AN01507

How to Use STLink Upgrade RisingHF Device

V1.0

Document information

Info	Content
Keywords	*RisingHF, Application Note, SWD, STLink, Upgrade*
Abstract	This document shows how to upgrade RisingHF device through ARM SWD interface

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1 Connection

Figure 1-1 STLink
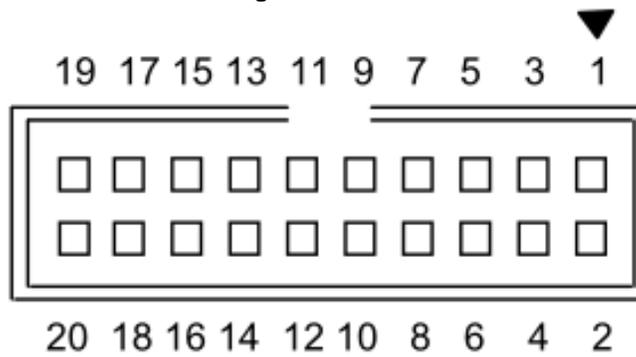
Viewed from above PCB

Figure 1-2 STLink pin definition

Pin no.	ST-LINK/V2 connector (CN3)	ST-LINK/V2 function	Target connection (JTAG)	Target connection (SWD)
1	VAPP	Target VCC	MCU VDD[1]	MCU VDD[1]
2				
3	TRST	JTAG TRST	JNTRST	GND[2]
4	GND	GND	GND[3]	GND[3]
5	TDI	JTAG TDO	JTDI	GND[2]
6	GND	GND	GND[3]	GND[3]
7	TMS_SWDIO	JTAG TMS, SW IO	JTMS	SWDIO
8	GND	GND	GND[3]	GND[3]
9	TCK_SWCLK	JTAG TCK, SW CLK	JTCK	SWCLK
10	GND	GND	GND[3]	GND[3]
11	NC	Not connected	Not connected	Not connected
12	GND	GND	GND[3]	GND[3]
13	TDO_SWO	JTAG TDI, SWO	JTDO	TRACESWO[4]
14	GND	GND	GND[3]	GND[3]
15	NRST	NRST	NRST	NRST
16	GND	GND	GND[3]	GND[3]
17	NC	Not connected	Not connected	Not connected
18	GND	GND	GND[3]	GND[3]
19	VDD	VDD (3.3V)[5]	Not connected	Not connected
20	GND	GND	GND[3]	GND[3]

1. The power supply from the application board is connected to the ST-LINK/V2 debugging and programming board to ensure signal compatibility between both boards.
2. Connect to GND for noise reduction on the ribbon.
3. At least one of this pin must be connected to the ground for correct behavior (connecting all of them is recommended).
4. Optional: for Serial Wire Viewer (SWV) trace.
5. Available on ST-LINK/V2 only and not connected on ST-LINK/V2/OPTO.

Figure 1-3 STLink Pin Function Definition

Figure 1-4 RHF1S001SWD Interface

Pin Name	RHFxxxxx	STLink
3V3	PIN1 (3V3)	PIN1 (3V3)
GND	PIN2 (GND)	PIN4 (GND)
RESET	PIN3 (RST)	PIN15 (RST)
SWDIO	PIN4 (DIO)	PIN7 (SWDIO)
SWCLK	PIN5 (CLK)	PIN9 (SWCLK)

Table 1-1 Connection Map

2 Upgrade

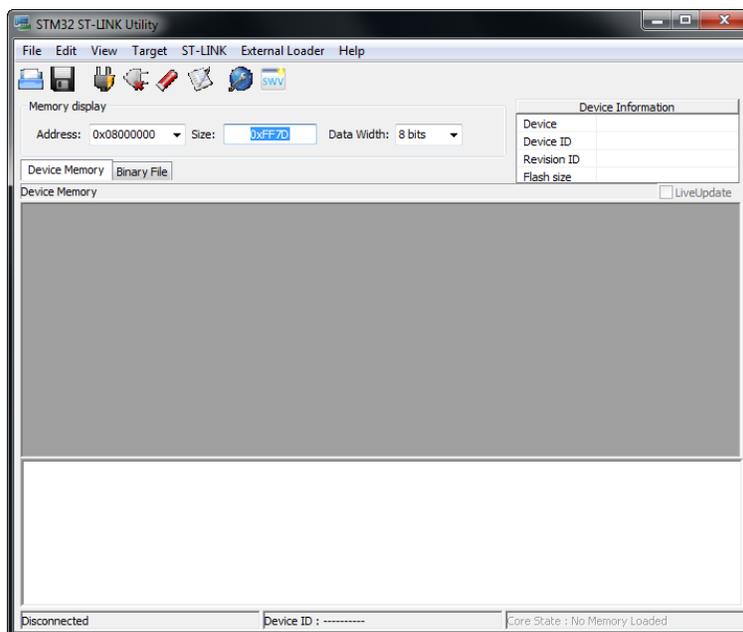Download ST-Link Utility from ST website, install and connect ST-Link with PC, program the new hex to the device

Table 2-1 ST-Link Utility

Revision

V0.1 2015-10-16
　　　+ Initial

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