Enable Serial Wire Trace

To enable Serial Wire Trace on STMicroelectronics STM32F10xxx devices:

- Use a ULINK2 connector interface that supports Serial Wire, and connect **ULINK2** to the board and to the host computer.
- Enable the Trace Port Interface as described in the **STM32F103xx Reference Manual**, chapters **Pinout and Debug Port Pins** and **TRACE Pin Assignment**.
- Configure µVision to capture trace data.

Enable the Trace Port Interface

1. Create a text file, for example **conf_STM32F10_SWO.ini**, and enter the following code:

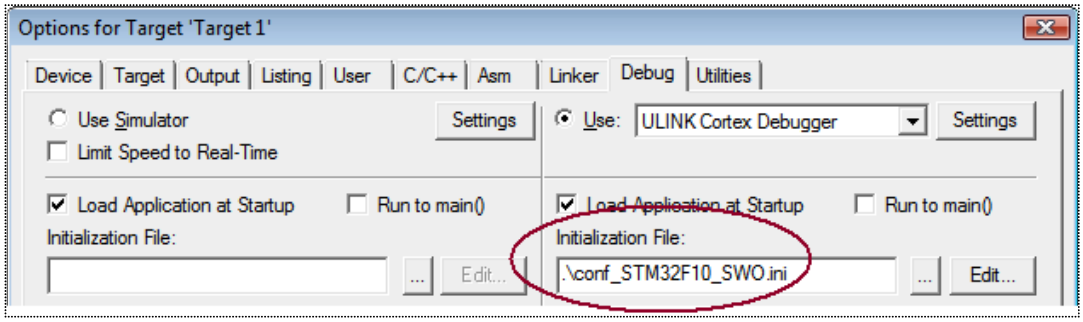
```
/*---------------------------------------------------------------------
** Define the function to enable the trace port
**---------------------------------------------------------------------*/
FUNC void EnableTPIU(void) {

  _WDWORD(0xE0042004, 0x00000020);    // Set asynchronuous communication via DBGMCU_CR
}

/*---------------------------------------------------------------------
** Invoke the function at debugger startup
**---------------------------------------------------------------------*/
EnableTPIU();
```

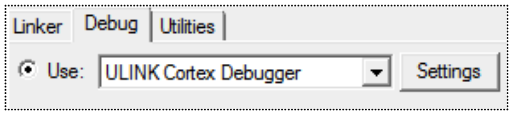
   Use the _WDWORD command to configure the TRACE_IOEN and TRACE_MODE bits of the **DBGMCU_CR** register: **_WDWORD(0xE0042004, 0x00000020);**

2. Open the dialog **Options for Target — Debug** and insert **conf_STM32F10xxx.ini** into the **Initialization File** field.

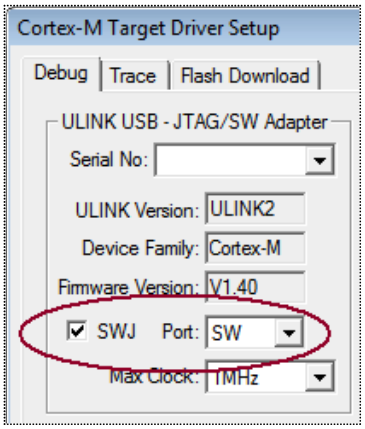


Configure µVision to capture trace data

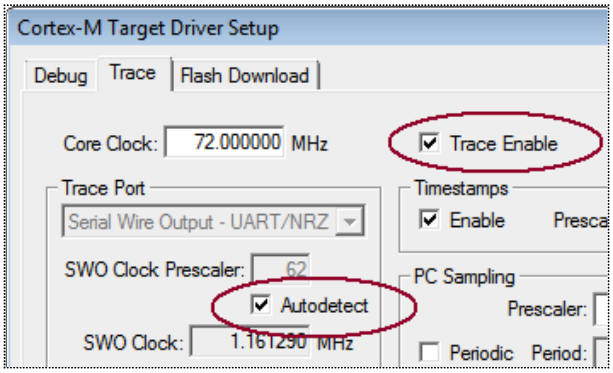
1. Open the dialog **Options for Target — Debug**.



2. Enable **Use**, select **ULINK Cortex Debugger**, and click **Settings** to open the **Target Driver Setup** dialog.



3. Enable **SWJ** and select **SW**.
4. Click the **Trace** tab.



5. Set **Trace Enable** and **Autodetect**.
6. The **Core Clock** must correspond to the device configuration.

Start the debugging session and verify the captured trace data with a µVision window.

Note

- Always synchronize the settings in the ***.ini file** with the settings in the **Target Driver Setup—Trace Port** dialog.
- Use the examples delivered with the Keil board MCBSTM32E as a reference.

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