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1
2 @brief      Establishing successful SWD debugging
3 @details    Unable to currently with existing tool
4 @auth      Justin Reina
5 @rev       2
6 @date      1/15/19
7
8 @section    Hardware
9     A. Nucleo-F091RC      (S/N: 066DFF495355878281174354)
10    B. Nucleo-F091RC      (S/N: 0670FF495355878281173711)
11    C. Personal Board      (S/N: P1/T2)
12    D. ST-Link/V2         (S/N: 56FF75065177495622091587)
13    E. Seggger J-Link EDU (S/N: 269402770)
14
15 @section    Tasks
16     1. Flash & Debug Nucleo-MCU with Nucleo-LINK (same board)
17     2. Flash & Debug Nucleo-MCU with Nucleo-LINK (alt board)
18     3. Flash & Debug Nucleo-MCU with ST-LINK/V2
19     4. Flash & Debug Personal Board with ST-LINK/V2
20
21 @section    Task One
22     @mcu     Nucleo-MCU.A
23     @icsp    Nucleo-Link.A
24
25     //Procedure
26     @pre     CN2 jumpers connected, powered down
27     1. Plug in Nucleo.A USB
28     2. Open TrueSTUDIO
29     3. One BP @ HAL_Init(), debug review, confirm & launch
30     @result  confirmed
31
32 @section    Task Two
33     @mcu     Nucleo-MCU.A
34     @icsp    Nucleo-Link.B
35
36     //Procedure
37     @pre     Task One, CN2 jumpers disconnected (both)
38     1. Unplug Nucleo.A USB
39     2. Connect SWD from Nucleo-Link.B to Nucleo-MCU.A
40     3. Plug in Nucleo.B USB
41     3. One BP @ HAL_Init(), debug review, confirm & launch
42     @result  confirmed
43
44 @section    Task Three
45     @mcu     Nucleo-MCU.A
46     @icsp    ST-Link/V2
47
48     //Procedure
49     @pre     Task Two, Disconnect USB
50     1. Disconnect Nucleo.B SWD connection
51     2. Transfer SWD connection to ST-Link/V2 CN3
52     3. Apply Vdd, reset
53     4. Deploy & Debug
54     @result  confirmed
55
56
57
58
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59
60 @section Task Four
61 @mcu Personal Board
62 @icsp ST-Link/V2
63
64 //Procedure
65 @pre Task Three
66 1. Disconnect Nucleo.A SWD connection
67 2. Transfer SWD connection to Personal Board (J5)
68 3. Apply Vdd, reset
69 4. Deploy & Debug
70 @result confirmed
71
72 @section Nucleo-LINK Wiring [2]
73 JP1.1 - Vcc (Red)
74 CN4.3 - Gnd (Black)
75 CN4.2 - SWCLK (Green)
76 CN4.4 - SWDIO (Blue)
77 CN4.5 - NRST (White)
78
79 @section Nucleo-MCU Wiring [2]
80 CN7.5 - Vcc
81 CN7.8 - Gnd
82 CN7.15 - SWCLK (PA14)
83 CN7.13 - SWDIO (PA13)
84 CN7.14 - NRST (NRST)
85
86 @section 2x10 SWD Wiring [3]
87 P1 - Vcc
88 P4 - Gnd
89 P7 - SWDIO
90 P9 - SWCLK
91 P15 - NRST
92
93 @section Personal Board Wiring (B)
94 J5.1 - Vcc
95 J5.3 - Gnd
96 J5.4 - SWDIO
97 J5.2 - SWCLK
98 J5.5 - NRST
99
100 @section Vocabulary
101 Nucleo-MCU - MCU located on NUCLEO-F091RC (U5)
102 Nucleo-LINK - ST-Link on NUCLEO-F091RC (U2)
103
104 @section References
105 [1] ST Community - Help needed with SWD connection
106 https://community.st.com/s/question/0D50X0000ADDtiisQD/
107 help-needed-with-swd-connection
108 [2] NUCLEO-F091RC Schematic (MB1136)
109 [3] Adafruit JTAG to SWD Adapter (#2094)
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