J-Link-OB flash下载 (V1.1)

该文档描述如何使用 SEGGER 公司提供的 J-Flash 软件通过 J-Link 下载(烧写,

烧录,编程)数据文件。

演示环境:

操作系统:window7

硬件调试下载器:J-Link-OB

软件下载器: J-Flash ARM V4.68

调试下载器连接方式:SWD

目标板系统: STM32F103C8T6 最小系板(ST)

目标板的供电方式:由 J-Link 调试下载器供电





STM32F103C8T6 最小系板(ST)下载演示:

1、在下载前请确保已经安装好软件 J-Flash ARM 软件及 J-Link

驱动,并正确连接 J-Link 调试下载器和目标板系统。

2、在桌面上或开始菜单中找到已安装好的 "J-Flash ARM V4.68" 软件图标,双击打开软件,软件界面图一所示。

SEGGER J-Fla	sh ARM V4.68 - [C:\Pro	ogram Files (x86)\SEGGER\JLinkARM_V468\Default.jflash] Window Help	
Project - De Name Connection Target interface Init JTAG speed JTAG speed JTAG speed JTAG speed JTAF Init JTAG speed JTAG speed JTAF MCU Endian Check core Id Core Id Use target RAM RAM address RAM size Flash memory Manufacturer Size Flash Id Check flash Id Check flash Id Check flash Id Chase address Organization	f □ □ Σ3 Value USB [Device 0] SWD 5 KHz Auto recognition <not used=""> ST STM32F103C8 Little Yes 0x20000000 16 K8 STM32F10xx8 internal ST STM32F10xx8 internal ST 64 KB 0x0 0x0 0x0 0x0 0x0 0x0 0x0 0x</not>	SEGGER	
LOG]	
- J-Flash ARM - JLinkARM.dll Reading flash d - List of flas Reading MCU dev - List of MCU Opening project - Project open Opening data fi - Data file op	14.68 (T-Flash compil- V4.68 (DLL compiled / evice list [C: \Program h devices read success ice list [C: \Program devices read successful file [C: \Program File ed successful end successful end successful (12)	ed Apr 6 2013 00:11:15) hpr 6 2013 00:10:46) Files (x66)\SEGGER\JLinkARM_V468\ETC\JFlash\Flash.csv] filly (1814 Devices) iles (x66)\SEGGER\JLinkARM_V468\ETC\JFlash\MCU.csv] lly (2092 Devices) s (x68)\SEGGER\JLinkARM_V468\Default.jflash] 	···
-		图—	

一、工程参数设置

单击单栏中 Options->Project settings 或者使用快捷键 "Alt-F7"

打开工程设置界面。

1、J-Link 连接设置:选择默认的 USB-Device 0, 如图二所示。

Project settings		8 23
General Target Interface CPU	Flash Production	
jelink	J-Flash-ARM is a software for J-Link ARM. It requires a license, which can be obtained from SEGGER (www.segger.com). This software is capable of programming the flash memory of several ARM micros, as well as external Flash connected to ARM cores.	
	Connection to J-Link	
User interface <u>m</u> ode		
	ally used for setup)	
C Simplified (Less options, typically	v used for production)	
	确定取消	

图二

2、目标接口方式和速度设置 打开 Target Interface 选项 ,选择 SWD 方式 , 下边的 SWD speed before init 和 SWD speed after init 可 以选择为 Auto selection , 如图三所示。

Project settings	? 🛛
General Target Interface CPU Flash Production	
SwD Image: Acceleration of the selection of t	
	应用(A)

图三

3、芯片的型号设置:打开"CPU"选项,在"Device"的下拉菜单 下选择 ST STM32F103C8,然后单击"应用"和"确定"按钮。如 图四所示;

Project settings	? X
General Target Interface CPU Flash Production	
Use J-Link script file	
Core Core Core ID ST STM32F103C8 ID 3BA00477 Little endian ▼ Mask FFFFFFF Use target RAM (faster) Addr 20000000 16 KB ▼	
Init steps	
# Action Value0 Value1 Comment	
Add Insert Delete Edit Up Down	
确定即消	应用 (A)

图四

二、连接 Jlink 和目标板

单击菜单栏下 "Target->Connect" 选项,出现如图五所示点击 OK.

SEGGER J-Link V4.68 - Emu	lator selection	8
jelinek V	Please select the emulator you want to connect to: # USB Identification 0 USB 1	
	OK Cancel	

图五

连接成功后会在 LOG 状态栏中出现图六所示

🔜 SEGGER J-Fla	sh ARM V4.68 - [C:\Pi	ogram Files (x86)\SEGGER\/LinkARM_V468\Default.jflash]	
File Edit Viev	v Target Options	Window Help	
Project - De	ef		
Name	Value		
Connection	USB [Device 0]		
Target interface	SWD		
Init JTAG speed	5 kHz		
JTAG speed	Auto recognition		
TAP number	<not used=""></not>		
IRPre	<not used=""></not>		
мси	ST STM32F103C8		
Endian	Little		
Check core Id	Yes		
Core Id	0x3BA00477		
Use target RAM	Yes		
RAM address	0x20000000		
RAM size	16 KB		
Flash memory	STM32F10xx8 internal	22	
Manufacturer	ST		
Size	64 KB		
Flash Id	0x0		
Check flash Id	No		
Base address	0x8000000		
Organization	32 bits x 1 chip		
•	4		
LOG			
- Project ope Opening data f - Data file of Connecting - Connecting	ened successfully File [F:\STM32F1\STM3 opened successfully (via USB to J-Link de	2F1_例程\STM32F103GPIO点真—个LED - gpiolike51\STM32F103GPIO点真—个LED\MDK-ARM\Obj\Project.hex 1256 bytes, 1 range, CRC = 0x33C16B6D) vice 0	.]
- J-Link firm - JTAG speed - Initializin	nware: V1.20 (J-Link) : 5 kHz (Fixed) ng CPU core (Init seq	ARM-OB STM32 compiled Aug 22 2012 19:52:04) uence)	E
- JTAG speed: - Connected s	2000 kHz (Auto) successfully		
•			▶
-			
Ready		Connected Core Id: 0x00000000 S	Speed: 2000 kH //

三、打开要下载的文件并下载

加载需要向目标板写进去的 "hex" 文件 :单击 "菜单栏->File->Open data file" 的选项 , 找到并选择需要的程序文件 , 单击 "打开"按钮。即可看到要烧录的 "hex" 文件 , 如图七和图八所示

Open data file	M32F1	03GPIO点亮一个LED > MDK-A	RM 🕨 Obj		搜索 Obj	X
组织 ▼ 新建文件	挟					0
📄 文档	*	名称	修改日期	축 🌪		
📄 迅雷下载		misc.d	2013/2/	13 16:39 D		
→ 音乐		misc.o	2013/2/	13 16:39 C ≣		
-		Project.axf	2013/3/	12 21:09 A		
北 京府纪		Project.hex	2013/3/	12 21:09 H		
35/0±21		🤶 Project.htm	2013/3/	12 21:09 3		
		Project.Inp	2013/3/	12 21:09 L	迎右预购	
■ 计异机	Ξ	Project.plg	2013/3/	12 21:09 P	/文/日/以此。	
🏭 本地磁盘 (C:)		💰 Project.sct	2013/3/	12 21:09 V		
💼 本地磁盘 (D:)		Project.tra	2013/3/	12 21:09 T		
🧰 本地磁盘 (E:)		Project_sct.Bak	2013/2/	13 16:39 B		
👝 本地磁盘 (F:)		startup_stm32f10x_hd.d	2013/2/	13 16:39 D		
🖬 SD (H:)		startup_stm32f10x_hd.o	2013/2/	13 16:39 🛛 C 👻		
快盘 (X:)				*		
	文件名	(N): Project.hex		•	All files (*.*) 打开(O) 取消	•

图七

SEGGER J-Fla	sh ARM V4.68 - [C:\Pro	ogram Files (x8	36)\S	EGG	ER\JI	Link/	ARM.	_V46	8\De	fault	.jflasl	h]										2	3
File Edit Viev	v Target Options	Window Hel	р																				
Project - De	f 🗆 🔍	F:\STM32	2F1\9	тмз	2F1_	例程	\STN	//32F	1030	iPIO;	点完-	-^L	ED -	gpio	olike	51\S	тмз	2F10	3GPIO点.	🗖		83	
Name	Value	Address: 098	nnnn	10	v1	2	v4																
Connection	USB (Device 01	Agaress. Jonor	00000		1.07	<u>~</u>	~1																
Target interface	SWD	Address	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	ASCII			-	11
		800000	00	04	ØØ	20	45	Ø1	ØØ	08	FB	Ø2	QQ	08	F3	Ø2	QQ	08	F				11
Init JTAG speed	5 kHz	0000000	100	00	00	00	0.0	04	00	00	40	04	00	00	00	00	00	00					
JTAG speed	Auto recognition	8000010	Er	02	99	69	80	01	99	08	47	04	99	08	99	99	99	99		1 .		••	
TAP number	<not used=""></not>	8000020	00	00	00	00	00	00	00	00	00	00	00	00	11	03	00	08				••	
IRPre	<not used=""></not>	8000030	91	01	00	08	00	00	00	00	ED	02	00	08	E5	03	00	08					
		8000040	5F	Ø1	ЮЙ	Ø8	5F	Ø1	ЮЙ	Ø8	5F	Ø1	ЮЙ	Ø8	5F	Ø1	ЮЙ	08					-
MCU	ST STM32F103C8	9000000	CD.	01	00	60	ED	01	00	60		01	00	00	ED	01	00	60					
Endian	Little	0000030	51	01	00	00	51	01	00	00	51	01	00	00	51	01	00	00			•••	••	
Check core Id	Yes	8000000	5F	61	NN	68	5F	61	90	68	5F	61	00	68	5F	61	ыn	68		••••	•••	••	
Lore Id	UX3BAUU477	8000070	5F	01	00	08	5F	01	00	08	5F	01	00	08	5F	01	00	08				••	
Dise target HAM	1.62	8000080	5F	01	00	08	5F	01	00	08	5F	01	00	08	5F	01	00	08					
RAM aduless	16 KP	8000090	5F	Ø1	ØЙ	Ø8	5F	Ø1	ØЙ	Øß	5F	Ø1	ØЙ	08	5F	Ø1	ØЙ	Øß					
TIAM SIZE	TO ND	0000010	C.P.	01	00	00	EP	01	00	00	EP	01	00	00	EP	01	00	00				••	
Elash memoru	STM32E10xx8 internal	00000000	51	et.	66	80	51	eT.		00	21	eT.		00	51	6T		00			•••	••	
Manufacturer	ST	80000B0	5F	01	00	08	5F	01	00	08	5F	01	00	08	5F	01	00	08			•••	••	
Size	64 KB	8000000	5F	01	00	08	5F	01	00	08	5F	01	00	08	5F	01	00	08					
Flash Id	0x0	8000000	5F	01	00	08	5F	01	00	08	5F	01	00	08	5F	01	00	08					
Check flash Id	No	8000050	5F	Ø1	ØØ	08	5 F	Ø1	ØØ	Øß	5 R	Ø1	ØØ	08	5 F	Ø1	ØØ	08		_	_		
Base address	0x8000000	0000010	LC.D.	04	00	00	- DI	01	00	00		01	00	00	- DI	04	00	00			•••	••	
Organization	32 bits x 1 chip	0000010	51	et.	66	80	51	eT.		00	21	eT.		00	51	6T		00			•••	••	
		8000100	5F	61	ИИ	68	5F	61	ИN	Ю8	5F	61	90	68	5F	61	ии	68		••••	•••	••	
		8000110	5F	01	00	08	5F	01	00	08	5F	01	00	08	5F	01	00	08				••	
	4	8000120	58	61	00	ØØ	58	61	00	ØQ	58	611	00	ØØ	58	61	00	ØØ				-	1
LOG																						8	ן
Application log - J-Flash ARM - JLinkARM. dll Reading flash d - List of flas Reading MCU dew - List of MCU Opening project - Troject open Opening data fi - Data file op	<pre>started V4.68 (DFL sompile) evice list [C:Vhrogram h devices read success ice list [C:Vhrogram devices read successfile file [C:Vhrogram Fil ed successfully le [F:\STM32F1\STM32F ened successfully (12)</pre>	ed Apr 6 2013 Apr 6 2013 00 m Files (x88)\/ Files (x88)(X814 D Files (x88)\SE ully (2092 Dev es (x88)\SEGGE 1_例程\STM32F1 56 bytes, 1 ra	00:: 10:« SEGGI evic GGER ices R\JL: 03GPI nge,	11:15 46) 3R\JL ss) inkAR 0点写 CRC	;) .inkA kARM M_V4; 毫— 个 = 0x;	RM_V468 _V468 68\D4 \LED 33C16	468\F 3\ETC efaul - gr 3B6D)	TC\J \JFl .t.jf ioli	Flash ash\M lash] ke51	1\F1s ICV. e STM3	(sh. c: (sv] (2F10)	sv] . 3GPI0)点亮	;—个	LED\Y	NDK-1	ARM\O	bj\₽:	roject. he	х]		•	E. 4
riceduy																1							11

图七

烧录hex文件 单击菜单栏"Target->Program(或Program&Verify

或 Auto)"选项即可个目标板烧录"hex"文件如下图:



提示:是否在编程之前擦除有影响的区域,需要单击"是",否则会提示编程失

败的对话框

J-Flash ARM V4.68	X
Target programmed successfully - Completed after 36.734 sec	

图九

编程成功后会提示编程成功的对话框,单击"确定"。

此时我们就大功告成,完成对我们目标板的程序烧录。