Auto-X Manual

V1.0

VisualThreat

1 Testing Method and Work Flow

1.1 Testing System Components

Table 1: Testing system components

component	name	function
Detection Equipment	VisualThreat Auto-X	Detect information security vulnerabilities automatically via feeding different factors and combinations.
Local Testing Terminal	Testing Portal	Provide local testing interface from which different testing facets can be selected.
Tester	Testing operator	Performs testing according to Auto-X manual.
Device Under Test	Device to be tested	Vehicle, Automotive Test Bench, or ECU.
Testing Accessories	Cables needed during testing	Connect detection equipment and device under test.

1.2 Accessories

Fig. 3 OBD cable


Fig.4 Power Adapter

2 Testing System Installation

2.1 Environment Configuration

Auto-X is compatible with the Windows 10 operating system and can also be used with Windows 8. Windows 10 is <u>highly</u> recommended for setting up the testing system and environment.

2.2 Install Auto-X Testing Software

Locate the folder "VT-AUTOX\VT-AutoX-Installation" on your pen drive and find the software setup file, as shown below:
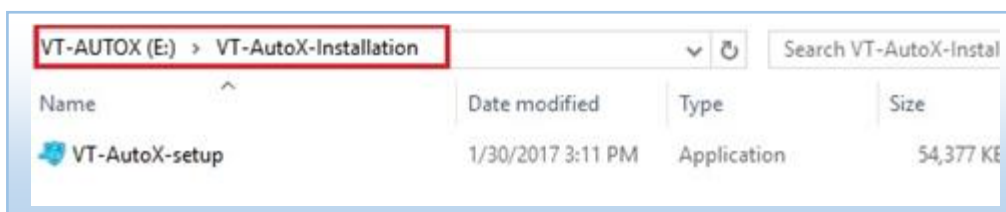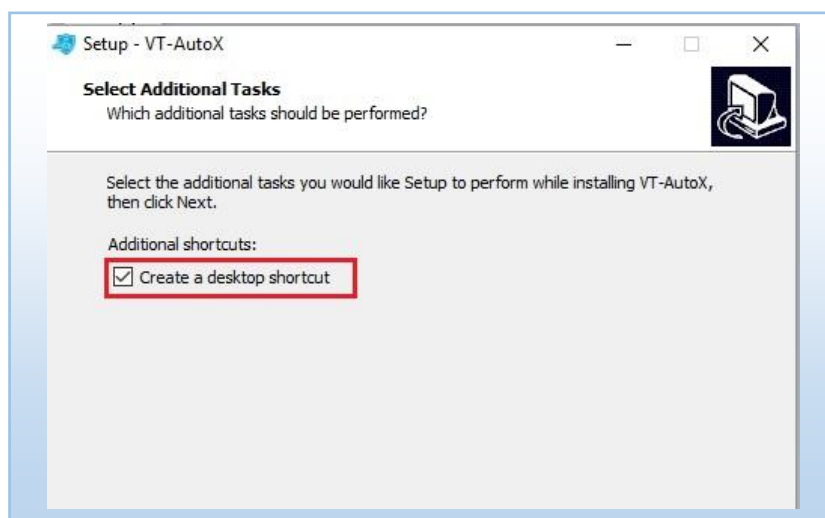

Double click the file "VT-AutoX-setup" to start installation, then follow the guide to complete it.
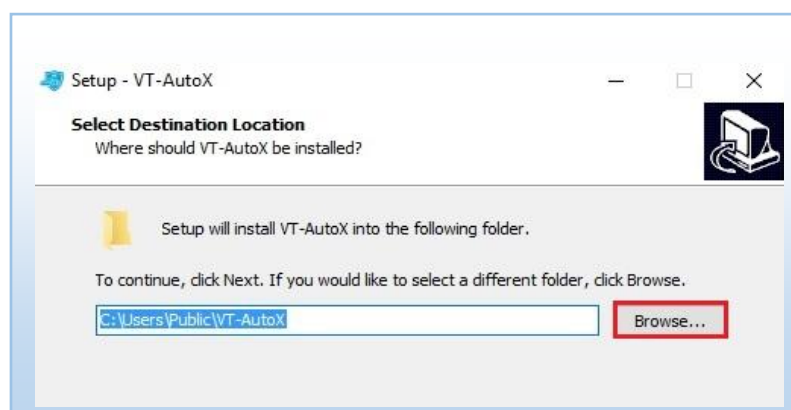
The default installation location is C:\Users\Public\VT-AutoX, but you can change it by clicking "Browse…" and selecting a different folder.

A desktop shortcut will not be created by default, but you can choose to "Create a desktop shortcut" to create one, as shown below:

After that, click the "Install" button to proceed.

At the final step of installation, "start VT-AutoX" will be checked automatically. If you don't want the software to open immediately, uncheck the box, then click "Finish" to finish the installation process, as shown below:
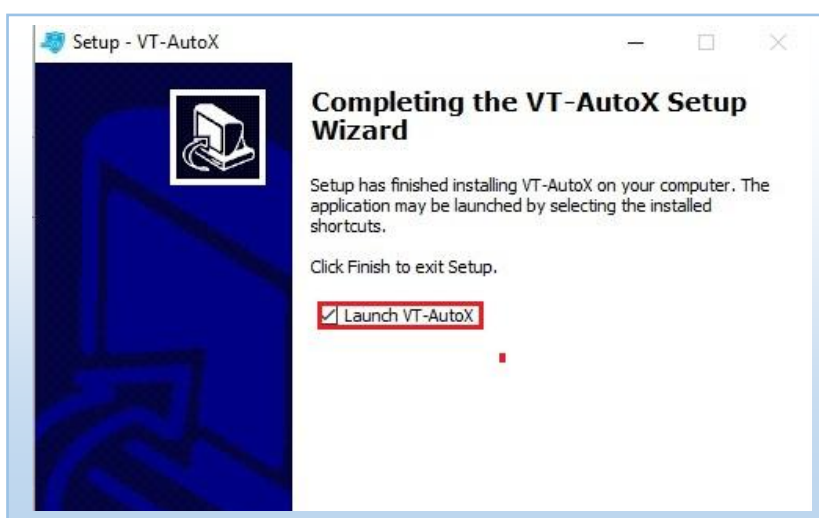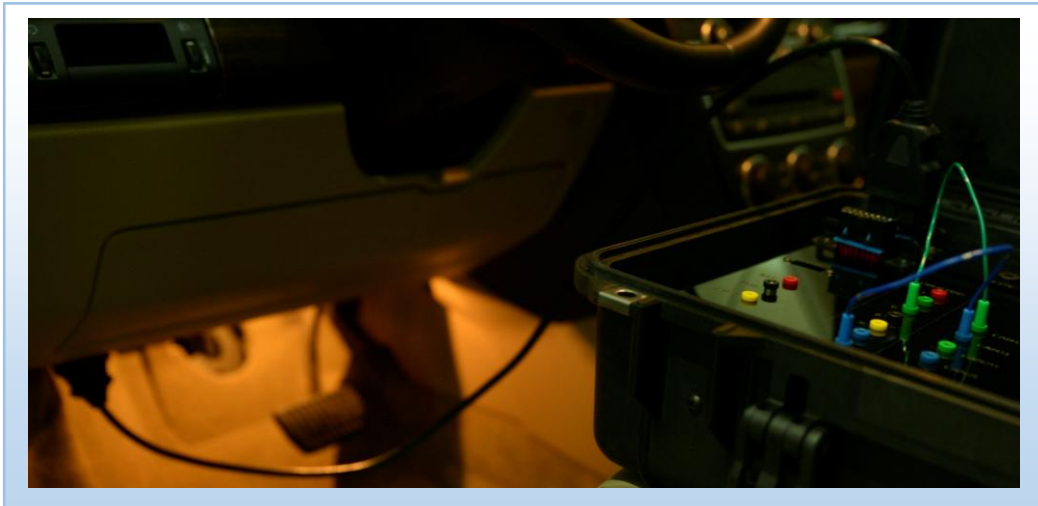
3 Connect to Devices

3.1 Connect to Real Car

Auto-X comes with two standard OBD ports for connection, and no external power supply is required. If you want to test other CAN network parts, you need to extend CAN Bus and connect it with Auto-X's CAN port.
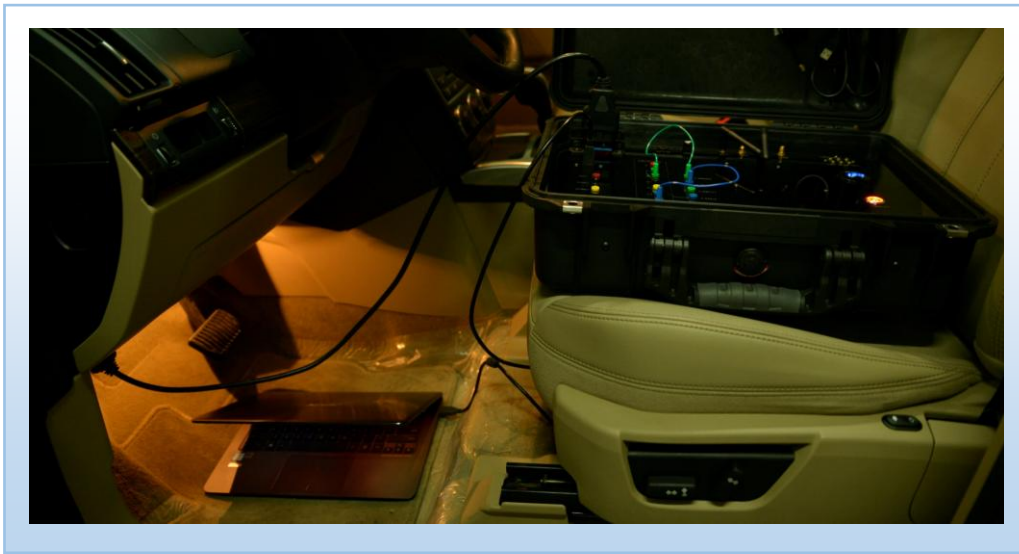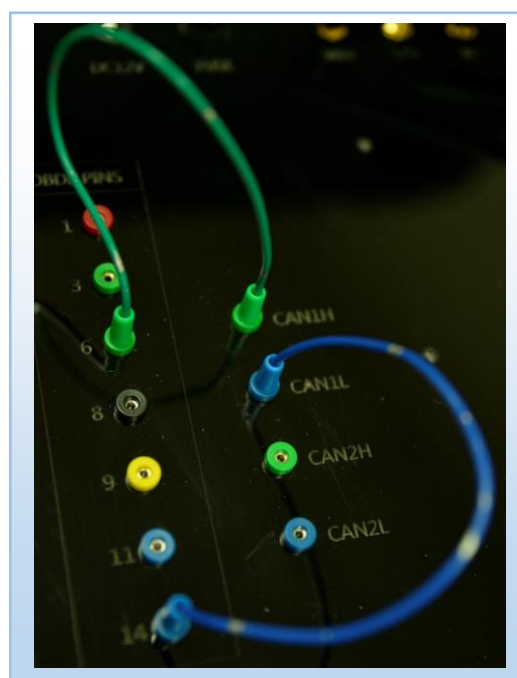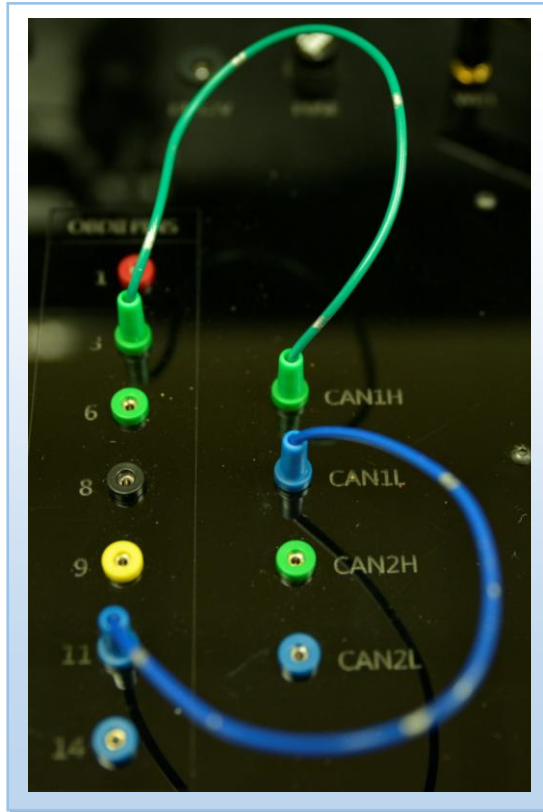

OBD Connection

Auto-X side's OBD port

As shown below, the left side are PINs originated from the OBD ports, and the right side is AutoX's bus interface. Connect OBD PINs in the left side to CAN pins in the right side according to CAN bus type of the device under test, i.e. HS CAN or MS CAN.
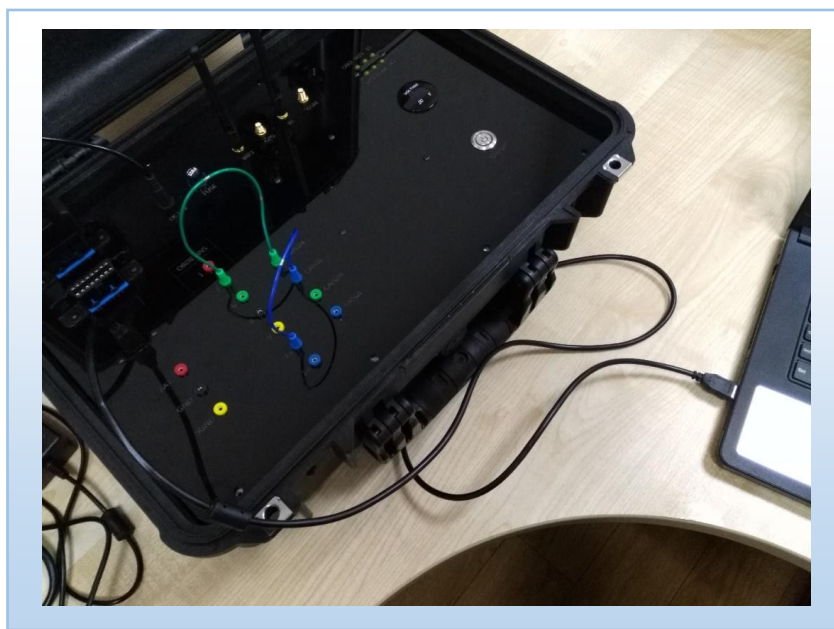

AutoX's CAN interface

According to ISO OBD interface definition, for HS CAN buses, you need to connect CAN1H and CAN1L to PIN6 and PIN4 respectively, with two DIP cables.

Connection for HS CAN bus type

Connect AutoX to PC via USB ports

3 Auto-X Testing Software

Open the folder **C:\Users\Public\VT-AUTOX\logs**, you can see a log file has been generated. Open it to check its contents, as shown above.

3.1 Auto-X Interface

The VisualThreat-AutoX testing system contains five tabs in its left pane named "Test Points", "Test Details", "Test Runs", "Test Results" and "Experiments", as shown below.

"Test Points": contains all test cases; you can view "Test Details" for every test case by clicking its name in the **Name** column.
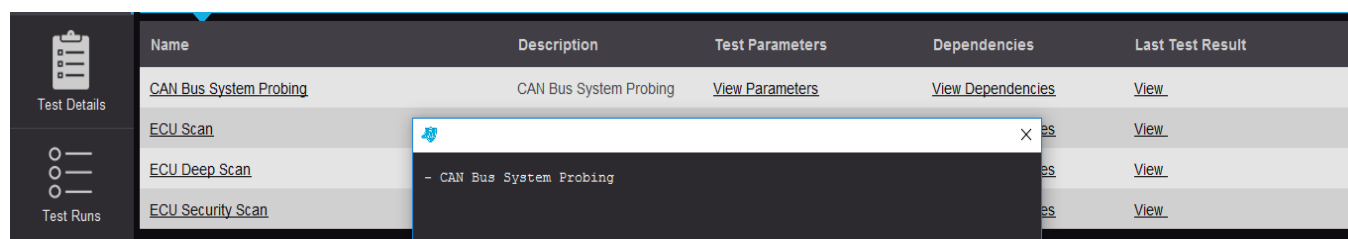
"Test Details": displays detailed information about the current test case. You can click the **RUN** button.
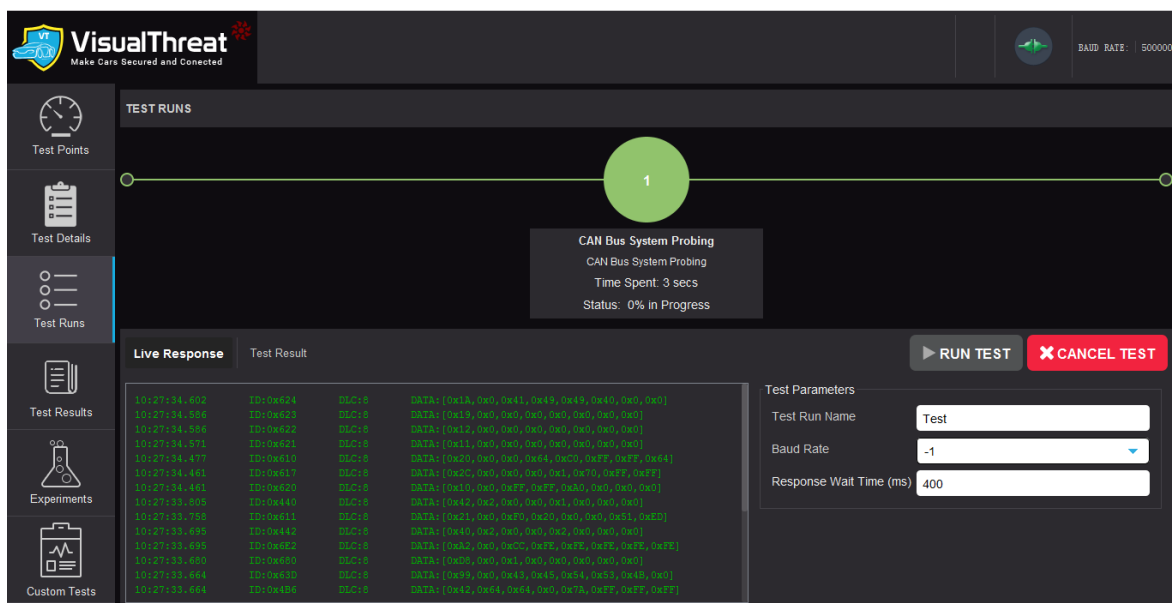
You can see all test cases which have been conducted and even filter your results by entering a key word in the search field.
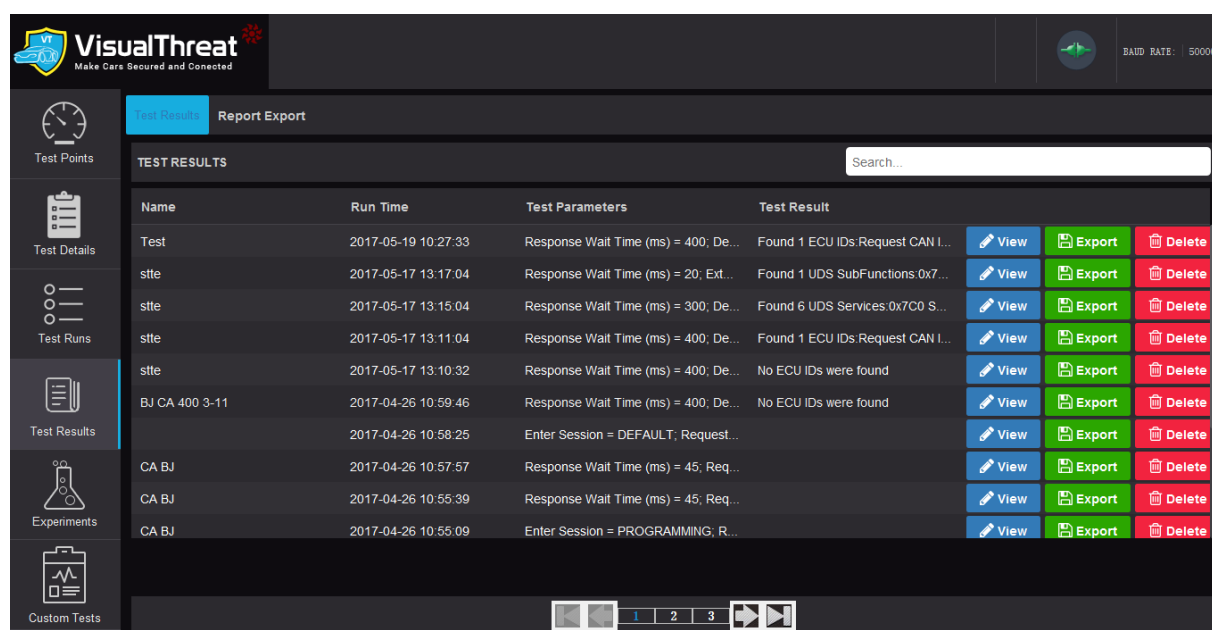
You cannot run most test cases directly; in most instances, their dependent test cases need to run first. You can see the dependent test cases by clicking the "View Dependencies" link. A popup window containing dependent test cases will show up. Please make sure the dependent cases have been performed in advance. For example, test case "ECU Subfunctions Discovery" depends on "ECU Services Discovery", as shown below.

How to Find Test Results

Every test case you perform will have a corresponding result and a running log. The test result can be checked with the VT-AutoX software itself, in one of two ways:

The first way is within the "Test Details" tab. This is for all test results that belong to a specific test case.

1. In the "Test Points" tab, click a test case name you want to check in the **Name** column. This will bring you to the "Test Details" tab for this particular test case.

2. In the "Test Details" tab, you can see results of all the tests you have performed previously under the "Historical Test Runs" section.

The other place to check test result is within the "Test Results" tab, which contains all test results of all performed tests. Open the "Test Results" tab, then enter a keyword in the search box to find the results of a specific test.Test running logs are kept in the installation folder. If you install the software to the default location, the logs will be saved in directory C:\Users\Public\VT-AutoX\logs\, as shown below: