# Tiny-Scan™
## 301
**EFI ECU** Engine Scanner

Quick Start Instructions

## What is the TS-301?

The TS-301 is a small engine diagnostic tool that uses the engine's diagnostics port and a built in micro-webserver that allows users to see and monitor Device Trouble Codes and other live information from the engine's sensor arrays on a phone, tablet, or computer. Information such as current RPM, Battery Voltage, Engine Temperature, O2 sensor Voltage and much more can be displayed in the many different parameters monitored. The TS-301 also allows users to "Capture" and save this data to be played back locally or uploaded to cloud storage for remote viewing, aiding technicians in troubleshooting and engine analysis. These values can be displayed in a variety of ways such as a table, gauges or graphs. Software can be updated as new ECU modules are released.

## Connecting to an Engine

This section will cover connecting the TS-301 to the engine. Please note that the connection of the TS-301 will vary widely per engine/vehicle and that these instructions are merely a guide of basic points to follow when installing.

1. Locate the diagnostic connector on the engine. Choose the appropriate adapter.

2. Securely position the TS-301 in a safe location within easy reach of the connector with enough cable slack to prevent pulling.

3. Plug the TS-301 into the connector. The connector will snap in place when the plug is fully seated.

4. Secure the cable as necessary.

⚠ *Please ensure that the TS-301, connectors, and cables are securely and safely positioned so that they will not be exposed to moving or heated parts of the vehicle while in operation.*

## Connecting to a Smart Device

Once the TS-301 has been installed, a smart device is needed such as a phone, tablet, or laptop with Android, IOS or Windows operating systems and Wi-Fi capability. (NOT A CHROMEBOOK)

1. Do not start, but turn power to the vehicle ON (the vehicle does not have to be running for the TS-301 to turn on). The LED on the TS-301 will flash green one time on start up and will take about 30 seconds to finish booting.

⚠ *The TS-301 does not have an internal power source and will turn off if the vehicle's power is turned OFF.*

2. Once the TS-301 has booted up, it will offer a new Wi-Fi access point (AP).

3. Using your Smart Device connect to the TS-301's Wi-Fi.

4. Open a browser (we recommend Google Chrome), type the IP address "192.168.4.1" into the browser's address bar, and press Enter. This is the default address and cannot be changed. The browser should load into the TS-301's Home Menu page.

## Connecting to Local Wi-Fi

Connecting to local Wi-Fi would allow you to update software, upload diagnostic information and many other features.

Connecting the TS-301 to a Wi-Fi network is necessary to update the TS-301's software, upload performance captures to the cloud for other people's review and allow access to the TS-301 from any device with a web browser that is connected to the SAME LOCAL NETWORK.

1. Connect a Smart Device to your TS-301 by following the steps above in **"Connecting a Smart Device".**

2. From the TS-301's Home Menu page, select **"Wi-Fi Connection".**

3. Enter the SSID/Password for your available Wi-Fi network and select the **"Connect"** button. A new display box will appear beneath the **"Save"** and **"Connect"** buttons which provides details on the connection process, including notes on a successful connection or problems that were encountered.

4. Select the **"Save"** button if you wish to keep the SSID and Password saved for future use.

5. Select the **"Auto-connect"** if you want the TS-301 to automatically connect to that Wi-Fi network during boot up in the future.

We recommend both saving and selecting the **Autoconnect** box for easy access to the TS-301 via the local network after the initial network connection setup. Once connected to a smart device, a technical user manual is available underneath the "about" menu.

6. Once the TS-301 is connected, the Connections page will display the TS-301's new local IP address (labeled as Wi-Fi IP). The TS-301 will still be accessible at the "192.168.4.1" IP address, but any device with a web browser that is connected to the same local network can now access the TS-301 by entering the TS-301's new IP address into a browser's address bar.

⚠ *Be aware that the TS-301 is a micro web server and performance will deteriorate with multiple users connected at the same time.*

⚠ *Simply connecting to a network will not save the settings. The **"Save"** button must be selected before **"connect"**. The drop-down list contains a list of available networks (signal strength, name and security information) and any saved networks. The unit will only **auto connect** to an access point that the **"Powerup Autoconnect"** box was checked and only on power up or reset.*

⚠ *If the TS-301 loses connection with the AP, the user will have to manually reconnect. Follow directions above in **"Connecting a Smart Device to the TS-301"** and **"Connecting the TS-301 to Local Wi-Fi"**. The unit will only scan for an AP and auto connect at start up.*

⚠ *Changing the Data Server will cause the TS-301 to fail updating from the Tinyscan.net server.*