

OPUS | **IVS**

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DREW TECHNOLOGIES

LEGACY — OF — LEADERSHIP



 **Mongoose - Plus**
User Guide



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Please Note

Mongoose-Plus® interfaces have been carefully designed and tested to comply with **OBDII protocols**. However, some vehicle models are not in full compliance with these protocols for various reasons. In addition, the computer control systems or sensors on any given vehicle may be malfunctioning or out of specification.

While **OPUS IVS™** testing and the experiences of thousands of **Mongoose-Plus®** users have shown the unit to be safe and reliable, there is an inherent risk in using any product that may potentially affect the operation or drive-ability of your vehicle.

If you are concerned about the operation of your vehicle at any time while using **Mongoose-Plus®**:

- * Pull off the roadway immediately or as soon as it is safe to do so.
- * Disconnect the **Mongoose-Plus®** from the **OBDII port**.
- * Consult a licensed mechanic or automobile service center.

Please report any issues or concerns to our **Technical Support Department** at j2534support@opusivs.com or (734) 222-5228 option 3. We are open **Monday–Friday, 9:00am–5:30pm Eastern Time**. We maintain an active database of the feedback we receive, and your comments can help us continuously improve the product.

Permission is granted to copy any or all portions of this manual, provided that such copies are for use with **Opus IVS™** product and that ©2021 **Opus IVS™**, (here-in referred to as **Opus IVS™**), remains on all copies. The accompanying software, provided for use with the **Opus IVS™** product, is also copyrighted. Permission is granted to copy this software for back-up purposes only.

Copyright & Trademarks

Copyright 1999–2022 **Opus IVS™**, All Rights Reserved.

Mongoose-Plus®, **CarDAQ®**, **IMclean®**, **IMready®** and **J2534 ToolBox** are registered trademarks of **Opus IVS™**. All other trademarks and brand names are the property of their respective owners.

Limited Warranty

Opus IVS™ guarantees that every **Mongoose-Plus®** is free from physical defects in material and workmanship under normal use for one year from the date of purchase.

In no event shall Opus IVS™ liability exceed the price paid for the product. Opus IVS™ shall be exempt from all other claims whether based upon direct, indirect, special, incidental, or consequential damages resulting from the use of the product, its accompanying software, or its documentation. **Opus IVS™**, makes no warranty or representation, expressed, implied, or statutory, with respect to its products or the contents or use of this documentation and all accompanying software, and specifically disclaims its quality, performance, merchantability, or fitness for any particular purpose. **Opus IVS™** reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity. Please direct all inquiries to:

Opus IVS™
3915 Research Park Dr
Suite A8
Ann Arbor, MI 48108

FCC Statement

The wireless module has been tested and found to comply with the **FCC Part 15** and **ICRSS-210** rules. These limits are designed to provide reasonable protection against harmful interference in approved installations. 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 may not occur in a particular installation. 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. Modifications or changes to this equipment not expressly approved by the part responsible for compliance may render void the user's authority to operate this equipment.

Modular Approval, FCC and IC.

FCC ID X3ZBTMOD3
IC 8828A-MOD3

In accordance with **FCC Part 15**, the **SPT2632C1A.AT2** is listed above as a modular transmitter device.

Introduction

Thank you for choosing the **Mongoose-Plus®**! The **Mongoose-Plus®** will allow you to re-flash modern vehicle controllers to stock as well as perform dealer level diagnostics on select manufacturer's vehicles. The **Mongoose-Plus®** is an SAE J2534-compliant device at a low cost. It provides a direct connection to a laptop or desktop computer via a USB connection. All of the electronics are contained in the OBDII connector shell, making it a compact and rugged vehicle communications tool. The **Mongoose-Plus®** is powered by the USB connector, so there's no need to re-start the **Mongoose-Plus®** if it is unplugged from a vehicle.

Getting to know the Mongoose-Plus®

Wireless Connection

LED Status
Indicators



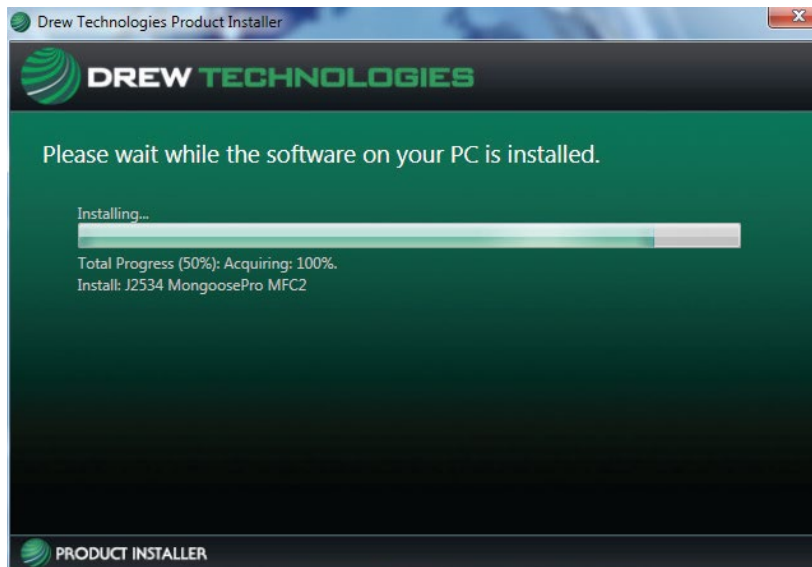
OBDII
Connector

Driver Installation

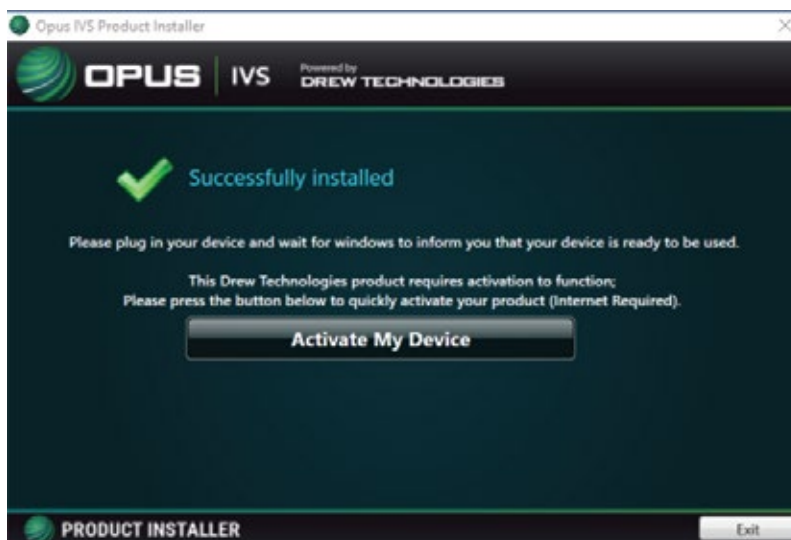
1. Go to or click this link to go to the **OPUS IVS™** downloads page:
<https://www.opusivs.com/support/downloads>.
2. Click the **Set-up** link for the respective **Mongoose-Plus®** be installed.
3. Click **Run** to install the software once the software has to downloaded to your PC.
4. Upon receiving this screen, read, check the box next to **Accept** then click **Install**.



5. Installing...



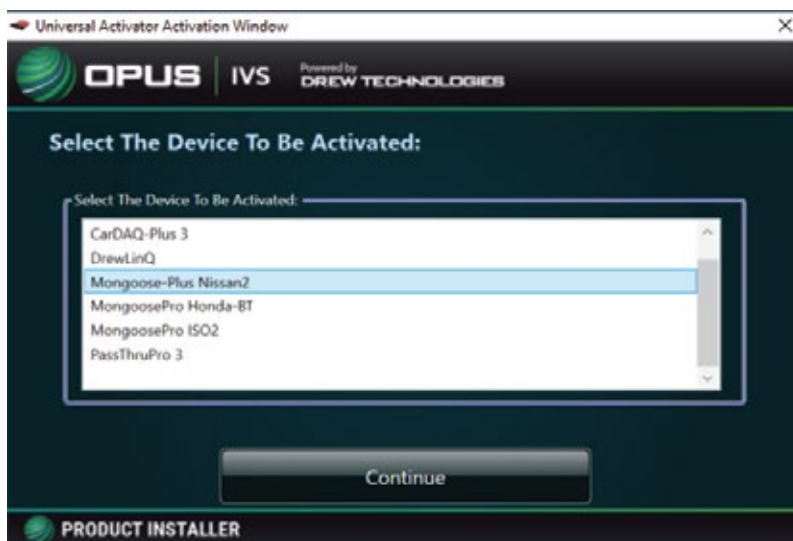
6. Once the setup application has finished, connect the **Mongoose-Plus®** to the PC. Once you have gotten a message in the lower, right-hand corner of your screen that the device has been installed, click on **Activate My Device**.



- The **Device Activator** application will reopen after clicking **Activate My Device**. Click the **Activate My Device!** button.



- Select the interface device you want to activate and click **Continue**.

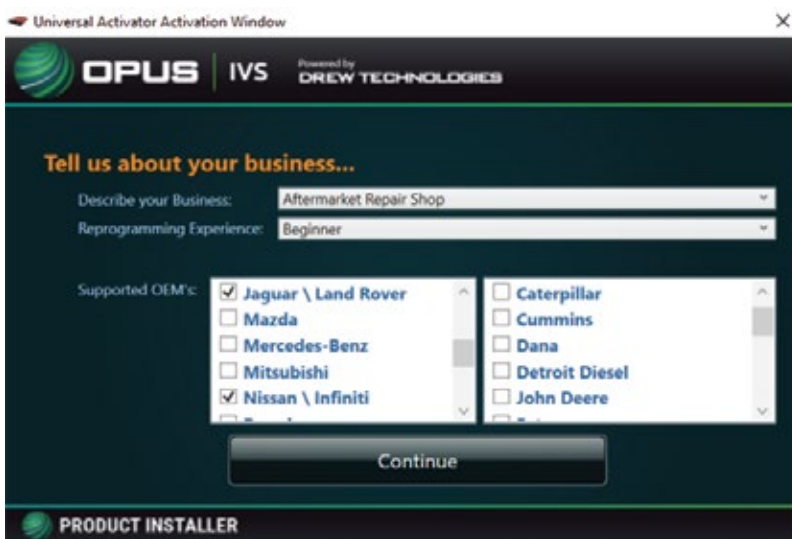


9. Enter the applicable information and click **Continue**.



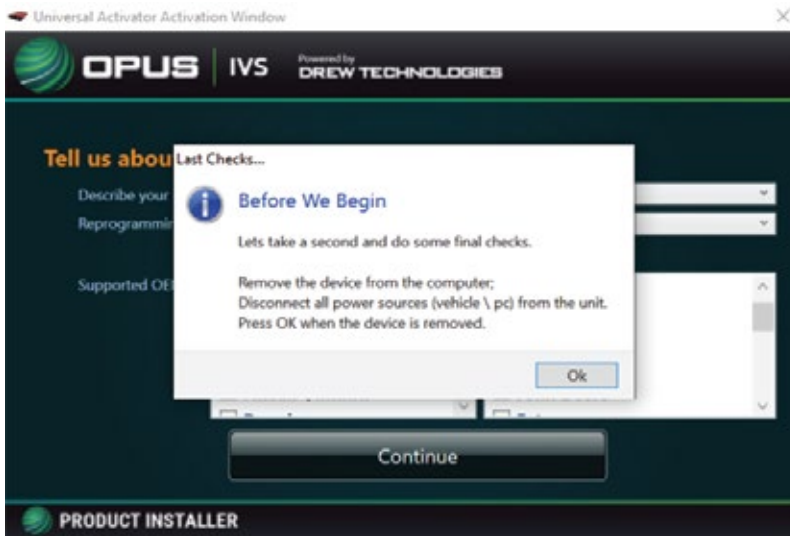
The screenshot shows the 'Universal Activator Activation Window' with the Opus IVS logo and 'Powered by DREW TECHNOLOGIES'. The main heading is 'To Activate Your Device, We Need To Know More About You...'. Below this, a note states: 'We use this activation information to activate your product's warranty. Without it, your product is unprotected.' The form contains the following fields: First Name, Last Name, Country, Company, Address, City, State, Zip Code, Phone, and Email. A 'Continue' button is located at the bottom of the form. The footer of the window reads 'PRODUCT INSTALLER'.

10. Select your type of business and level of programming experience, then select the OEM's you are planning to support. Click **Continue**.

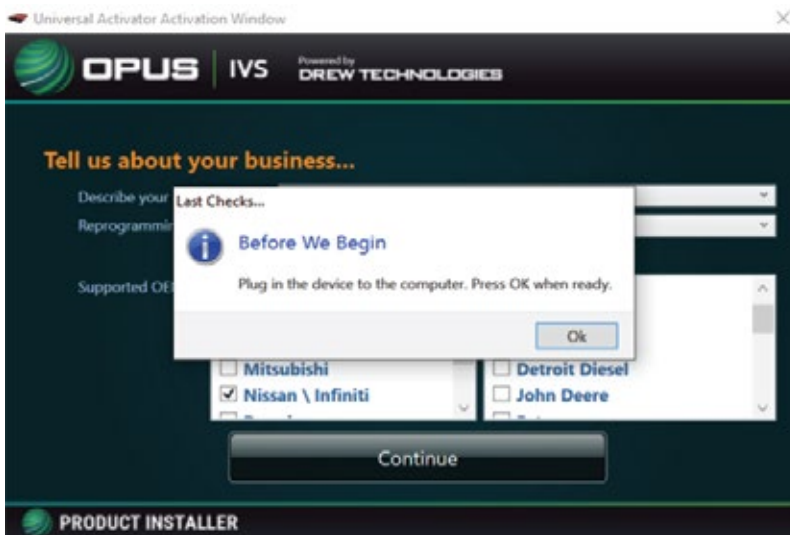


The screenshot shows the 'Universal Activator Activation Window' with the Opus IVS logo and 'Powered by DREW TECHNOLOGIES'. The main heading is 'Tell us about your business...'. The form contains the following fields: 'Describe your Business:' with a dropdown menu showing 'Aftermarket Repair Shop', 'Reprogramming Experience:' with a dropdown menu showing 'Beginner', and 'Supported OEM's:' with two columns of checkboxes. The first column includes Jaguar \ Land Rover, Mazda, Mercedes-Benz, Mitsubishi, and Nissan \ Infiniti. The second column includes Caterpillar, Cummins, Dana, Detroit Diesel, and John Deere. A 'Continue' button is located at the bottom of the form. The footer of the window reads 'PRODUCT INSTALLER'.

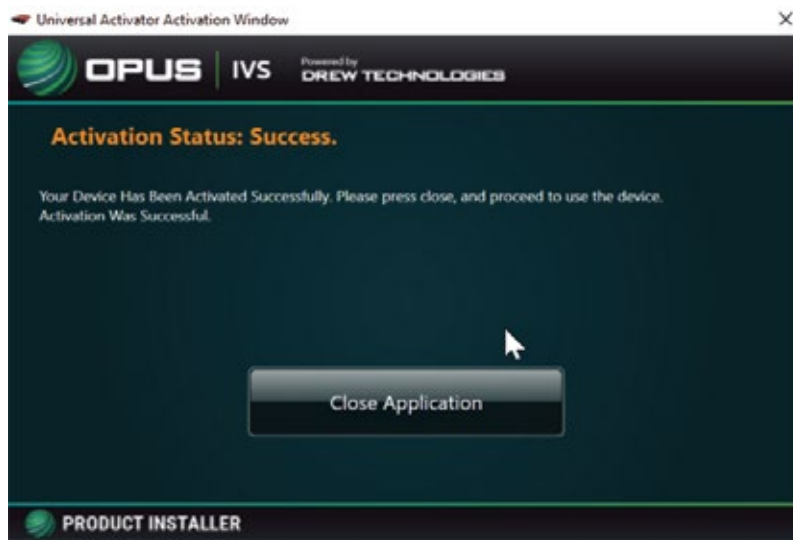
11. Leave the **Mongoose-Plus®** disconnected from the PC.



12. Plug your **Mongoose-Plus®** to the PC, and click **OK**.



13. This is the screen you will see once your device activation is successful.

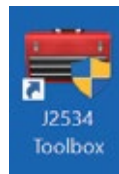


NOTE: Once product activation is performed successfully, you can also install the device on other PC's and not have to perform the activation procedure again.

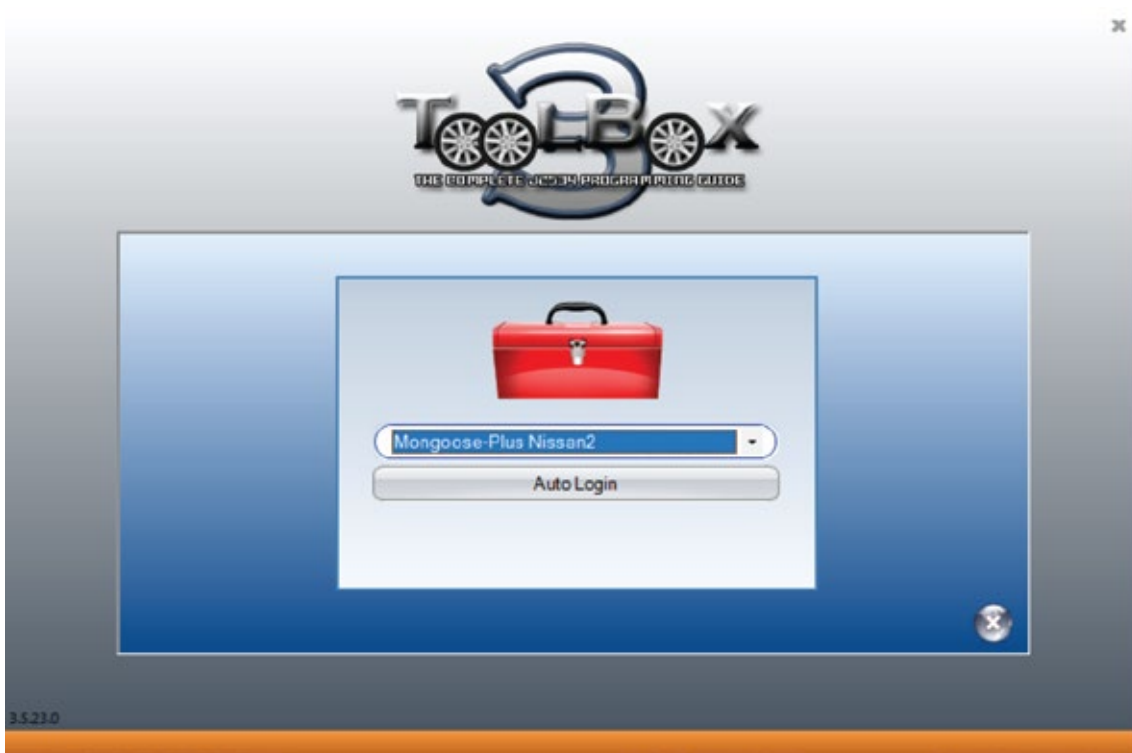
J2534 Toolbox 3

The purpose of the **J2534 Toolbox** is to provide current, relative information and assistance to the user. The information is provided via various walk-through documents, OEM documentation, web-links, quick-links, videos, basic diagnostic functions, connection verification and much more. The **J2534 Toolbox** should be referred to regularly as information is updated continually.

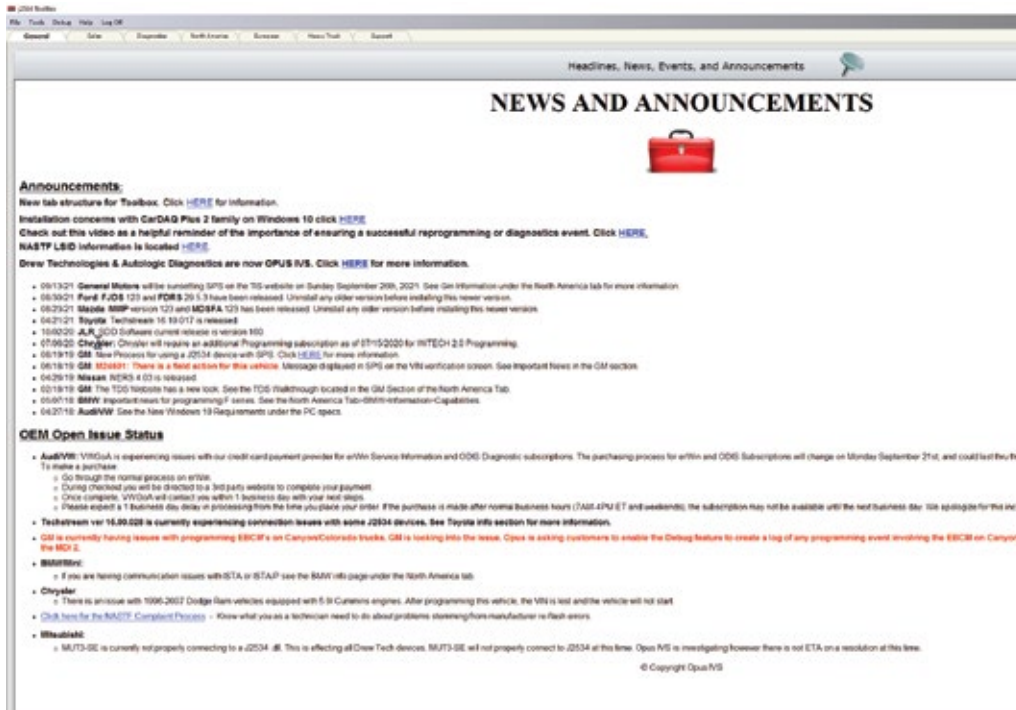
1. Locate and double-click the **J2534 Toolbox Icon** on the desktop



2. Select your interface from the drop-down menu and click **Auto Login**.



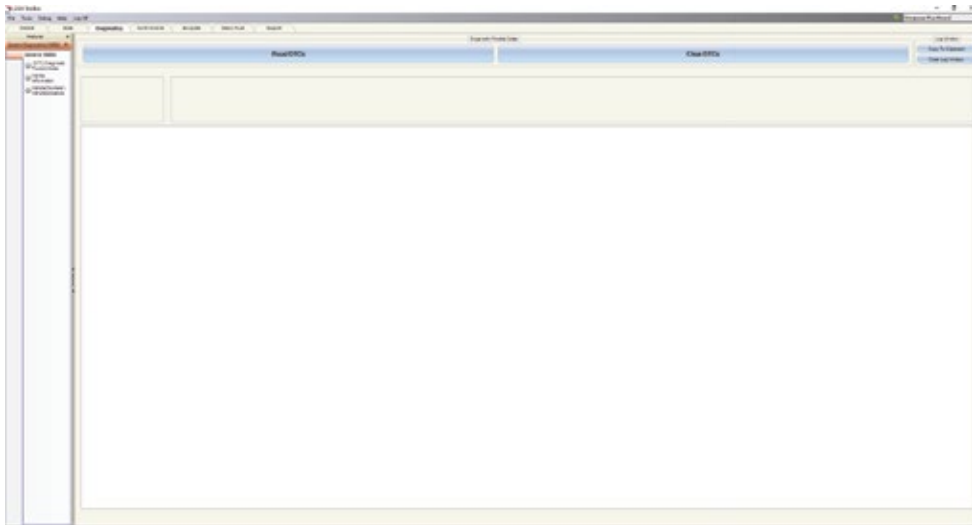
- a. **GENERAL TAB** Contains important news, current OEM concerns, training broadcast invitations and current information you should review.



- b. **SALES TAB** Connects you to the Opus IVS™ website.



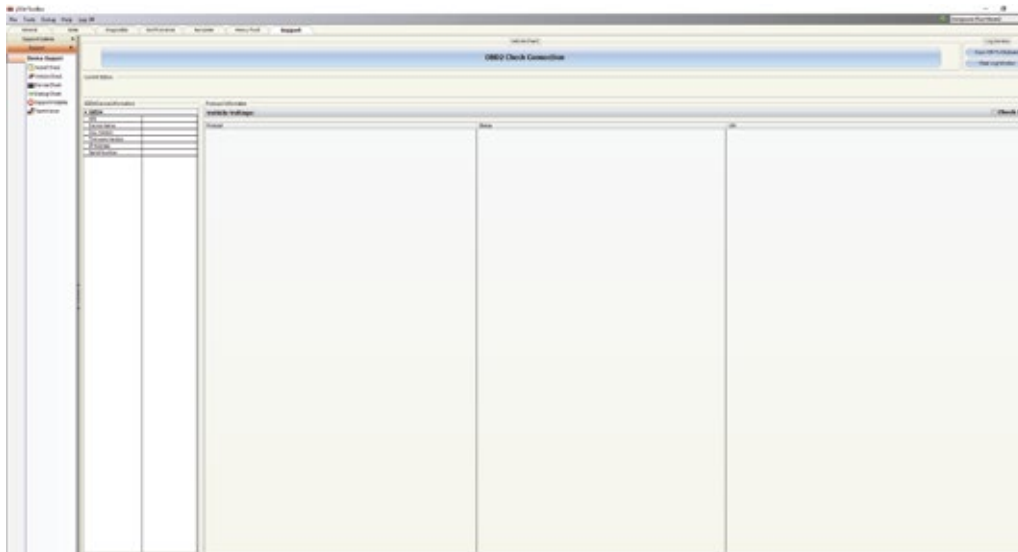
- c. **DIAGNOSTIC TAB** Contains relative links, some diagnostic functions, information and videos about flashing and OEM's that currently provide diagnostics via J2534.



- d. **FLASHING TAB** Contains the information pertaining to OEM J2534 flashing including links, information, walk-throughs, and some helper functions.



- e. **SUPPORT TAB** Contains functions to check driver installation, vehicle communication, updating the device, create debug logs, contact Technical Support and other resources.



- f. **TRAINING TAB** Contains general information, installation and Using OEM J2534 Application Videos with Drew Technologies products.

Maximum Voltage Per Mongoose-Plus® Product

Product	Max VBatt	Min VBatt CAN	Min VBatt J1850	Min VBatt K-Line	Min VBatt SCI
Chrysler	32	N/A	9	6	10
Ford	32	N/A	N/A	6	N/A
GM II	32	N/A	9	6	N/A
Honda	32	N/A	N/A	6	N/A
ISO/CAN	32	N/A	N/A	6	N/A
Nissan	32	N/A	N/A	6	N/A
Toyota 2	32	N/A	9	6	N/A
VW	32	N/A	N/A	6	N/A

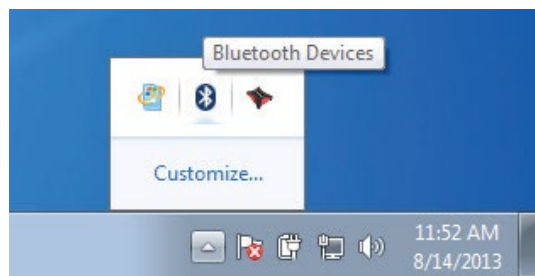
Mongoose-Plus® Vehicle Connector Pin Assignments

Feature	VW2	Honda2	ISO/CAN3	MFC3	Ford2	Nissan2	GM3	Chrysler2
Product Code	SQ	SN	SP	SL	SM	SO	SR	SS
USB ID	0x018F	0x018C	0x018E	0x018A	0x018B	0x018D	0x191	0x192
CAN-FD 1 (6&14)	●	●	●	●	●	●	●	●
CAN-FD 2 (3&11)	●	●		●	●		●	●
CAN-FD 2 (3&8)				●				●
CAN-FD 3 (12&13)							●	●
CAN-FD 3 (1&9)							●	●
CAN-FD ? (SW Pin 1)							●	
Fault Tolerant CAN3 (1&9)								●
Fault Tolerant CAN1 (6&14)								●
Ethernet/NDIS (3&11) ISO 13400-3 option 1	●	●	●	●		●	●	
Ethernet/NDIS (1&9) ISO 13400-3 option 2					●			●
Ethernet Activation (meas V on pin 8, pull up 4.7k, 500 ohms)	●	●	●	●	●	●	●	●
J1850 (VPW) (Pin 2)				●			●	●
J1850 (PWM) (2&10)				●	●			
ISO Serial K-line (Pin 7)	●	●	●	●	●	●	●	●
ISO Serial K-line or L line (Pin 15)	●	●	●	●	●	●	●	●
K line (pin 1)								●
K line (pins 3,6,7,8, 9,12,13,15)							●	
DiagH (Pin 1)		●						
DiagH (Pin 14)		●						
GM UART (pins 1,9)							●	
SCI (Pin 6,7,9,12,14,15)								●
STG (Pin 1)	●	●		●	●	●		
STG (Pin 9)	●	●		●	●	●		
STG (Pin 15)	●	●	●	●	●	●	●	●
VPP 5Volts (Pin 12)	●	●		●		●		
VPP FEPS (Pin 13)				●	●			
UART Echo Byte	●	●	●	●	●	●	●	●
TP 1.6 / 2.0	●							
Measure V on pin 1	●	●		●	●	●	●	●
J2534-1 0500 support	●	●	●	●	●	●	●	●

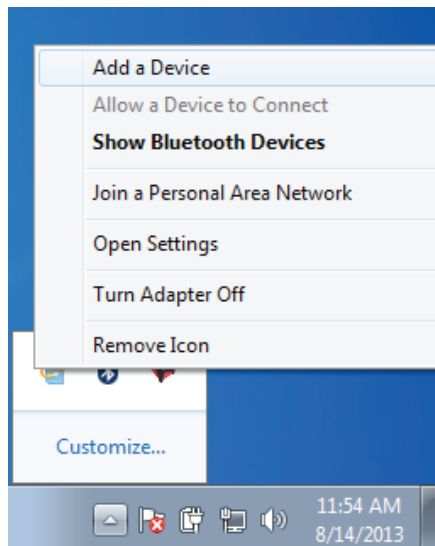
Bluetooth Setup

Bluetooth is an option that can be purchased with some **Mongoose-Plus®** versions. If you have purchased **Bluetooth**, your **Mongoose-Plus®** will have a **BT** at the end of the model number. Please note that **Opus IVS™** does not recommend doing any reprogramming over **Bluetooth**.

1. Make sure your **Bluetooth** dongle is installed by inserting your **Bluetooth** dongle manufacturer media into your PC and follow the installation directions.
2. To pair your **Mongoose-Plus® BT**, right click on the **Bluetooth icon** in the System Tray.



3. Click on **Add Device**



4. Select your device from the available options, then click **Next**.
5. Enter the pairing code **2534** in the text box and click **Next** pair the **Mongoose-Plus®**.
6. Your **Mongoose-Plus®** has been successfully paired with your PC.

NOTE: Only have one (1) **Mongoose-Plus®** paired with your PC to avoid erroneous test results. The **Mongoose-Plus®** driver will inform if you have multiple devices paired to your PC.

Technical Support

Please contact **Opus IVS™** for technical support at J2534support@opusivs.com. or (734) 222-5228 option 3.

If technical support finds it necessary for the unit to be returned for repair, you will be asked for your contact information and then provided with a **Return Merchandise Authorization number (RMA #)**. **Opus IVS™** will use the **RMA #** to track the unit through the repair process. Please write this number on the outside of your shipping box so it can be routed to the correct department. If the necessary repair is not covered by **Opus IVS™** warranty, you will be contacted for payment arrangements.

Mongoose-Plus LED Indicators

Mongoose-Plus LED Indicators - USB Only Device				
LED	Blinking Red	Solid Red	Blinking Green	Solid Green
Left LED	N/A	Firmware Error - Call Support	Device Start Up Process	Device is Functioning
Right LED	Data Transfer	Vehicle Power With No USB	N/A	N/A

Mongoose-Plus LED Indicators - USB and Bluetooth Device								
LED	Blinking Red	Solid Red	Blinking Green	Solid Green	Blinking Blue/Green	Solid Blue	Blinking Blue	Blinking White/Blue
Left LED	N/A	Firmware Error- Call Support	Device Start Up Process	Device is Functioning	N/A	Bluetooth On	N/A	N/A
Right LED	Data Transfer	N/A	N/A	N/A	Pairable	Bluetooth Connected	Not Pairable	Data Transfer

Note: If not Pairable, unplug from the vehicle connector and plug it back in (restart the device)

Environmentals

Environmental conditions, 5°C to 40°C and a Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C

Indoor use only

Altitude: 2000m above mean sea level

Relative humidity: 0 to 90%

Over voltage category: II

Pollution degree: 2

Mongoose-Plus



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