Getting Started with Venus3 and Hyperspace Tuning Software

About the product.

Spitronics products are developed for the DIY market and are mostly sold through dealers and to handy customers in and outside the RSA boundaries. This makes it a more cost effective product as the company overheads are held to a minimum. Spitronics rather makes use of the extensive infrastructure of dealers that specialize in this type of business. The Spitronics devices are not plug & play devices but must be customized by the dealer for specific applications. These products are very versatile and can be adapted to most engines, transmissions etc. The dealer is responsible for after-sale service which is a third party company that Spitronics don't have control over. So make sure about the dealer's service and capabilities before you buy from him. Spitronics is not responsible for poor service from him. Please read our terms and conditions found on our website. All the information, software and manuals are freeware on our website **www.spitronics.com** See also *Compiling an ECU Product* for guidelines on putting the right firmware, product and drawings together.

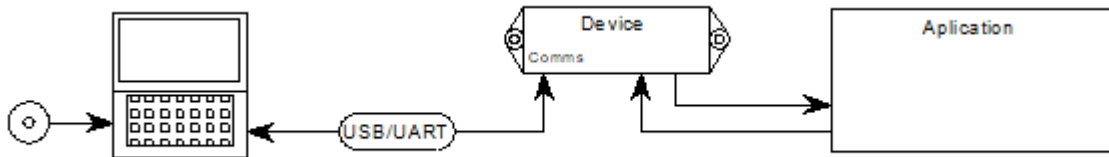## How does Spitronics Products Work

Each Spitronics product is Micro based which requires specific firmware programs to initialize the hardware for each type of engine or transmission. It has tuning Maps that adjust parameters and graphs for that engine. To alter the Maps, requires tuning software, so that the tuner can adjust fuel and timing etc. for that application. The product needs to be activated before it will operate.

1. The **firmware** will initialize the hardware to work on a specific engine. This firmware is fixed code and is pre-loaded into the product with the BootLoader. Only the manufacturer requires a programmer and from there on it use the Bootloader and normal USB tuning cable as illustrated in Step 1. The firmware files are freeware on our website and has the extension of *.FIRM* and are downloaded via the tuning software. This process is illustrated in step 1 of Fig 1.
2. Spitronics developed an internet **activation** system to allow dealers abroad to carry stock at a reduced price. Then when the dealer sells to a customer, he will activate the unit in a specific hardware class according to the required firmware for that application. He will need credit on the Portal for the activation. He will load the correct firmware and startup Map for the customer and guide him to the correct drawings and settings. He will test the unit on a simulator and verify that everything is in order as to assist the customer. This feature makes the product counter ready without the delay of ordering the product on demand. This procedure is illustrated in the steps of Fig 1.
3. The **Hyperspace tuning** software will allow the tuner to adjust his engine to his requirement. This could be performance, economy etc. This tuning data is saved in the product and also in a file called a data Map or a Tune with the extension *.SPIECU* etc.
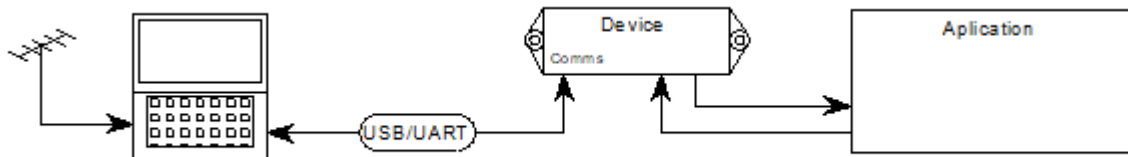
Block Diagram of Product interfacing

Step 1 – Programming
The dealer must program the relevant firmware file into the device. Venus3 use a bootloader and the normal USB tuning cable. The file extension is *.VDfirm* and is downloaded from Spitronics website via the Hyperspace software.
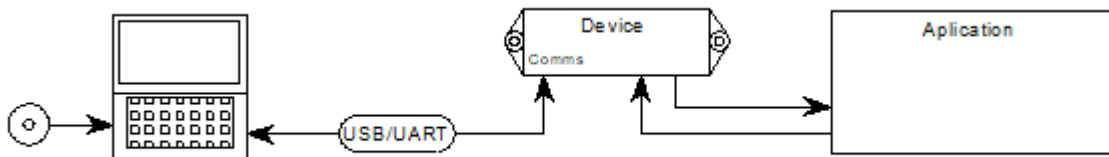

Step 2 – Activation
The dealer must allocate the device for the customer on the Portal and then the dealer or customer must Assign the allocation to the device. The laptop must have internet connection to do the assign process.

Step 3 – Setting up
The dealer or customer must load a relevant startup map for the customer and then he can start setting up his device. Some startup maps may be on the website or can be supplied by the dealer.

What you need to get started.

1. The **product hardware** and **accessories** for the specific application. This will be the ECU, control modules such as idle control and Coil Igniters, harnesses, MAP sensors etc. for that specific application. The product is sold in different classes and priced according to the features and outputs used. There is a selection chart in the Venus3 Product Information manual under Product Information indicating the different classes for different features. You may also start in the ECU Firmware Numbers chart if you know what crank pattern your engine has. Or you may ask a dealer in your area or send a mail to sales@spitronics.com
2. The USB / UART communication cable to connect the device on to a laptop for tuning purposes. This cable is sold separate as you only need one for tuning all our products. The communication electronics is put in the cable which means the product becomes cheaper as each device does not require those components. This USB Cable has Windows drivers that needs to be installed before it will operate. See further in the manual for instructions.
3. The Hyperspace Tuning Software to interface with the products. The software is Windows based and works on all versions from WinXP and up. You need a Laptop or Tablet for this.

There is also an Android version for smart phones. It does have limitations as the interface screen is very small. The software for each firmware type like ECU, TCU etc. is separate to simplify operation.

4. A **Startup map** which helps with the setup of the specific engine. Each engine differs in minor changes so these MAP's still requires some refining. A MAP or Tune is a data file that is saved on the hard disk and differs for each type of engine. If you don't get a specific map for your engine, you may adapt any map to suit your engine.
5. The Venus3 Drawing Manual and a Hyperspace Software Manual for explaining wiring and tuning. These manuals come in various methods for ease of use. There is a lot of information but once you browse through them you will get to your info quickly. They are available on the web and is updated from time to time.

Optional requirements.

1. The Bluetooth module. This is handy products to connect the device to dashboard products from third parties or android phones.
2. The **Simulator** helps dealers to setup and test customer's devices. It is recommended for the dealer that carries stock and help customers over the counter. The latest Simulator3 works on all our products with the exception of different connecting harnesses. Note that the product requires test firmware that works with the simulator.

Useful links and direction of info on the website.

The USB / UART communication cable.

- DOWNLOADS

- USB Drivers   USB Drivers   2015-06-23 13:49:49

- Spitronics_USB_Drivers (4 MB) ⬇ 11

https://support.spitronics.com/downloads/ - download-filesUSB-Drivers

The Ver 3 Hyperspace Tuning software.

- DOWNLOADS

- Tuning Software

- Hyperspace Software

- Due to regular updating of software we will not include a link here. Select the software you require. ECU, TCU, TxW etc. The **Read Me** file has more information regarding the software. The link below will take you to the folder.

The Venus3 Manual

- **DOWNLOADS**

- 📁 Manuals

- Due to regular updating of manuals we will not include a link here. Select the manual you require. The *Read Me* file has more information regarding the manuals. The link below will take you to the folder. There is also online manuals in the folder which breaks the big manual up in smaller PDF documents.

- https://support.spitronics.com/downloads/#download-filesManuals

Installation of Software, Drivers and Manual

USB Drivers

The browser should download the drivers in the downloads folder. The drivers file is compressed with WinRAR which is freeware software. Un-compress the file. After uncompressing there should be a folder created as below.
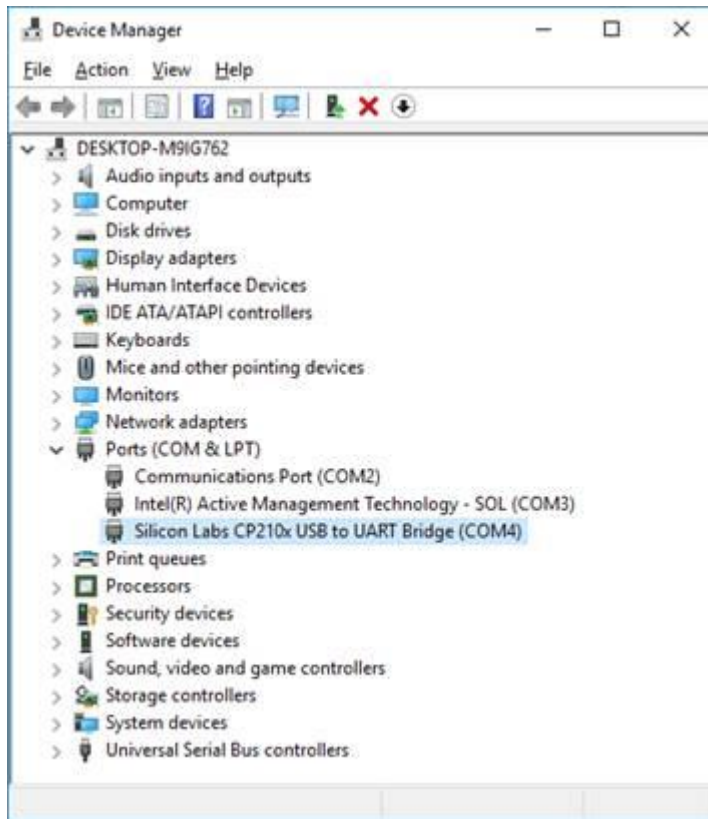
📁 CP210x_VCP_Windows

Go into the folder and you should see the following.

Name	Date modified	Type	Size
x64	11-Apr-14 11:56 PM	File folder	
x86	11-Apr-14 11:56 PM	File folder	
CP210xVCPInstaller_x64.exe	11-Apr-14 11:56 PM	Application	1,026 KB
CP210xVCPInstaller_x86.exe	11-Apr-14 11:56 PM	Application	901 KB
dpinst.xml	11-Apr-14 11:56 PM	XML Document	12 KB
ReleaseNotes.txt	11-Apr-14 11:56 PM	Text Document	11 KB
SLAB_License_Agreement_VCP_Windows...	11-Apr-14 11:56 PM	Text Document	9 KB
slabvcp.cat	11-Apr-14 11:56 PM	Security Catalog	12 KB
slabvcp.inf	11-Apr-14 11:56 PM	Setup Information	5 KB

If you have a 64bit computer then run the file called 🗲 CP210xVCPInstaller_x64.exe

For 32bit computer run the file called 🗲 CP210xVCPInstaller_x86.exe

After you installed the driver plug the USB /UART cable into the computer and the cable will be activated. In the device manager you should see the block below in com ports. This means the drivers are installed correctly.

Tuning Software

Select the software you require. The browser should download the file in the downloads folder on your PC. The file is compressed with WinRAR which is freeware software. Un-compress the file. After uncompressing there should be a file created as the example below.
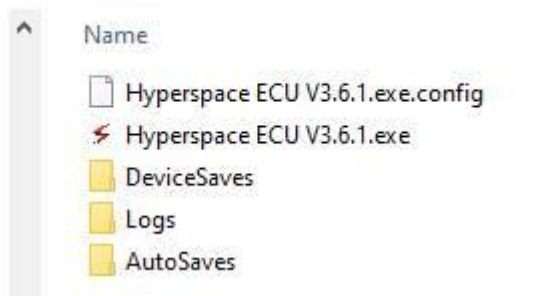
⚡ Hyperspace ECU V3.6.1.exe

Run the file and Hyperspace will be opened.

After it is opened and indemnity was done as well as manuals opened in the software you should end up with a file set like below:

Local Disk (C:) > Spitronics > Hyperspace > ECU >

Name
Hyperspace ECU V3.6.1.exe.config
Hyperspace ECU V3.6.1.exe
DeviceSaves
Logs
AutoSaves

The Hyperspace software can detect if you open the wrong software type or version and then open the correct version for you instead. This requires that you do install all your software in the following structure.

This PC > Local Disk (C:) > Spitronics > Hyperspace

Then you need to use sub folders like below:

Device Manager
ECU
TCU
TxW

Connecting a Product to Hyperspace for the first time.

By now you should be familiar with the product and information around it. The chapters you should read before attempting to install is the Safety Precautions**.** This will help to prevented making the obvious faults that could damage the unit or components of the engine. Below is a screenshot where you can find it in the Venus3 Installation manual.

Always follow the ***Startup Procedure*** step by step as it is explained in the manual. Do not attempt to take shortcuts and try to start. If you missed some points in the setup, the ECU or engine components could be damaged. Each Product differs and has its own unique way in the Startup Procedure. Each point is numbered and you can reference this number to the dealer to ask him for advice. If the number does not function correctly do not go further until it is solved. Failing to do so may damage the unit and inflict repair costs for your account. Below is a screenshot where you can find it in the Hyperspace manual.