CMSIS-DAP/DAPLink User Manual

- Introduction
- Feature
- MDK Config
 - Debugger Select
 - Target Detect
 - Flash Algorithm
 - Reset Setting
- DAPLink Usage
 - Drag-and-Drop
 - Firmware Upgrade

Introduction

CMSIS-DAP/DAPLink is a cmsis-dap debugger made by MuseLab which support SWD/JTAG and a USB CDC serial port.

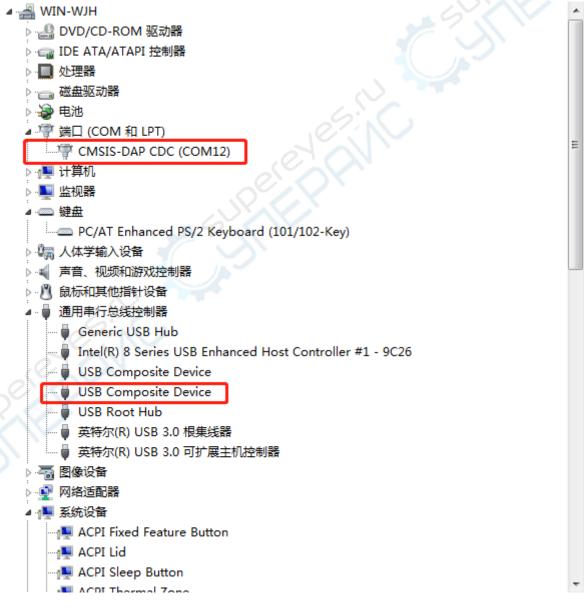


Feature

- open source hardware/software
- 5V/3.3V power supply to target board
- SWD interface
- JTAG interface
- USB CDC serial port
- DAPLink is a upgrade of CMSIS-DAP, which support drag-n-drop program
- DAPLink support drag-n-drop upgrade the firmware

MDK config

plug the debugger into PC USB, if everything is ok, there will appear a CDC port and a USB HID device



Debugger Select

select CMSIS-DAP Debugger in Option -> Debug

C Use Simulator		Asm Linker Debug Vtilities			
 Load Applicat Initialization File: 		✓ Load Application at Startup ✓ Run to main() Initialization File:			
Breakpoin	Session Settings ts IV Toolbox indows & Performance Analyzer	Restore Debug Session Settings			
CPU DLL:	Parameter:	Driver DLL: Parameter:			
SARMCM3.DLL	-REMAP	SARMCM3.DLL			

Target Detect

click Settings in Option -> Debug, recommend to select the swd port, and config the frequence to 10MHz

CMSIS-DAP	pter — SW D		Device Name	Mov
Serial No: 0001A0000001	SWDI	O Ox1BA01477	ARM CoreSight SW-DP	Up
Firmware Version: 2.0.0				Dov
SWJ Port: SW		utomatic Detection 1anual Configuration dd Delete U	ID CODE: Device Name:	AP: 0x00
Connect & Reset Options Connect: Normal	Reset: SYSR	ESETREQ -		wnload Options Verify Code Download Download to Flash

Flash Algorithm

you need to config the flash algorithm for your target mcu, here is a example with stm32f1x

Note: select the Reset and Run for target auto reset after program done.

Description Device Size Device Type Address Range STM32F10x Med-density Flash 128k On-chip Flash 08000000H - 0801FFFFH Stat:	 Erase Sectors Do not Erase 	 ✓ Program ✓ Verify ✓ Reset and Run 		gorithm 20000000 Size: 0x10	00
Start: Size:	ription				
			Start:	Size:	
Add Remove			1		

Reset Setting

Generally, you may need to start the mcu when program done, config the Reset type to SYSRESETREQ here and select Reset and Run in the Flash Download Page above.

CMSIS-DAP 👻		Error	Move
Serial No: 0001A0000001	SWDIO	SWD/JTAG Communication Failure	Up
Firmware Version: 2.0.0			Dow
V SWJ Port: SW V Max Clock: 10MHz V Debug Connect & Reset Options		ual Configuration Device Name:	AP:
	eset: SYSRESI		Verify Code Download

DAPLink Usage

Drag and Drop

plug the DAPLink into PC USB, there will be a USB DISK appear called DAPLink,

∠ i	设备和	巡动器 (8)			
	8	百度网盘 双击运行百度网盘	i	我的手机	本地磁盘 (C:) 3.13 GB 可用 , 共 53.2 GB
		软件 (D:)		新加卷 (E:)	新加卷 (F:)
ļ		6.04 GB 可用 , 共 65.4 GB		9.30 GB 可用 , 共 59.6 GB	25.3 GB 可用 , 共 59.5 GB
		My Passport (G:)	0	DAPLINK (I:)	
1		178 GB 可用 , 共 931 GB	\checkmark		
-		_ '			

DAPLink support drag and drop program, just drag the binary with suffix hex or bin into the DAPLink, the DAPLink will do all the program work.

Tips: one firmware can only support one type of MCU drag-n-drop program, for different type of MCU, you may need to compile the source yourself.

Firmware Upgrade

DAPLink implement a bootloader with USB MSD, which made it very easy for the firmware upgrade.

- 1. short the nRST and GND.
- 2. plug the DAPLink into PC USB, a USB DISK named MAINTAINENCE will appear.
- 3. disconnect the nRST and GND.
- 4. drag the new firmware into the MAINTAINENCE, wait for a few moment, then upgrade done, a new USB DISK DAPLINK will appear with replace of MAINTAINENCE