

### Install Keil MDK Version 5

- Download and install the MDK Core from [www.keil.com/mdk5/install](http://www.keil.com/mdk5/install)

### Add Software Pack using the Pack Installer

- **Keil::STM32F4xx\_DFP** – STMicroelectronics STM32F4 Series Device Support
- **Keil::STM32NUCLEO\_BSP** – STMicroelectronics NUCLEO Board Support

### Power up the board

- Do **not** connect the board to the PC! Go to C:\Keil\_v5\ARM\STLink\USBDriver and double-click **stlink\_winusb\_install.bat** to install the drivers for the on-board USB ST-Link/V2.
- Connect a USB power supply **USB ST-Link/V2** port to the computer using a Mini USB cable. Windows recognizes the ST-Link/V2 device and installs the drivers automatically.

### Verify Installation using example projects provided in the Software Pack

- Copy an example using the Pack Installer. Compile, download to Flash, and debug the application. The provided examples are ready to run.

### More Information

- Getting Started User's Guide [www.keil.com/gsg](http://www.keil.com/gsg)
- Board Information [http://www.keil.com/boards2/st/nucleo\\_f446re](http://www.keil.com/boards2/st/nucleo_f446re)

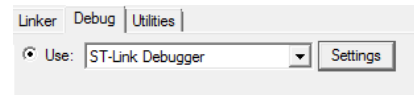
### Related Products

- MDK Version 5 [www.keil.com/mdk5](http://www.keil.com/mdk5)
- MDK-Professional Middleware [www.keil.com/mdk5/middleware](http://www.keil.com/mdk5/middleware)

### Enable ST-Link Debugger

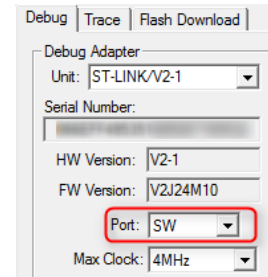
Select **Options for Target**  or press **ALT+F7**.

Go to the **Debug** tab and select the **ST-Link Debugger**.



### Connect Using SWD

Click on the **Settings** button. On the **Debug** tab select the Port **SW**. This board does not support JTAG.



### Configure Trace using Serial Wire Viewer

Go to the **Trace** tab and enter the correct CPU **Core Clock** speed as specified in your project. Check the **Trace Enable** box.

When debugging, the Status bar shows information about the Trace connection.

