



12.3in Digital Dash

DD-EFI-12.3-DD

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Installation of this product may void your manufacturer's factory warranty. Please install at your own risk as the dealer or service provider may wish to verify the vehicles mileage/codes/service hours/etc. by connecting via diagnostic tool.

Digital Dash Kit (DD-EFI-12.3-DD)

Items Included:

- (1) DD-EFI 12.3" Digital Dash
- (1) Power Supply Connector
 - Red – 12V+ Battery
 - Black – Ground
 - Yellow – 12V+ Ignition
 - Blue – 12V+ Door/Dome Light Trigger (Optional)
- (1) GPS Antenna
- (1) Quickstart Guide

Items NOT Included:

- TunerStudio MS/Ultra Registered License
- Wireless Keyboard & Mouse
 - (ie: Logitech K400 Wireless keyboard and Built-in Touchpad)
- Serial to USB Cable
 - Needed for MS1, MS2, Microsquirt Systems

Features

The Digital Dash Kit is a fully programmable LCD dash display that connects your standalone ECU (MS1/MS2/MS3) directly to your TunerStudio MS/Ultra tuning software via USB connection. Built-in features include: boot-up splash screen video, customizable digital dashboard, and datalogger.

Dashboard Features

Below is a list of the common parameter's users would like to be displayed via the dashboard of which is being captured by your MS ECU. *Some items may need additional wiring/configuration to be displayed on your dashboard.

- Engine RPM
- Engine Coolant
- MAP
- MAT (Engine/Manifold Temperature)
- Boost PSI & Vacuum
- Target AFR (Air Fuel Ratio)
- Actual AFR (Air Fuel Ratio)
- Closed Loop Idle Indicator
- Battery Voltage
- Spark Timing
- MPG (Instant/Average)
- Shift Light
- *Oil Pressure
- *Speedometer (GPS or digital input)
- *Fuel Level
- *Gear Position
- *Transmission Temperature
- Etc...

Power Supply Features

The built-in power supply is automatically activated by either the Door Switch/Dome Light Trigger (Optional Blue Wire) or Vehicle Ignition Power is Active. The power supply is internally configured to shutdown 30 minutes after Door Switch/Dome Light Trigger (Optional Blue Wire) or Vehicle Ignition Power is Deactive.

- Pre-Programmed to 30 Minutes
- Low standby current draw of 4 mAh
 - Won't drain your vehicles battery
- Ignition sensing wire for turning ON/OFF computer
 - Optional Door/Dome Light Trigger

Hardware Installation

1. Remove the Vehicle's Stock Instrument Cluster (if available)
2. Wire and Plug-in the Power Supply Connector:
 - Red – 12V+ Battery
 - Black – Ground
 - Yellow – 12V+ Ignition
 - Blue – 12V+ Door/Dome Light Trigger (Optional)
3. Install GPS Antenna
 - The GPS Antenna needs to have access to the open sky
 - The GPS Antenna is also weatherproof & magnetic, so it can be installed on the exterior if desired
4. Install MS Tuning Cable to USB Port
 - MS1, MS2, Microsquirt System will need a Serial to USB Cable
5. Optional: Plug in the USB Dongle for your Wireless Keyboard & Mouse
6. Mount the Digital Dash in its permanent location

If you are completely removing the stock instrument cluster a Jumper Wire may need added to your instrument clusters wiring from the Alternator Sensing/Excite Wire to your Ignition 12+ Wire.



The alternators sensing/excite wire in many vehicles are wired to your battery indicator light. Removal of the instrument cluster may disconnect your Alternator wiring, and will need to be reconnected. Failure to do so may result in your alternator not charging. Make sure to either reinstall the factory resistor from your instrument cluster or add a 2-Amp fuse in-between the Jumper Wire.



WARNING: When mounting the Digital Dash do NOT cover the fan holes on the back as this could lead to overheating.

Software Configuration

Enabling Your TunerStudio MS/Ultra License

The Digital Dash utilizes the registered version of the EFI Analytics TunerStudio MS/Ultra software as your tuning and dashboard display. To activate the tuning and dashboard features you need to use your registration key from your TunerStudio MS/Ultra software.

1. Turn ON the Ignition to the Vehicle to start the boot-up of the digital dash
2. Wait until the boot-up process has been completed and for TunerStudio to be displayed
3. Plug-in Keyboard/Touchpad into computer
4. Connect to the Internet
 - Click on the Network Symbol on the top-right of the Application Bar
 - Click on the Wireless Network you would like to connect
 - Enter Network Password
5. With your Keyboard/Touchpad click on:
 - Help
 - Enter Registration
 - Enter in your TunerStudio MS/Ultra registration information
6. Close TunerStudio to save settings



Restoring TunerStudio Vehicle Project

The Digital Dash utilizes your current TunerStudio Vehicles Project, since it is running a full version of TunerStudio. This will give you all the same features and dashboard options as your tuning laptop of tuning, datalogging, and dashboard display. You will be able to make changes directly in the Digital Dash removing the need for the laptop in the passenger seat.

Steps to complete on your Tuning Laptop:

1. The Digital Dash uses a different “Connection Type” to your MS ECU, so you will need to adjust this in your Vehicle Project before restoring it to the Digital Dash:
 - Open your Vehicle Project on your Tuning Laptop
 - Click on:
 - Communications Tab
 - Settings
 - Connection Type: Click on the drop-down list
 - Select RS232 Serial Interface
 - Save the Vehicle Project
 - RECOMMENDATION: Save it as a different filename
 - **CLOSE** TunerStudio for the changes to save correctly to your project file
2. Insert the provided Thumb Drive into your tuning Laptop
3. Copy your Vehicle Project Folder to the Thumb Drive
4. Reopen TunerStudio and return your Vehicle Project’s Communication Type back to original setting on your tuning Laptop
 - **WARNING:** Failure to do so may cause a connection issue the next time to connect your tuning laptop

Steps to complete on your Digital Dash:

1. Turn ON the Ignition to the Vehicle to start the boot-up of the Digital Dash
2. Wait until the boot-up process has been completed and for TunerStudio to be displayed
3. Click on the TunerStudio Project folder icon at the top-left of the screen

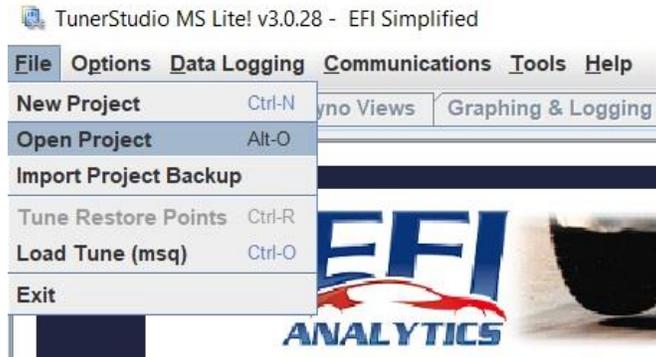


4. Plugin the Thumb Drive with your Vehicles Project
 - Click “OK” to open the Thumb Drive file location when prompted
 - Copy the Vehicle Project from the Thumb Drive to the TunerStudio Project Folder
 - Close both TunerStudio Projects and Thumb Drive folders when done



Reminder to remove any thumb drive plugged from the Digital Dash after uploading your Project File

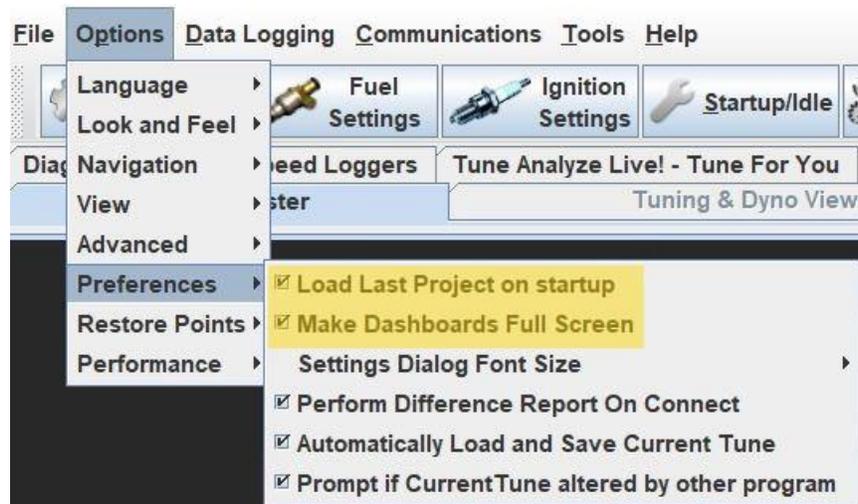
5. Click-on/Open TunerStudio back up
6. With your Keyboard/Touchpad click on:
 - File
 - Open Vehicle Project
 - Select your Vehicle Project



Enabling TunerStudio Start-up Features

After the boot-up process of the Digital Dash you would like to have your Dashboard auto display. To enable this feature, you need to activate the Dashboard to Full-screen on Start-up option of TunerStudio.

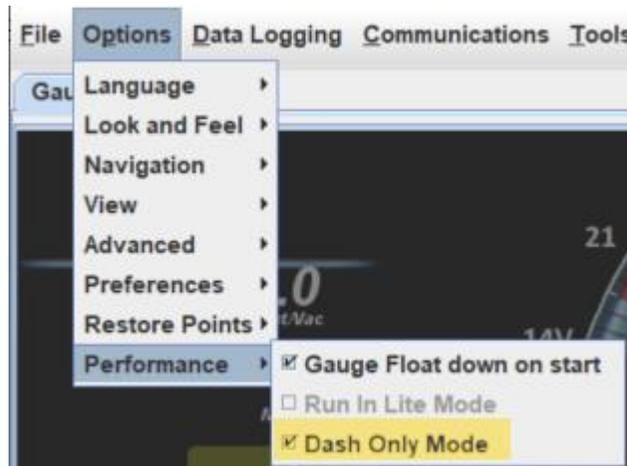
1. With TunerStudio open from the previous step
2. With your Keyboard/Touchpad click on:
 - Options
 - Preferences
 - Select the below (2) features:
 - Load Last Project on Start-up
 - Make Dashboards Full Screen



Enable Dash Only Mode

To be able to utilize all the tuning features of TunerStudio you need to disable the Dash Only Mode. This will give you the ability to have access to all your tune settings from your dash screen.

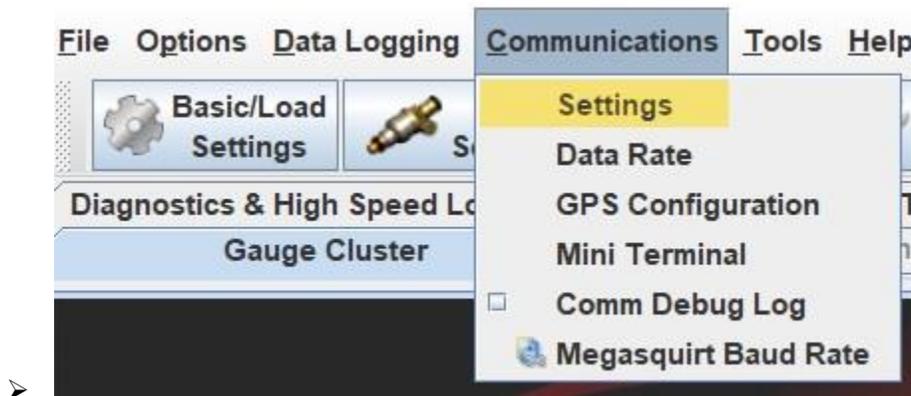
1. With TunerStudio open from the previous step
2. Use your Keyboard/Touchpad click on:
 - Options
 - Performance
 - Check the checkbox for “Dash Only Mode”



Setup of the Communication Settings

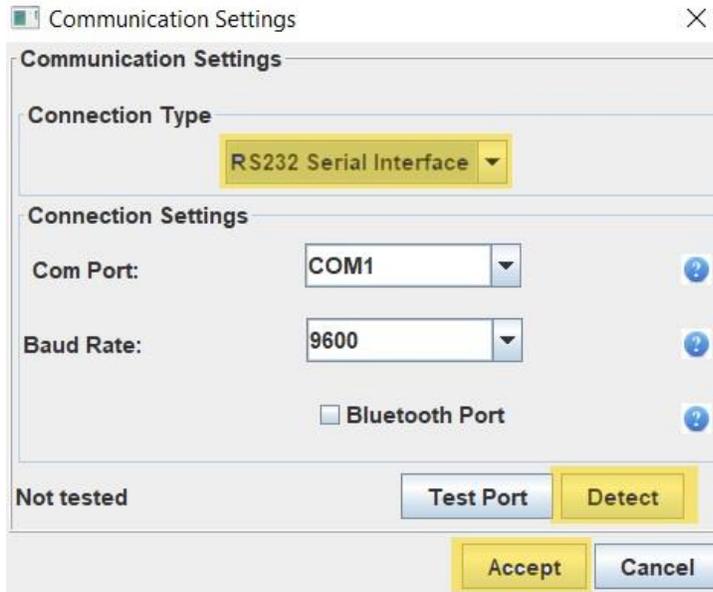
Now its time to connect your Digital Dash to your MS ECU, so they are able to communicate/connect together automatically. This process you will need to detect the which USB Port you have the MS ECU USB plugged into.

1. Double-check you have the MS ECU plugged into one of the computer’s open USB Ports
2. With TunerStudio open from the previous step
3. Use your Keyboard/Touchpad click on:
 - Communications
 - Settings



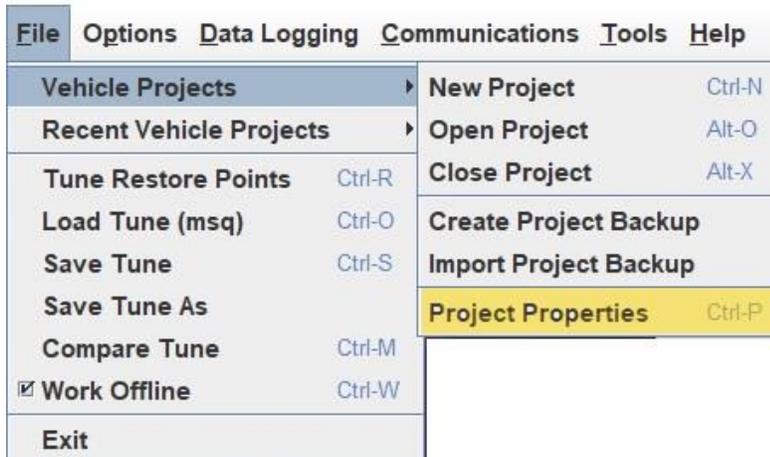
4. Communication Settings:

- Double-check your “Connection Type” is RS232 Serial Interface
- Click-on “Detect”
 - Allow the computer to auto detect which USB Port you have the MS ECU Tuning Cable plugged into
 - Once detected click-on “Accept”
- Click-on “Accept” to close the Communication Settings window



5. Saving the above Communication Settings to your Vehicle Project

- Use your Keyboard/Touchpad click on:
 - File
 - Vehicle Projects
 - Project Properties (Shortcut Ctrl+P)
 - Once open click-on “Ok”



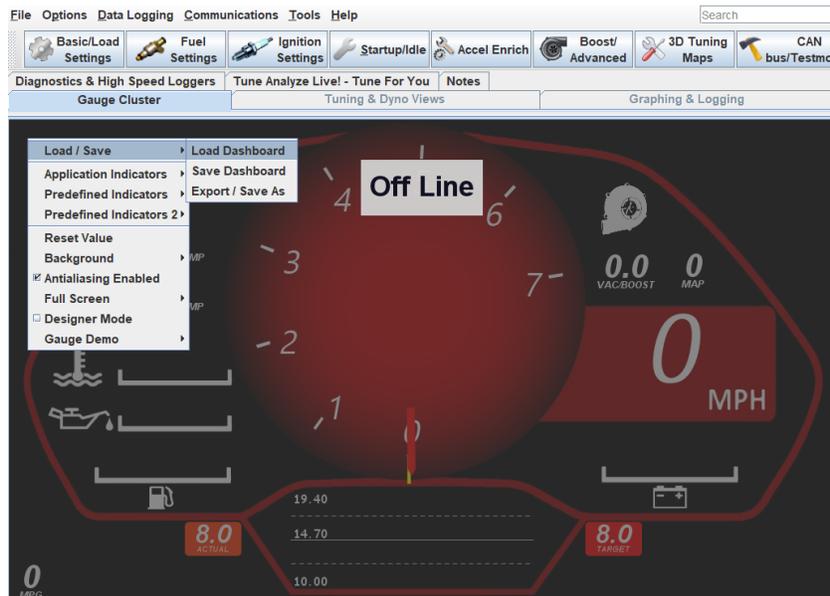
6. This will save your settings to your Vehicle Project

7. TunerStudio will now automatically close your Vehicle Project and Reopen

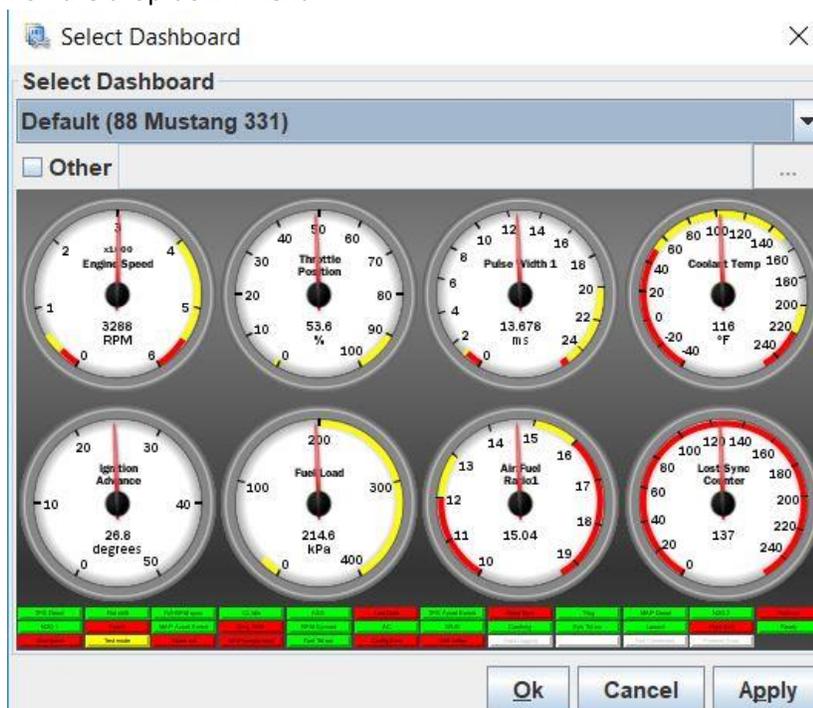
Choosing of Dashboard

There are many already pre-programmed dashboards from TunerStudio and Digital Dash EFI to choose from. You are also able to design your own dashboard or modify an existing dashboard as well.

1. With TunerStudio open; Right-Click on Dashboard
 - Mouse over; then click on:
 - Load / Save
 - Load Dashboard



2. You can choose from preloaded TunerStudio or DD-EFI Dashboards
 - Click-on the drop-down menu



Google Drive Sync Setup

This feature links your Google Drive Account to your Digital Dash allowing your Datalogs and Tune Files to be automatically synced. There won't be any need to copy/paste Datalogs to a Thumb Drive for review along with auto updating your tune files back to your Digital Dash upon start-up.

1. Open GDrive Installer – Click the Start Button (Raspberry Top-Left)
 - Go to DD-EFI Folder
 - Then GDrive Installer
2. Complete the Google Drive Sync Configuration – Type the below steps:
 - n & Enter
 - DDEFI (All Caps) & Enter
 - 12 & Enter
 - Enter
 - Enter
 - 1 & Enter
 - Enter
 - Enter
 - n & Enter
 - y & Enter
 - Login to Google Account
 - Accept rclone
 - n & Enter
 - y & Enter
 - q & Enter
 - reboot & Enter

Remotely Accessing your Digital Dash – Any Desk

This feature gives you the ability for remote access to your Digital Dash, which can be utilize by your remote tuner, crew chief, yourself, etc. You can then make changes to your dashboard and/or tune from any computer.

1. Make sure the DD-EFI Digital Dash is ON
2. Wait for the Digital Dash to complete the boot-up sequence
3. Using your Wireless Keyboard & Mouse double-click to exit Fullscreen in TunerStudio
4. Click on the Any Desk Icon at the top-right of the screen 
5. Use the Any-Desk Address for Remote Connection

Modification of Boot-Up Splash Screen

During the boot-up of the Digital Dash a Splash Screen video is played the same as newer vehicles. The Splash Screen video is user configurable to play any .MP4 format video, but needs to be a minimum of 25 seconds or longer.

1. Copy your new Splash Screen video on the provided Thumb Drive
 - **MAKE SURE:**
 - The video is a .MP4 file format
 - The video needs to be a minimum of 25 seconds or longer
 - The video filename is “splashscreen.mp4”
 - Right-Click on video file
 - Choose option Rename
 - Rename file to: splashscreen.mp4
2. Turn ON the Ignition to the Vehicle to start the boot-up of the Digital Dash
3. Wait until the boot-up has been completed and your TunerStudio dashboard is displayed
4. With your Keyboard/Touchpad exit the Fullscreen of the Dashboard
 - Keyboard - Esc Key
 - Mouse - Double-Click on Dashboard
5. Open the Splashscreen video location:
 - Click on the Start Button (Raspberry icon) on the Top Left of the screen
 - Scroll to the DD EFI folder
 - Scroll over and click on the Movie Icon



6. Plug-in to the computer's USB Port the Thumb Drive with your new Splashscreen video
 - You will receive an option to open the folder
 - Click “OK”
7. Rename the current splashscreen.mp4 (This ensures you don't overwrite this file)
 - Right-click on splashscreen.mp4 file
 - Click Rename
 - Rename the file (ie: DDEFI Splashscreen)
8. Drag your new Splashscreen video from your Thumb Drive to the Splashscreen folder
9. Make sure your new Splashscreen video is named correctly “splashscreen.mp4”
 - Failure to get the file name correct the video will not play
10. Close the folders as you are completed

