



How to debug with Serial Wire Viewer tracing on STM32MP15

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A quality version of this page, approved on 19 April 2021, was based off this revision.

This article provides some setup information for STM32MP15 serie, debugging Cortex-M in *Production Mode*. It does not intend to cover all STM32CubeIDE Serial Wire Viewer (SWV) capabilities; complete information is available in (UM2609), chapter 4.

In that mode, the available console on the board (UART4) is used by Cortex-A Linux. The clock tree is managed by Linux and 'Trace clock' needed to setup SWO is available from Linux console with command:

```
awk 'ck_trace/{print $5}' /sys/kernel/debug/clk/clk_summary
```

In order to test, let's modify main.c file from a generated project with a looping variable 'i', as depicted hereafter.

File:Swv-traceclk-linux-main.png
Trace clock from Linux console

Then, setup debug configuration, enabling SWV and setting the clock: 133.25MHz here.

File:Swv-dbg-cfg.png
Debug Configuration with SWV enabled

Stopping Debug session, open Serial Wire Views: *Window > Show View > Other... > SWV > SWV Trace Log & SWV Data Trace*.

In *SWV Trace Log > Configure Trace* menu, setup *Comparator 0* in order to spy variable 'i'.

File:SWVConfigureTraceButton.png

File:Swv-settings.png
SWV Setting

Then start the trace

File:SWVStartTraceButton.png

Resuming debug session gives inside *SWV Data Trace* view the corresponding graphic.

File:Swv-data-trace.png
SWV Data Trace Output

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