



X100 PAD2

Auto Key Programmer

User Manual

Declaration

1. This manual is designed for the usage of X100 PAD2, applying to X100 PAD2 smart automotive diagnosis platform.

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Xtool X100 PAD2 User Manual Instructions

Please read this user manual carefully before using the scanner.

When reading the manual, please pay special attention to the words "Note", "Caution" or "Warning", read them carefully for appropriate operation.

Xtool X100 PAD2 Diagnosis System Main Unit Maintenance

Avoid shaking or dismantling the unit as it may damage the internal components.

Do not use hard or sharp objects to touch the LCD screen; do not use excessive force; do not expose the screen to strong sunlight for a long period.

Caution: keep it away from water, moisture, high temperature or very low temperature.

If necessary, calibrate the screen before testing to ensure the accuracy of LCD performance.

Keep the main unit away from strong magnetic fields.

Operation Instructions

For safe operation please follow the instructions below:

Keep the scanner away from heat or fumes when using it.

If the vehicle battery contains acid, please keep your hands and skin or fire sources away from the battery during testing.

Exhaust gas of vehicle contains harmful chemicals, please ensure adequate ventilation.

Do not touch the cooling system components or exhaust manifolds when engine is running due to the high temperatures reached.

Make sure the car is securely parked, Neutral is selected or the selector is at P or N position to prevent the vehicle from moving when engine starts.

Make sure the (DLC) diagnostic link connector is functioning properly before starting the test to avoid damage to the Diagnostic Computer.

Do not switch off the power or unplug the connectors during testing, otherwise you may damage the ECU and/or the Diagnostic Computer.

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CHAPTER I About X100 PAD2

1. Appearance

1.1. Front View

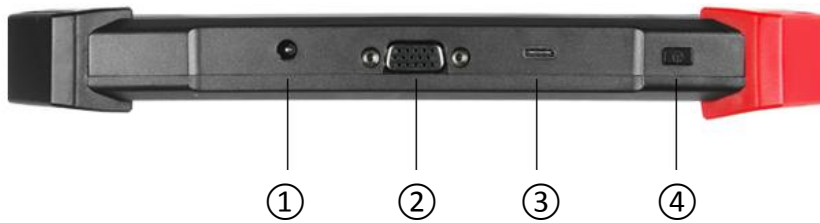


1.2. Back View



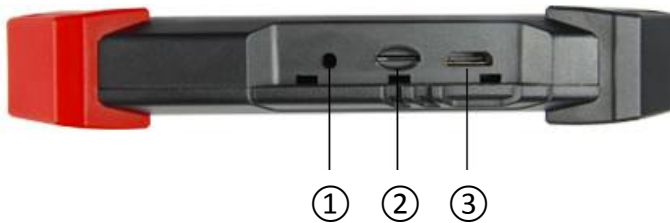
2. Layout of X100 PAD2 Tablet

2.1. Top View of X100 PAD2 Tablet



- ① Charging port: Battery charging
- ② DB15 Port: Supports wired connection with car by the cable
- ③ USB Type C Port: Connect with PC for data transmission
- ④ Power Button: Power on or power off

2.2. Side View of X100 PAD2 Tablet



- ① Earphone jacket
- ② TF Card Port
- ③ Mini HDMI Port

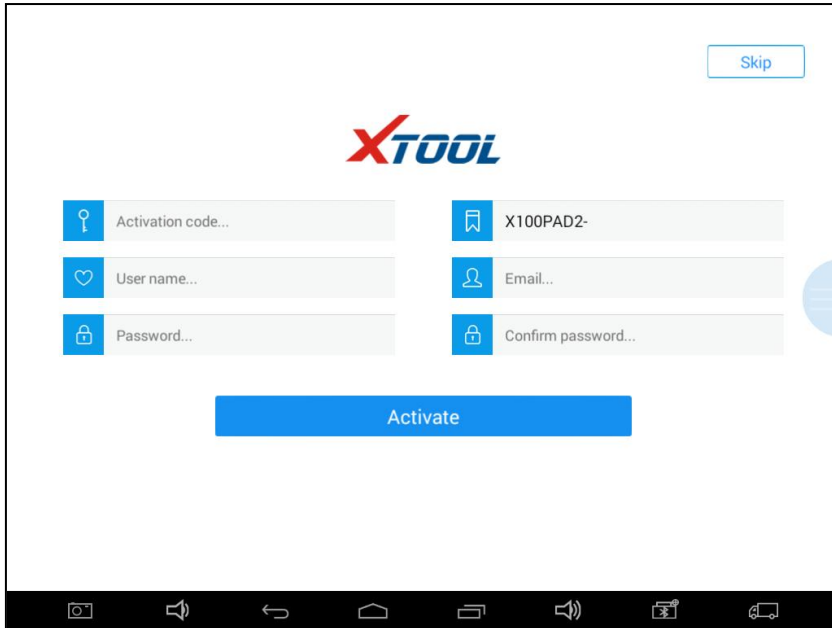
3. X100 PAD2 Technical Parameters

Operating System:	Android
Processor:	Quad-core 1.6GHz Processor
Memory:	1G RAM,16G FLASH
Display:	8 inch IPS LCD with 1024x768p resolution
TP:	8 inch multi-point touch screen
Camera:	Rear camera, 5.0 Megapixel, AF with Flashlight
Sensors:	Gravity Sensor, Ambient Light Sensor
Audio Input/Output:	Microphone, Dual Speakers, 3-Band 3.5mm stereo/standard headset jack
Power and Battery:	12V
Power Voltage:	29.6W
Power Consumption:	-20 to 50°C(-4 to 126°F)
Operating Temperature:	4000mAh, 7.4V lithium-polymer battery
Humidity:	<90%
Dimension(L×W×H):	240×177×30mm

CHAPTER II How to Use the X100 PAD2

1. X100 PAD2 Activation

1.1. Please activate X100 PAD2 before you use it to test vehicles. And please connect WiFi first.



1.2. Input activation code (on the manual cover), product serial number (each device will have a serial number and activation code), nickname (workshop's name or user's nickname), login account (can be your email address or cell phone number) and password, the system will then save it. Activation is a one time process. The diagnostic application will start after activation.

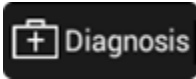
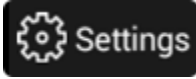
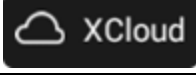
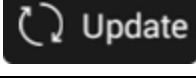
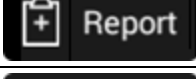
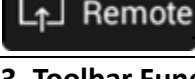
2. X100 PAD2 Main Interface and Functional Buttons Descriptions

2.1. Main Interface









Tap on X100 PAD2 application icon, the main interface and sub-menus will be shown as below.



2.2. Sub-menus and Function Buttons

Function Buttons	Descriptions
 Diagnosis	Opens the X100 PAD2 diagnostic application. It can read diagnostic information, view live data, perform actuation tests and special functions etc.
 Settings	By selecting “Setting”, users can access the language setting and other system related settings.
 XCloud	Online Communication Platform for X100 PAD2 users. (English version is coming soon)
 Update	Click UPDATE after X100 PAD2 is connected to internet, then you can download the latest diagnostic software directly to X100 PAD2.
 Report	Users can view all the diagnostic reports and diagnostic data generated in the diagnosis process.
 Remote	Users can get remote help and support when needed.

2.3. Toolbar Function Buttons

Function Buttons	Descriptions
	Screen capture
	Turn down the volume
	Return to previous interface
	Return to the main interface of Android System
	Show (recently used) applications
	Turn up the volume
	Click here to return to the diagnostic interface
	Click here to return to diagnostic vehicle models interface

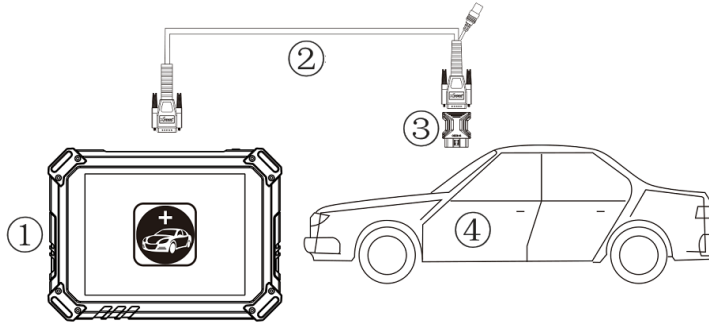
3. Vehicle Connection Diagnosis

3.1. Vehicle Connection Test

a. Turn on X100PAD2 tablet

b. Connect cables and X100PAD2 in following order: ①→②→③→④

c. Switch on the ignition and tap on X100PAD2 application to test vehicles. (Shown as follows)



- ① X100 PAD2 Mainframe
- ② Main Test Cable
- ③ OBDII Connector
- ④ Vehicle

3.2. Precautions before Use

3.2.1. The vehicle power supply has to meet the normal voltage limits DC 9-15V

3.2.2. Users should check the position of the DLC port and ensure the OBDII 16pin connector and the DLC port are correctly aligned before attempting to connect.

3.2.3. When taking some special functions tests, users are required to operate the device according to operating instructions. For vehicle, it has to strictly meet the requirements, for example, the conditions that some vehicle models need to be reached are as follows: engine temperature 80°C/105°C, turn off the loads (such as headlights, air-conditioner, etc.), put accelerator pedal in released position, etc.

3.2.4. If users can not find the tested vehicle model or electronic control system in the X100 PAD2 test menu, they may need to update the software or consult Xtool technical service department.

3.2.5. Please ensure that only official XTOOL cables and connectors are used to prevent damage to the unit.

3.2.6. Before powering off the unit, please ensure that you cancel or complete the current task or function and return to the main interface, then power off.

3.2.7. Do not use excessive force to operate the touch screen.

3.2.8. During long period of non-use, please disconnect the power and turn off the

X100 PAD2 unit.

4.Special function and Diagnosis

4.1. Menu Options

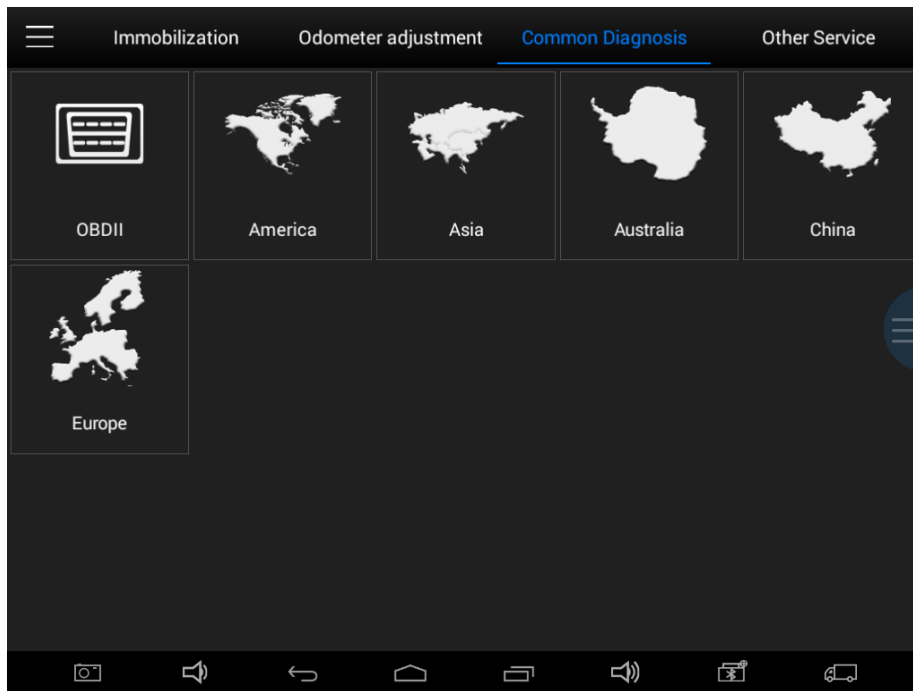
4.1.1. After the X100 PAD2 mainframe is connected to the vehicle via main test cable, Immobilization can be performed. The Immobilization interface is shown as below:



4.1.2. X100 PAD2 lists mileage adjustment separately. The Odometer Adjustment interface is shown as below:



4.1.3. Users can choose the relevant menu for the vehicle being tested: selection for **Europe** will enter the European cars menu, selection for **Asia** will enter the Asian cars menu, selection for **America** will enter the American cars menu.

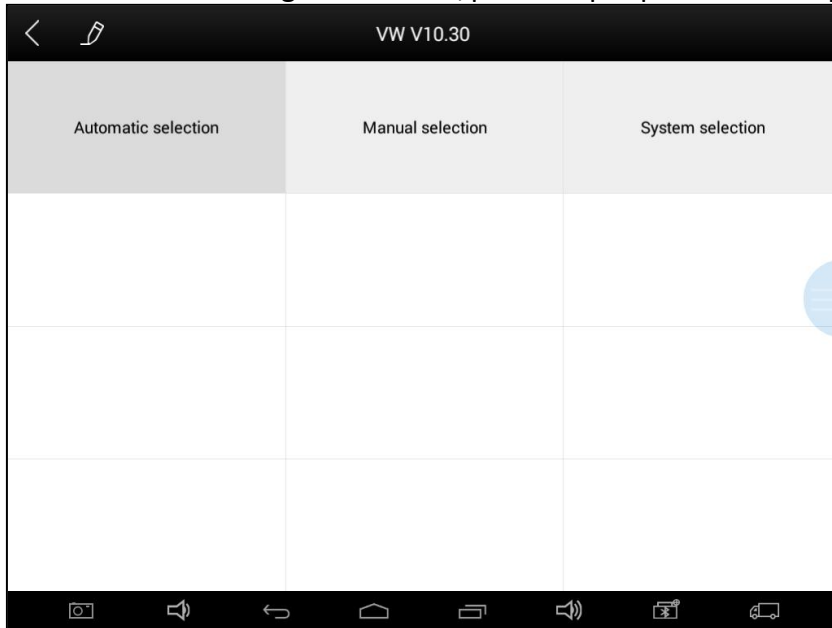


4.1.4. Besides the usual system diagnostic functions, XTOOL also has developed a series of special diagnostic functions for certain vehicles as follows:



4.2. Test Functions: it can read and clear faults codes for all systems of vehicles.

4.2.1. Using **VW** as an example, select **Common Diagnosis**, then select **EUROPE**. Choose the **VW** word. If the word is not showing on the screen, please swipe up or down to display it.



PLEASE NOTE: Different vehicles have different menus and systems.

Common main function menu includes the following options:




Read ECU: This function is to read the ECU version information, which is the equivalent of “System Identification” or “System Information” in some electronic control systems.

This will allow you to read ECU related software and hardware versions, models and production date of diesel engine, part number, etc.

Read DTCs: read the trouble codes that are stored in the ECU.

Clear DTCs: clear current and historical trouble codes memory in ECU. The trouble codes can not be erased without eliminating the fault that the code relates to. **TIP:** Save or print the currently stored fault codes before clearing them to provide help in the case of an intermittent fault.

4.2.2. Toolbar function buttons descriptions

Function Buttons	Descriptions
	Return to previous interface
	Print test data
	Click to record the data, click again to send your feedback to XTOOL service center

After clicking the data record button the second time the data feedback page will appear as shown below, showing diagnostic software version, vehicle being tested, and the steps performed in the diagnostic process. Users can then enter the nature

of the problem and any other relevant information and send the form to the Xtool engineering department.

FEEDBACKS

Cancel Send

SUBJECT: 2015/05/28 07:18:56

PROBLEM:

VEHICLE INFORMATION

GM -> after 2010 -> (D)2013 ->
 Passenger Car -> Chevrolet -> F ->
 Powertrain -> [J] 6.2L V8 [L99] ->
 Automatic Transmission -> Engine
 Control Module -> Diagnostic Trouble
 Codes [DTC]

SOFTWARE INFORMATION

EN_PS_GM_V7.01

USER INFO

CONTACT:
 TEL.:
 EMAIL:

ATTACHMENT

2015-05-28 07-18-56.log 0.16 K

4.3. Read ECU

This function is used to read ECU version information, which is the equivalent of “System Identification” or “System Information” in some electronic control systems. This will allow you to read ECU related software and hardware versions, models and production date of diesel engine, part number, etc. shown below:

01 - Engine

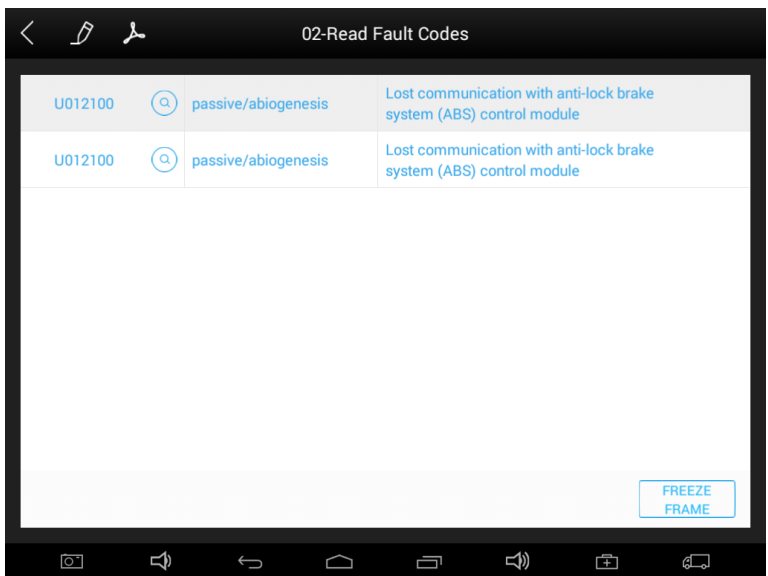
01-Control Unit Info

VIN:	WVGA597P5DD038038
VW/Audi part number:	7P0907401G
System description:	3.0TDI EDC17
Hardware version:	H41
Software version:	0002
FAZIT identification:	BPG-81018.04.1313080026

OK

4.4. Read DTCs

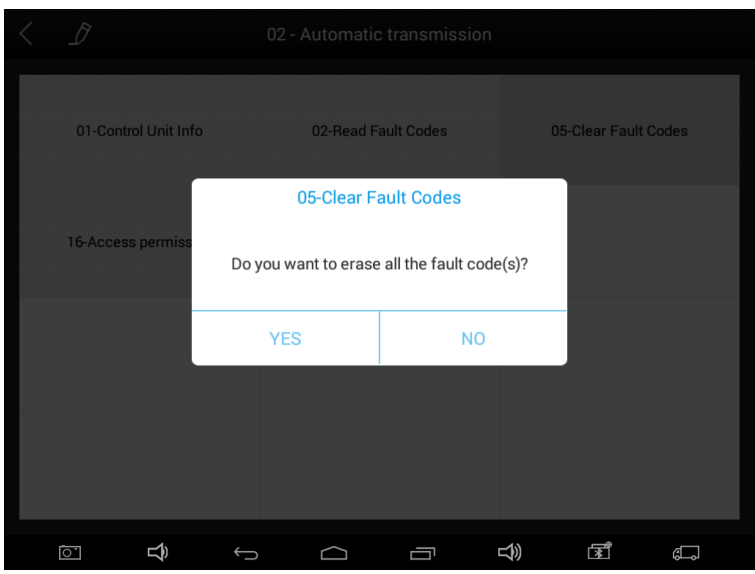
Select **Read Fault Codes** to read the trouble codes stored in the ECU. The screen will show the trouble codes and their definition, shown below:



Tip: In the process of diagnosis, if the device shows “System is OK” or “No Trouble Code”, it indicates that the ECU has not detected a fault in any of the circuits that it monitors. If there is a fault which is not being recorded it may be that the fault is with a part of the system not under the control of ECU, such as a mechanical system fault. It is also possible that the signal of a system sensor may be incorrect but still within the ECUs stored limits, this can be verified in Live Data.

4.5. Clear DTCs

4.5.1. Return to the previous step, select **Clear Fault Codes** to clear the current and historical trouble codes memory in ECU. Performing this function will clear all the current and historical trouble codes. Please ensure that the trouble codes have been recorded before clearing, shown below:



4.5.2. Click **YES** to confirm the operation, if the communication is normal, it will show **“Trouble Codes Successfully Cleared”** or **“Trouble Codes Cleared”**. Generally, users will need to re-read trouble codes after clearing them to confirm that the trouble codes have been cleared.

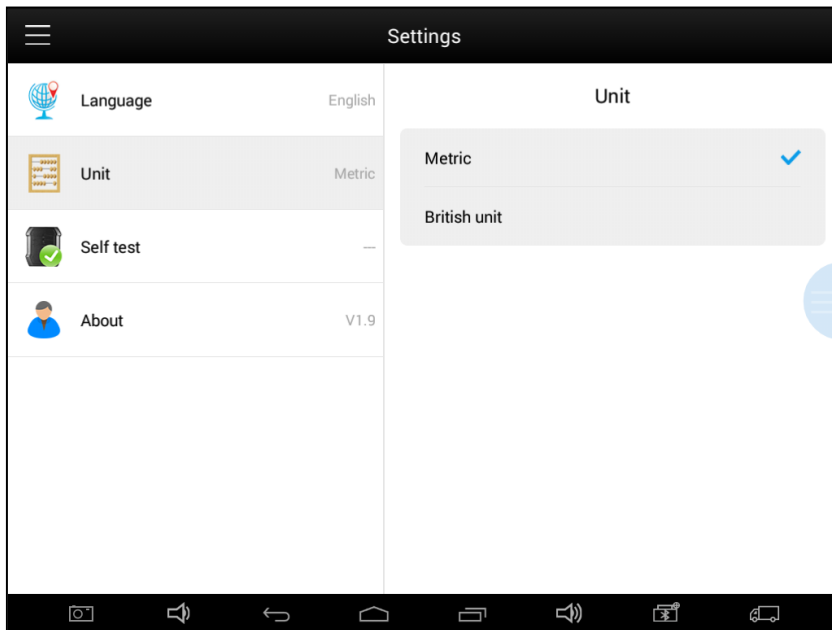
5. Settings

By selecting **Settings** users can set the language, unit and other system related options.

Languages: select the language. Please tick the required option from the multi-language options on the right.



Units: Select unit of measurement. Users can select Metric or British Unit.

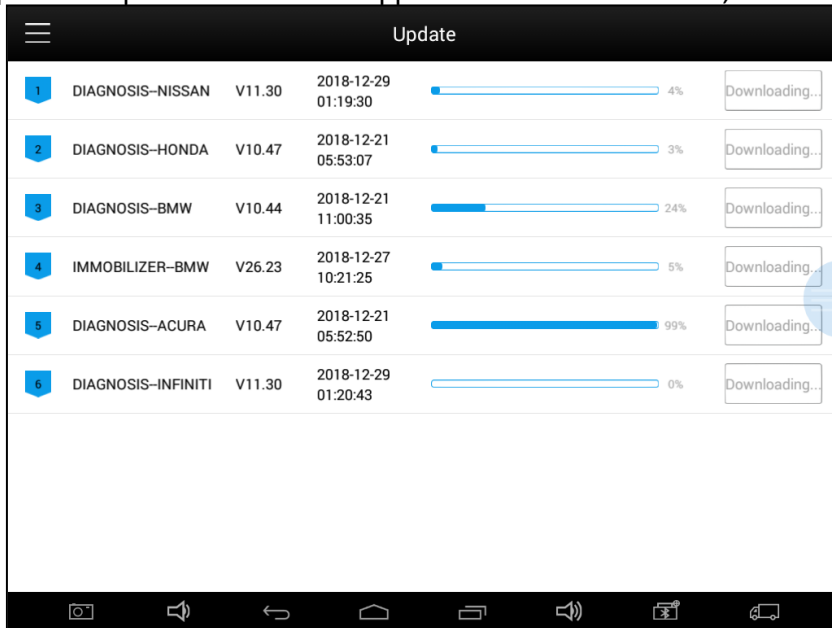


6. XCloud (English version is coming soon)

All the auto maintenance technicians who use our products can not only look up the maintenance information that we put on our cloud service platform conveniently, and combine the diagnosis result to query, and communicate with other Xtool users in our forum, but can also access various online databases of maintenance and diagnostic skills and vehicle maintenance plans.

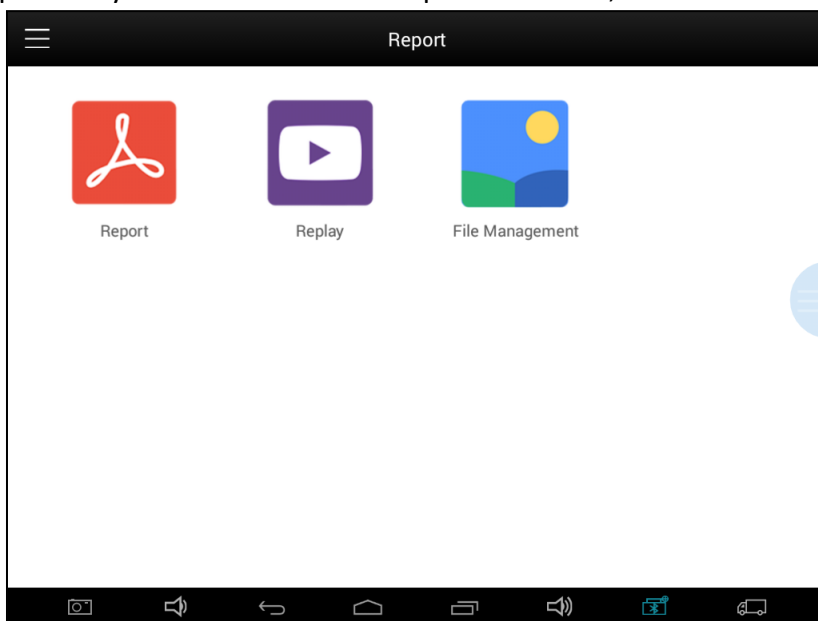
7. Update

X100 PAD2 updates directly via the Internet using WiFi or wired connection. To access the update application open the X100 PAD2 application and click UPDATE , shown below.



8. Report

Report is used for viewing and printing the saved files, such as Live Data, Trouble Codes or pictures generated in the process of diagnosis, users also can view a record of which cars have been previously tested. It includes three parts: PDF Files, Pictures and Data Playback.

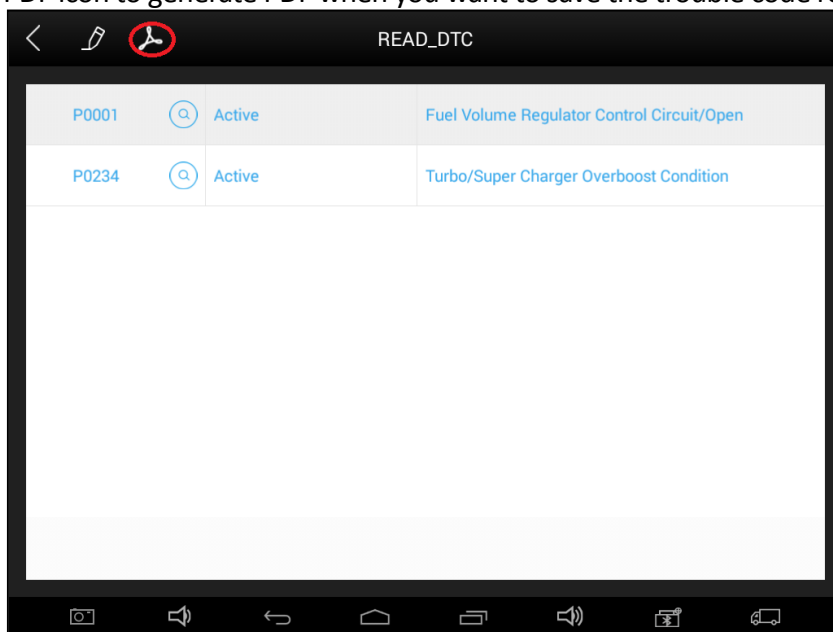


8.1. PDF Files:

8.1.1. PDF files are the diagnostic reports of Live Data or Trouble Codes that have been saved during diagnosis. Entering **PDF** will allow you to view and print these reports.

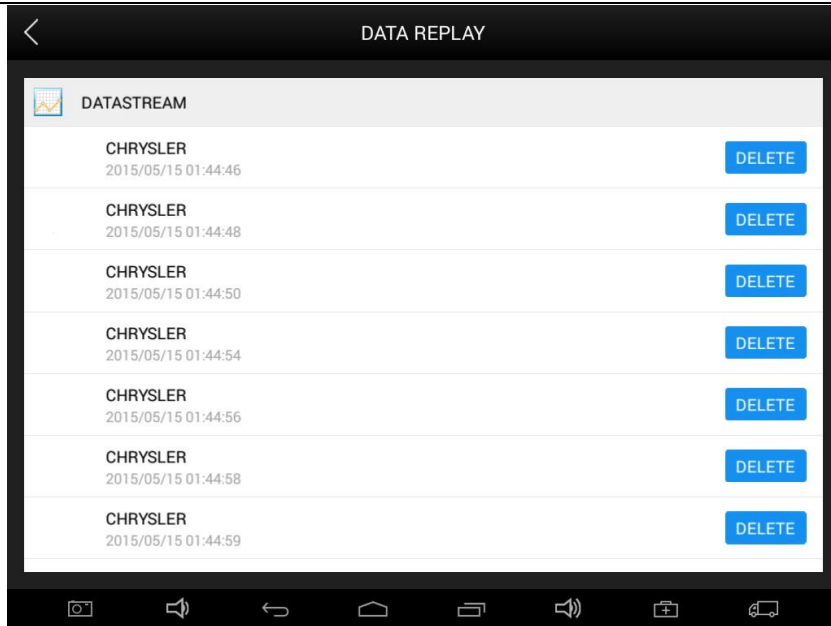


8.1.2 Click PDF icon to generate PDF when you want to save the trouble code report



8.2. Data Replay:

With Data Playback you can play back recorded Live Data & freeze frame data.



8.3. File Management:

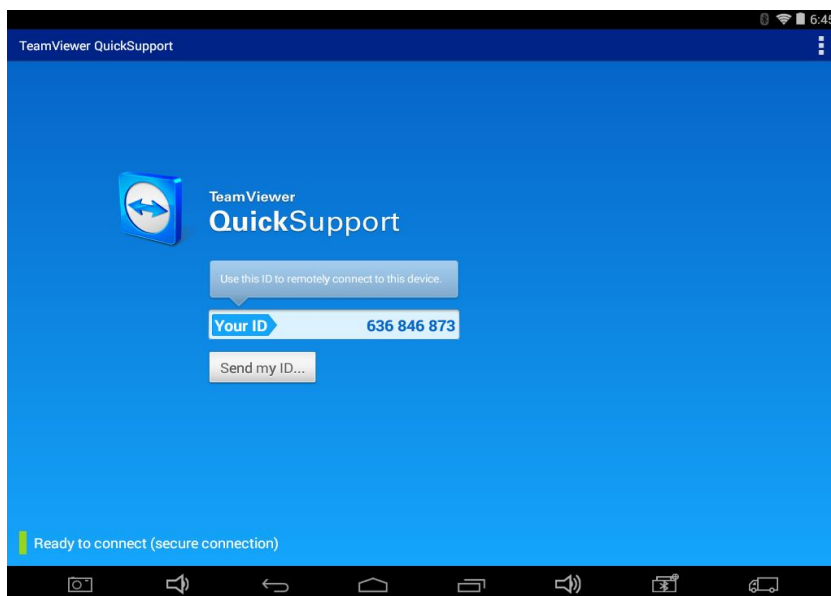
Pictures are all the screen capture files saved in the diagnosis process.

9. Remote

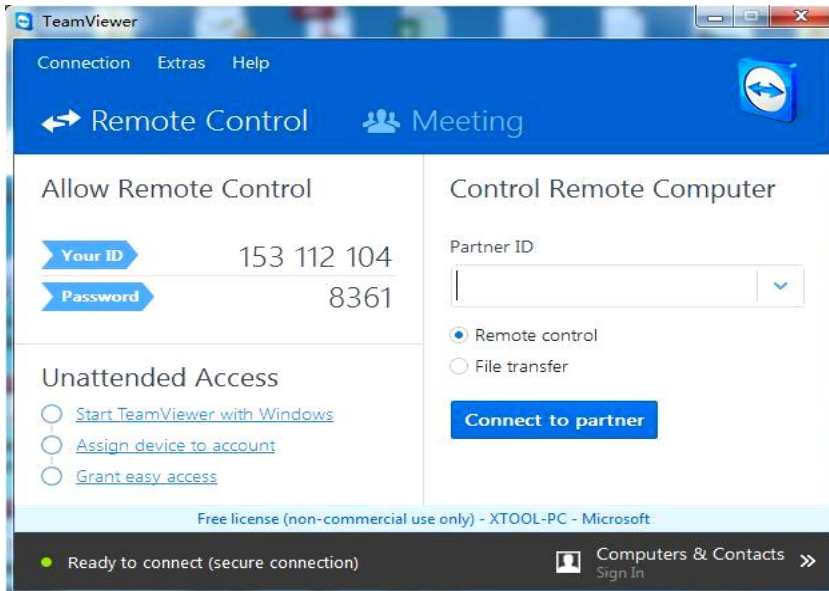
If users encounter problems and are not able to solve them, they can open this application and ask for remote assistance.

How to get remote assistance from Xtool Technical Assistance Center:

- a. Open X100 PAD2
- b. Click **Remote** and open the **Team Viewer** interface. Generate and display device ID.



- c. Your partner will also need to download and install **Team Viewer**.
- d. Inform your partner of your **Team Viewer** ID and password to enable them to begin remote access of the X100 PAD2.



CHAPTER III How to Use KC100

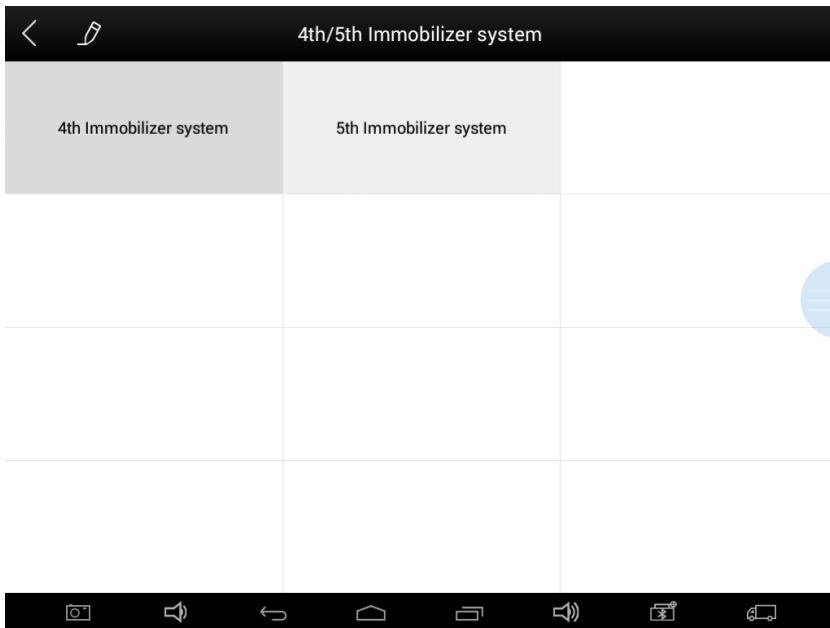
If you purchase an EXTRA dongle KC100, you can work with VW/Audi/Skoda/Seat 4th and 5th immobilizer software and BMW CAS1-3++ immobilizer software. Lets take VW as an example. Since VW 4th and 5th Immo programming needs online programming, please make sure X100 PAD2 connect Internet before doing programming. Please find operation steps as below:

1. Please use main cable and OBDII connector (or other relative connector) to connect between X100 PAD2 and your car's OBD port.
2. Please use TYPE-C to mini USB cable to connect between X100 PAD2 and KC100.

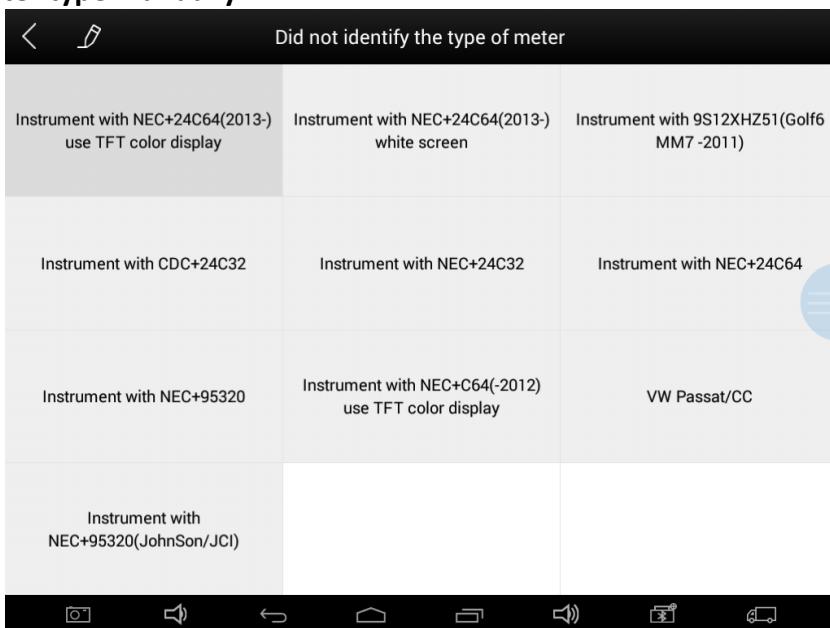


3. Please switch ignition on position, then enter software as following steps:
Immobilization - VW - 4th/5th Immobilizer System





4. If your car is 4th immobilizer system, please click 4th immobilizer system. If your car is 5th immobilizer system, please click 5th immobilizer system. It will detect your meter type automatically, if it does not detect successfully, you can choose your meter type manually.



5. Then follow the instructions that software reminds you to copy new keys.

CHAPTER IV Location of Diagnostic Link Connectors on Different Vehicle Models

1. Diagnostic Link Connectors Locations of Various Vehicle Models



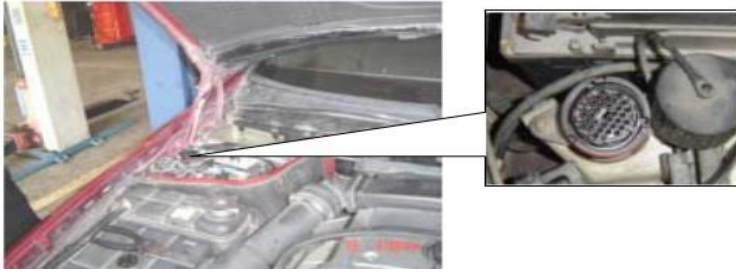
*AUDI A6: the OBD plug is on the lower left side of the dashboard, use SMART OBDII-16 connector.



*VW Bollywood 1.8: the OBD plug is below the console, use SMART OBDII-16 connector.



*Benz S320,220 Chassis: the OBD plug is below the dashboard, use SMART OBDII-16 connector.



*Benz C180: the OBD plug is on the left hand side of the engine bay, use Benz-38 connector.



*Benz 300SEL 140 chassis: the OBD plug is on the left hand side of the engine bay, use Benz-38 connector.



*GM Buick: the OBD plug is below the dashboard, use SMART OBDII-16 connector.



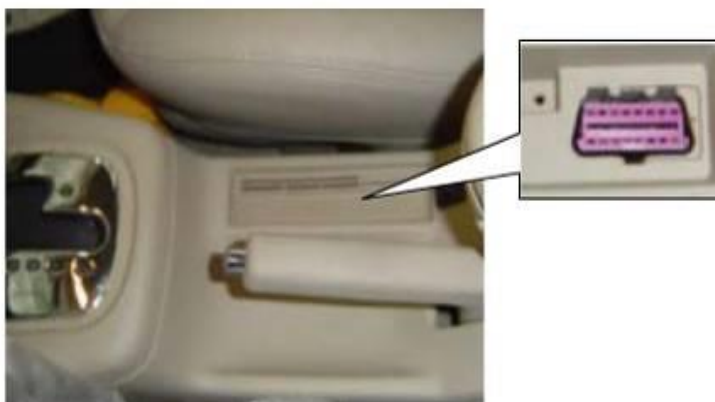
*GM Buick GL8 : the OBD plug is below the dashboard, use SMART OBDII-16 connector.



*VW POLO: the OBD plug is below the dashboard, use SMART OBDII-16 connector.



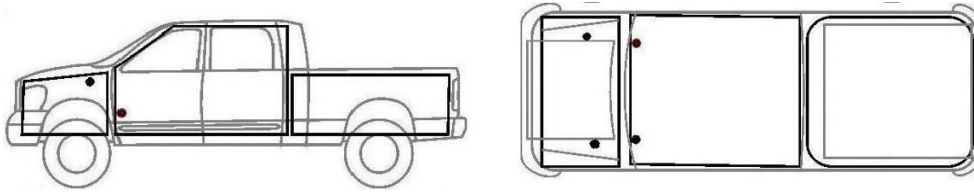
*BMW 735i: the OBD plug is in the right hands side of the engine bay, use BMW-20 connector.



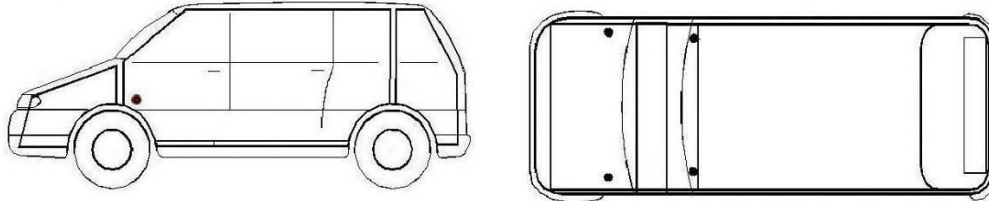
*VW Passat B5: the OBD plug is behind the gearlever and beside the parking brake lever. Lift the cover to access it. Use SMART OBDII-16 connector.

2. Location Diagram of Vehicle Diagnostic Link Connectors

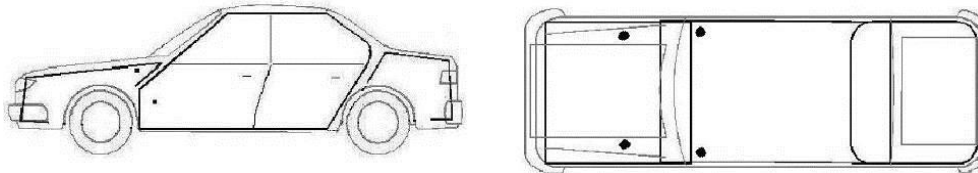
Location diagram of pick-up truck diagnostic link connectors:



Location diagram of utility vehicles diagnostic link connectors:



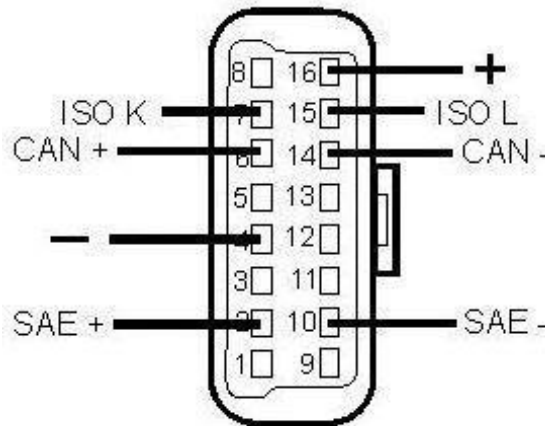
Link diagram of small car diagnostic link connectors:



NOTE: Each vehicle manufacturer may use additional pins to diagnose a variety of systems. Not every manufacturer uses the same standard. The function on a certain pin will vary from manufacturer to manufacturer. Verify with the manufacturer.

3. Diagnostic Link Connectors Terminal Definition and Communication Protocols

3.1. Standard OBDII Diagnostic Link Connector:



Pin Definition (Reference material)

Various pin definitions as follows:

1. Manufacturer definition
2. SAE J1850 bus positive
3. Manufacturer definition
4. Bodywork site
5. Signal site

6. ISO 15765-4 defined CAN high
7. ISO9141 and ISO14230 defined K line
8. Manufacturer definition
9. Manufacturer definition
10. SAE J1850 bus negative
11. Manufacturer definition
12. Manufacturer definition
13. ISO 15765-4 defined CAN low
14. ISO9141 and ISO14230 defined L line
15. Permanent positive voltage

[1] 1, 3, 8, 9, 11, 12 and 13 are defined by manufacturer.

[2] 2, 6, 7, 10, 14 and 15 are used for diagnostic communication. Unused definitions can be defined by manufacturers.

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