Before You Start

Downloading the App

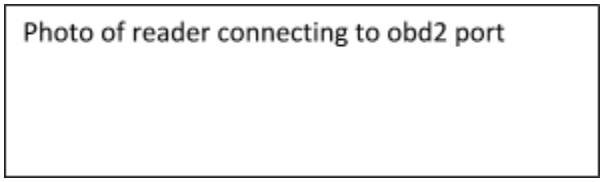
First, download the official CANnect app on Google play store. This app will communicate with the reader to display and translate vehicle information as well as additional information such as: sensors and current vehicle information.

Introduction

Key feature of the reader

Getting Started

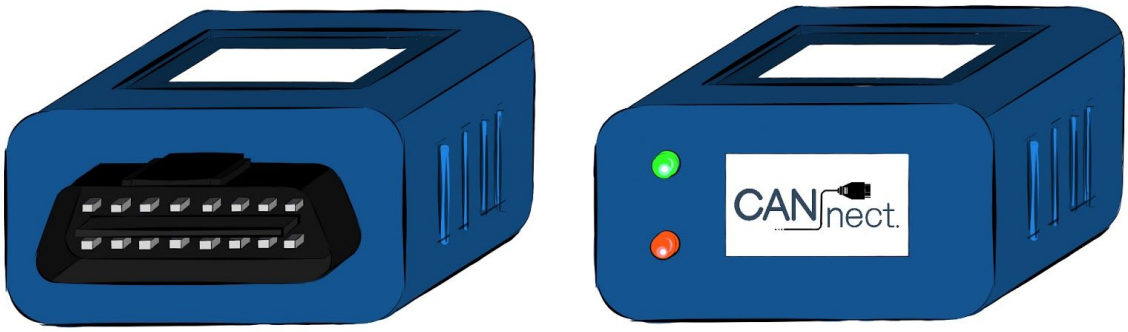
After successfully downloading the app on the Android device, connect the reader to OBD-II port of the vehicle. Steady green led light indicates the reader power is on, and flashing red led light means the device is ready for Bluetooth pairing.



Hardware

Reader

1. When the reader is connected to the vehicle OBD II port, flashing red-led light indicates the reader is seeking for Bluetooth devices (Android phone) to pair up.
2. Once the engine is turned on, connect to the reader from the app via Bluetooth. Do not turn off the engine during use of the app.
3. Once the two devices are paired up, red-led will stop flashing and green-led will light up.



4. Since there is no external power supply, the reader will turn-off when it is unplugged from the OBD II port.
5. Since the OBD II port is always powered on when the vehicle engine is off, the reader will also be on as long as it is plugged in. (maintenance)

Sensor

CANnect allows car hobbyists to explore more about the vehicles with 6DOF sensor. The sensor enables users to view current vehicle orientations and translations on the app.

1. Place the CANnect sensor at the centre of the interior hood of the vehicle, or any place that user desires.
2. Locate the nearest automobile auxiliary power outlet (car cigarette lighter outlet) and plug in the adapter included in the package to power on the sensor.
    a. If you wish, you may connect wires directly from the +12V line to the connector pins. Ensure it is professionally installed.

3. When the power is on, flashing the red-led light indicates the sensor is trying to establish connection with the CANnect reader via Wi-Fi. Therefore, the reader must be plugged into the OBD II port.
4. Once the connection is confirmed, instead of flashing red-led, fixed steady green-led will light up.

GPS/Tracking Module

CANnect can support an additional addon module to enable location tracking of a vehicle. This tracking module encompasses an LTE/GPS combo or separate LTE and GPS components which sends longitude and latitude information to Firebase which is received on the app.

Note that the use of this feature requires Firebase, a service operated by Google. In using this component, the user agrees that their location information may be processed and handled by Google and its operating partners who may be located outside of Canada - this is typically in the United States for North America.

For this module, it uses the SIMCOM SIM7000A LTE module. Since this module uses a special variant of 4G LTE instead of the traditional version, make sure to check with the cellular provider of choice that the SIM Card service supports these requirements.

- LTE Band 2 (1900 MHz)
- LTE Band 4 (AWS 1700/2100)
- LTE Band 12 (700 MHz)
- LTE Band 13 (700 MHz)
- LTE CAT-M1 (often referred to as eMTC or LTE-M) or CAT NB1 (referred to as NB-IoT)

CANtech recommends Hologram for its single rate for global coverage across multiple networks and is the network that CANnect has been tested with. Otherwise, Telus is an alternative option as well for Canada-only usage.

Setting up the hardware for Tracking Module

1. Screw or attach the provided antennas onto the connectors labelled “LTE” and “GPS.”
2. Insert SIM Card in the microSIM size format.
3. Provide power to the module (---ADD HOW---)
    a. Use the provided power adapter to the vehicle’s auxiliary power outlet, or
    b. Connect the wires directly from the +12V line to the connector pins on the module. Perform this step with professional assistance.
4. An LED indicator for “PWR” should light on to indicate it is on.

5. Position the module such that the antenna has a clear sight to the sky.

Setting up the software and network connection

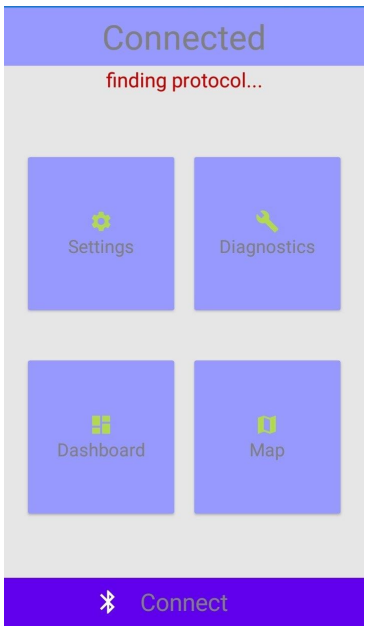
1. Follow steps 1-6 in “Using the App” to pair the reader to the app.
2. In Settings, choose the GPS Module section
3. Login with your credentials for CANnect car-tracking. Otherwise, you may create one yourself.
    a. Use the Sign-in with Google option for a quick login, or
    b. Provide an email and password.
4. Type in the APN setting for your SIM Card service. For Hologram, this is “hologram”. Check with your service provider if you are not sure what this is.
5. Choose the option to pair your tracking module to the app. This may take a few moments.
6. The status should say it is paired. The number on the module should match the paired device number in the app. Your module should automatically connect to the cellular service and send its coordinates. An LED indicator for “LTE” should blink occasionally if it is connected.
7. If you need to reconfigure the APN, follow steps 4-6. If the app does not show any update coordinates, check to see if the “LTE” indicator is blinking. If not, check to see if the APN is correct and that the module is in an area with cellular coverage.

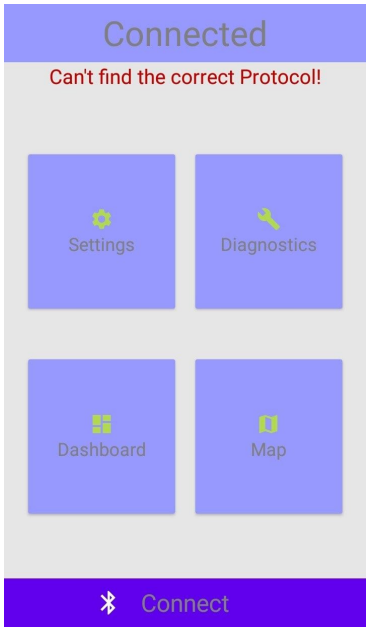
Using the Tracking Module

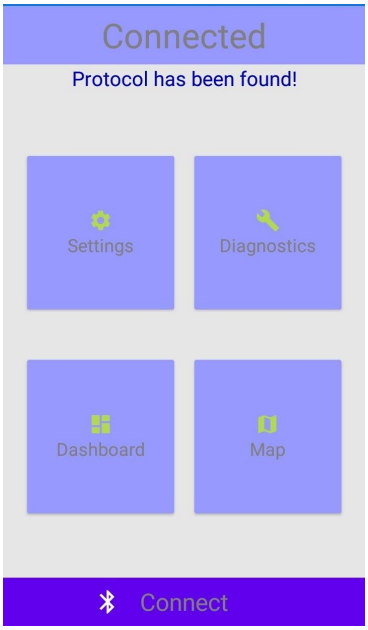
1. How to use it.

Using the App

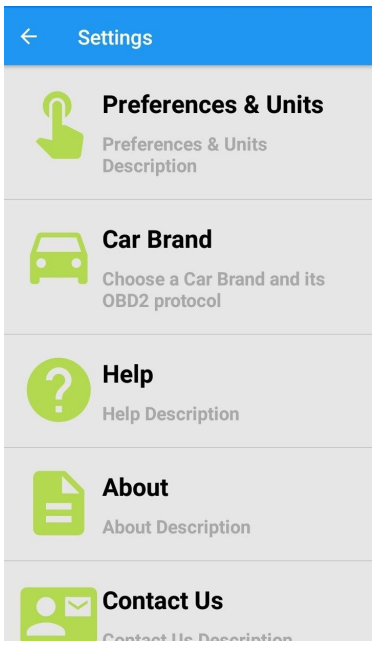
1. Launch the CANnect app.
2. Click on the **Connect** button at the bottom of the screen to pair with the reader.
3. If Bluetooth is not already turned on, click **BLUETOOTH ON** to turn on.
4. Click **DISCOVER NEW DEVICES** and select **CANnect Reader** to start pairing with the reader.
5. Upon successful pairing with the reader, **Connected to the Reader** will display at the bottom.
6. Click ⟵ at the top left of the screen to go back to the previous page.
7. Red text, **finding protocol…,** indicates the reader is automatically finding the correct protocol to communicate with the vehicle OBD II. This process can take up to 30 seconds.
8. Upon finding the correct protocol, **Protocol has been found**, blue text will be displayed as seen in the Figure X below.
9. **Can't find the correct Protocol!** will be displayed if the vehicle protocol is not supported by the CANnect reader.

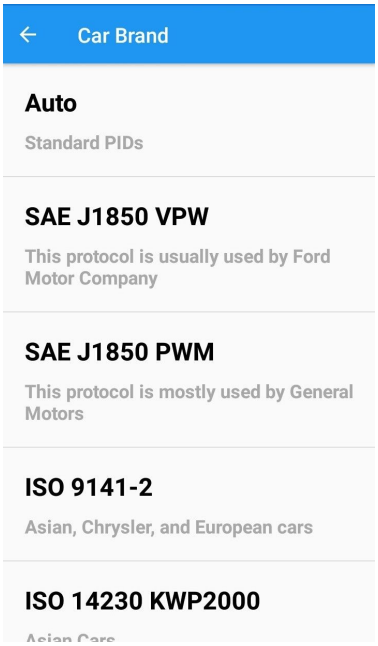


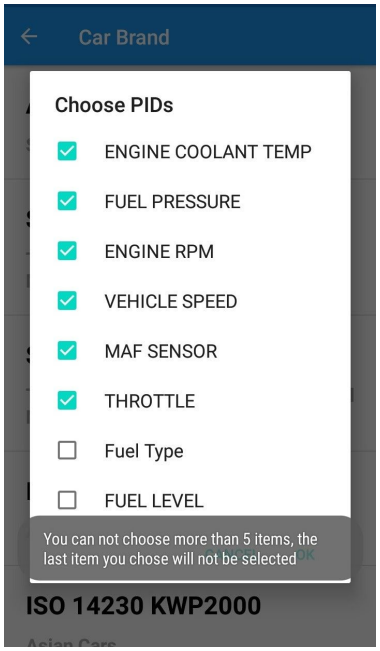




10. To add basic PIDs to table page, click on **Settings,** then **Car Brand** to select from different protocols. Only 5 PIDs can be viewed all at once.



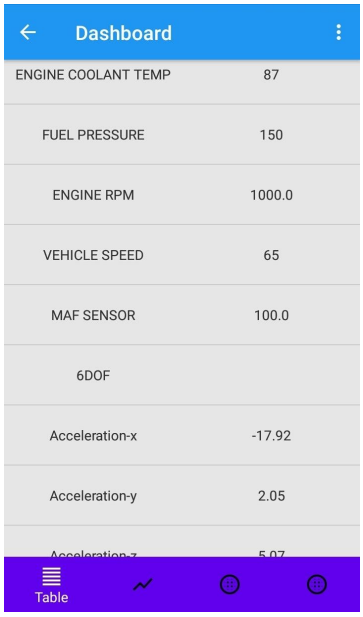


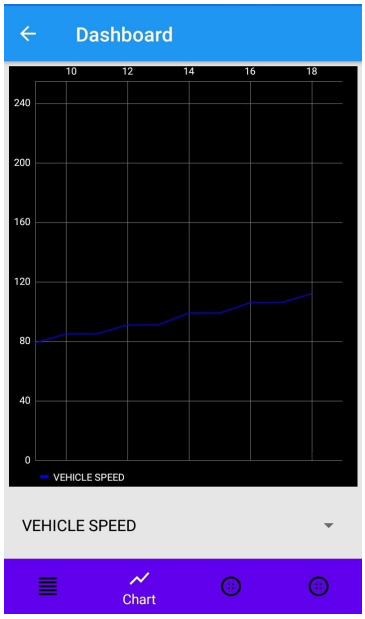


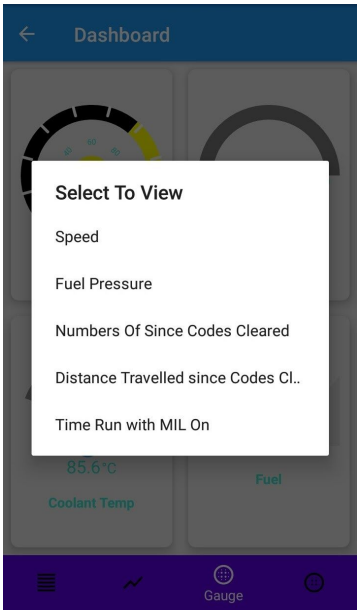
11. Click ← at the top left of the screen to go back to the previous page.
12. To view current vehicle information, click on **Dashboard**.
13. **Table**, **Chart, Gauge** and **DOF** tabs at the bottom of the page offer different displays of the information.

14. On the **Table** page, users can view previously selected PIDs along with the sensor reading from the sensor module.

15. On the **Chart** page, users can view different PIDs by choosing from a drop-down list. The graph can also be zoomed in/out by pinching the screen.
16. On the **Gauge** page, users can also view different gauges by long pressing on either four boxes. Doing so will pop out the menu window which users can select various options from. Some of the PIDs will not display any values as some vehicle protocol lacks the corresponding sensor PID.







17. In addition, unique to CANnect reader, users can also view the forces acting on vehicle at different points on the app.
18. And using data from 6DOF sensors, the app can calculates acceleration, orientation.

Maintenance

1. If the app is closed, the reader must be unplugged from the OBD and plug in before relaunching the app again.