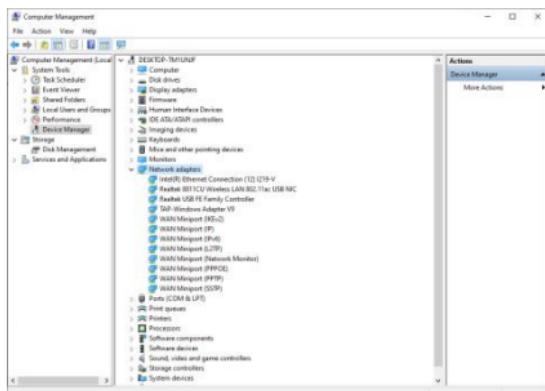


USB connection

When connecting to a USB LAN for the first time, Windows will automatically install drivers

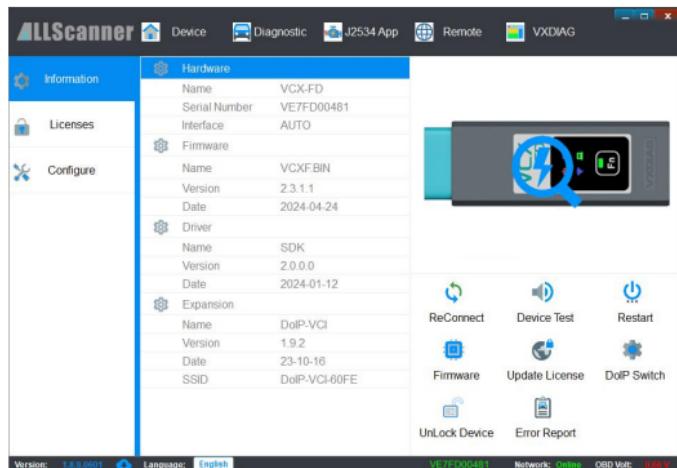


After the driver installation is successful, you can see the network adapter in the Device Manager: Realtek USB FE Family Controller.



Device connection detection

After the device is correctly connected according to the above method, start the VX Manager management software. If the serial number, version, name, and other information of the VCX device can be displayed correctly, it indicates that the device has been correctly connected to the computer.

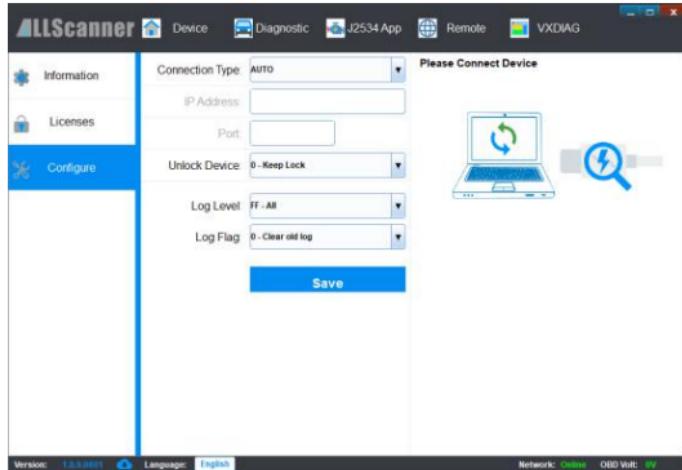


basic function

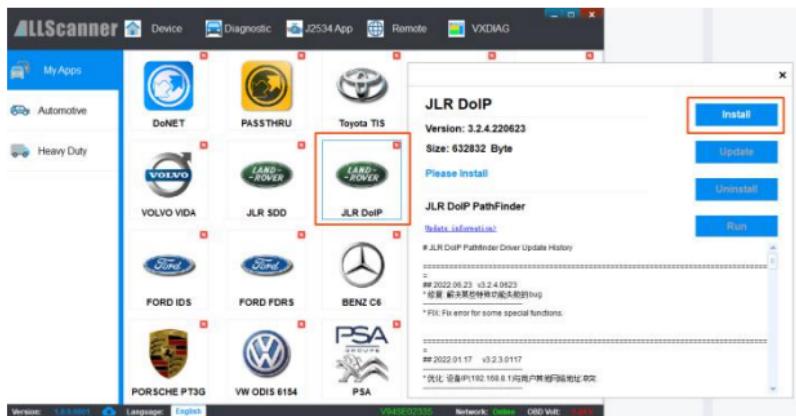
| | | |
|--|--------------------|--|
| | Reconnect | Reconnect the device and refresh the device information. |
| | Equipment Testing | The device self-tests and the LEDs flash and beep. |
| | Restart the device | The device is reset and restarted. |
| | Update Firmware | Download and update the device firmware program online. |
| | Update License | Download and update device authorization data online. |
| | DoIP switch | Test vehicle DoIP communication by activating or deactivating the DoIP protocol. |
| | Release occupation | Manually release the equipment after it is occupied. |
| | Error report | View and get the device error log. |
| | Check updates | Check for updates to the VX Manager software. |

Device Connection Configuration

- The VX Manager default connection type configuration is: AUTO automatic, can support automatic identification of all connections, generally without modification.
- If you confirm that you need to modify the connection type, you can modify it in the Device Management-> Device Configuration interface.

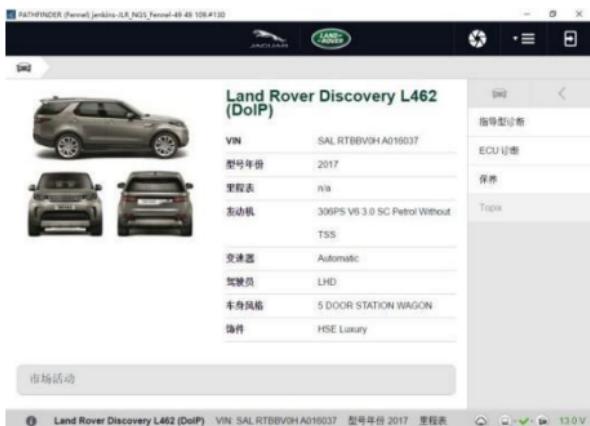


Open the [Vehicle Diagnosis]->[My Application] page, click the diagnosis application to be installed, such as [JLR DoIP], and the driver information interface will pop up. Click [Install] to start installing



Start diagnosis

Open the diagnostic software and automatically scan the vehicle model information. The diagnosis results are as follows:



The screenshot shows the VCX software interface. At the top, it displays the vehicle model as 'Land Rover Discovery L462 (DolP)'. Below this, there are two images of the vehicle: a side profile and a front view. To the right of the images is a table listing the vehicle's specifications. The table includes the following data:

| | |
|------|------------------------------------|
| VIN | SALRTBBV9HA16037 |
| 型号年份 | 2017 |
| 里程表 | n/a |
| 发动机 | 306PS V8 3.0 SC Petrol Without TSS |
| 变速器 | Automatic |
| 驾驶员 | LHD |
| 车身风格 | 5 DOOR STATION WAGON |
| 部件 | HSE Luxury |

On the right side of the interface, there is a vertical sidebar with several options: '指导型诊断' (Guideline Diagnosis), 'ECU 读写' (ECU Read/Write), '保养' (Maintenance), and '拓扑' (Topology). The '拓扑' option is currently selected and highlighted in grey. At the bottom of the interface, there is a status bar showing the vehicle model, VIN, year, and other diagnostic information, along with some icons and a battery level of 13.0V.

Equipment authorization

VCX devices manage device functions through license, and the products purchased by users may include multiple licenses based on model and configuration.

List of authorized functions supported by VCX series products:

| | | | |
|---|----------|---|--------|
|  | DONET |  | VOLVO |
|  | PASSTHRU |  | FORD |
|  | BENZ |  | MAZDA |
|  | BMW |  | GM |
|  | VW/AUDI |  | TOYOTA |
|  | JLR |  | HONDA |
|  | PORSCHE |  | SUBARU |

View Authorization

- Connect VCX devices to computers.
- Run VX Manager management software
- Open the [Device Management] → [Device Authorization] page to see a list of all authorizations supported by the current device.

| # | Name | Expire Date | License Status |
|----|----------|---------------------|----------------|
| 1 | DONET | 2030-12-31 15:00:00 | Available |
| 2 | PASSTHRU | 2030-12-31 15:00:00 | Available |
| 3 | PDU | 2030-12-31 15:00:00 | Available |
| 4 | TOYOTA | 2030-12-31 15:00:00 | Available |
| 5 | HONDA | 2030-12-31 15:00:00 | Available |
| 6 | SUBARU | 2030-12-31 15:00:00 | Available |
| 7 | VOLVO | 2030-12-31 15:00:00 | Available |
| 8 | JLR | 2030-12-31 15:00:00 | Available |
| 9 | GMGDS | 2030-12-31 15:00:00 | Available |
| 10 | GMT2WIN | 2030-12-31 15:00:00 | Available |
| 11 | FORD | 2030-12-31 15:00:00 | Available |
| 12 | MAZDA | 2030-12-31 15:00:00 | Available |
| 13 | BENZ | 2030-12-31 15:00:00 | Available |
| 14 | BMW | 2030-12-31 15:00:00 | Available |
| 15 | PORSCHE | 2030-12-31 15:00:00 | Available |
| 16 | PT30 | 2030-12-31 15:00:00 | Available |

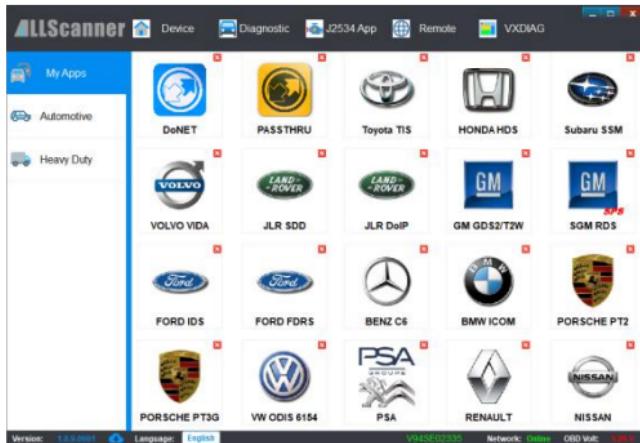
Update authorization VCX

- VCX device authorization must be regularly updated online. If it is not updated for more than 60 days, the device authorization will expire, which will affect the use of authorization functions.
- Updating the license requires a computer connected to the Internet.
- The VX Manager management software automatically updates authorization by default when it starts (update interval of 24 hours).
- Connect VCX devices to computers.
- Run the VX Manager management software, and the authorization will be automatically updated when the software starts.
- Click on 'Update Authorization' on the 'Device Management' → 'Device Information' page to manually update the authorization.

| Name | VCX-FD |
|---------------|------------|
| Serial Number | VE7FD00481 |
| Interface | AUTO |

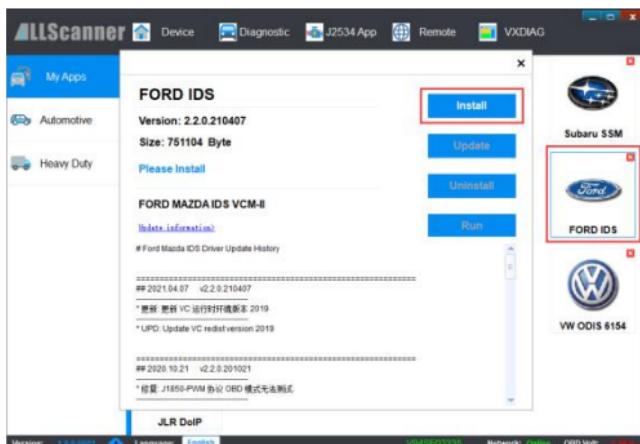
Diagnosis driven management

Launch the VX Manager device management software, open the 'Vehicle Diagnosis' tab, and then click on the 'My Applications' option on the left side of the page to display authorized and available diagnostic drivers.



Install diagnostic driver

Open the 'Vehicle Diagnosis' -> 'My Applications' page, click on the diagnostic application you want to install, such as 'FORD IDS', and the driver information interface will pop up. Click [Install] to start installing the driver.



Driver installation process

Installing VX Manager will retrieve the latest diagnostic drivers from the server and install them, after which you can start using the original diagnostic features. The installation interface is as follows:



Update diagnostic driver

With the upgrade of original software and continuous optimization and updates of diagnostic drivers, please always stay up-to-date!

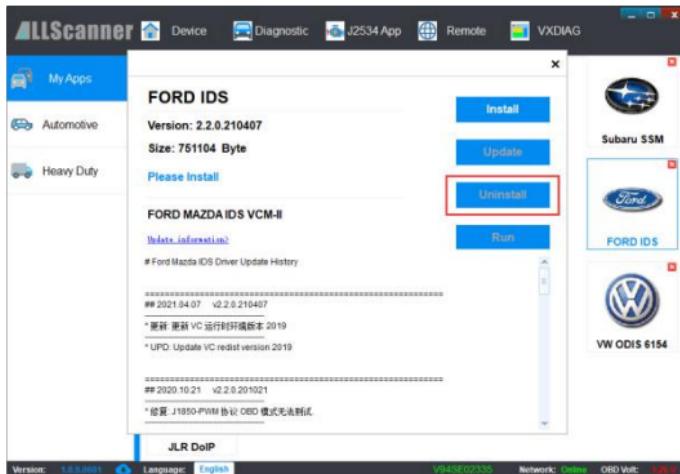
Open the "Vehicle Diagnosis" ->"My Applications" page. When a new version of a diagnostic driver is released, a "+" will be displayed in the upper right corner. Open the driver details and click "Update" to start upgrading the driver.



Uninstall diagnostic driver

After uninstalling the VCX diagnostic driver, the original software is restored to its original state (which can be used with the original equipment).

Open the Vehicle Diagnosis -> My Applications page, click on the diagnostic application you want to uninstall, such as [FORD IDS], and the driver information interface will pop up. Click [Uninstall] to start uninstalling the driver.



Warranty clause

1. One year limited warranty
2. The product warranty period is one year. The warranty start time and end time shall be based on the date of supply invoice. If the invoice is lost, the purchase time shall be calculated according to the factory date.
3. Under normal use conditions within the product warranty period, if the product or any part is proved to be damaged due to design, material or process defects, the company will repair or replace (new product or modified part) free of charge according to the situation with the warranty card.
4. The freight for repair within the warranty period shall be paid by the supplier, and the freight for repair after the warranty period shall be borne by the user.
5. The warranty service is only limited to the equipment itself, and the company is not responsible for any damage other than the equipment.
6. For the computer equipment not directly assembled by the Company, the supplier shall be responsible for the after-sales service of the computer part.
7. For the damage beyond the scope of warranty, Allscanner will also provide normal warranty for customers without charging maintenance fees. In case of replacement of materials, the user shall be notified for approval, and the material cost and transportation cost shall be borne by the user.

The warranty does not apply to:

1. Any product damage caused by abnormal use or abnormal conditions, such as fire, soil, sand, water, falling or extrusion, chemical corrosion, blown fuse, theft, improper use of power supply, irresistible natural disasters, etc.
2. Damage caused by unauthorized disassembly, alteration, improper installation and maintenance.
3. Damage caused by an operation intended for an illegal purpose, such as reading or changing a program in a device.
4. Products whose mechanical or electronic serial numbers have been deleted, altered, or destroyed.
5. Due to exposure to high temperatures or extreme environments.
6. Natural wear or damage of normal parts under the condition of conforming to relevant national product quality regulations.

Services and Support

Technical support

You can visit <http://www.vxdia.net> the Wiki Technical Documentation Center at www.example.com, which contains all the important documentation resources:

VXDIAG Software Installation and Use

Introduction and installation of various original diagnostic software

Various original diagnosis software test cases and videos

Maintenance services

If the device needs to be returned for repair, download and complete the Service Repair Form. Be sure to fill in the following information:

Contact Name

Telephone number

Product Serial Number

Problem Description

Warranty card

Return address

Please contact us as follows:

| | |
|--------------------|---|
| address | 103. A Building, Shenzhen Academy of Aerospace Technology, 10 South Road, High-tech Zone, Nanshan District, Shenzhen P.R. China |
| Telephone | +86-0755-33000960 |
| Zip Code | 518057 |
| Product Consulting | info@allscanner.com |
| Technical support | support@allscanner.com |

FCC Radiation Exposure Statement:

This device meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health. The SAR limit of USA (FCC) is 1.6 W/kg averaged. Device types: Auto diagnostic scanner (FCC ID: 2BLUG-VCXFD) has also been tested against this SAR limit. SAR information can be viewed on-line at <http://www.fcc.gov/oet/ea/fccid/>. Please use the device FCC ID number for search. This device was tested simulation typical 0mm to body. To maintain compliance with FCC RF exposure requirements, use accessories should maintain a separation distance between the user's bodies mentioned above, the use of holsters and similar accessories should not contain metallic components in its assembly, the use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

FCC Warning

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: 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.





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