keil V4、J-FALSH 安装及设置

- 1. 我公司工控板例程全部应用 keil V4 开发,应用仿真器是 JLink V8,接口采用 SWD 4 线接口,以下内容是软件如何安装及设置内容。
- 2. Keil v4 安装,以 V4.22 版本为例,其它版本也可以参照这个:
 - (1) 打开下载好的压缩包, 解压后如图, 并运行 MDKV422.exe 可执行文件

中心 明朝山 重新山 二 10月 - 國打开 利果	新建文件关 新建文件关	く」「解店	F后		B • 0 0
👷 改蔵夫	名称	#22.00	类型	大小	
建不载 重奏画	■ MDK4.6+注册机 戰 [MDK.V4.22] MDK422.exe Kell uVision4 V9 02/2481 car	2012/12/14/ 2013/10/11/	文件夹 应用程序 好け RAR It	413,99	
氢 最近访问的位置	■ MDK4.6+注册机.zip	2013/9/24/	好压 ZIP 压缩	17 KB	
》库 《家庭组		2 F网 F转航	ok7		
➡ 计算机	800				
▲本地磁盘(C:) □ 程序(D:) □ 文档(E:)					
 本地磁盘(C:) 程序(D:) 文档(E) 娱乐(F) のか公(G) 					

(2) 点击 next



(3) 勾选同意协议并点击 next



选择自己的安装路径,点击 next

Setup MDK-ARM V4.22	×
Folder Selection Select the folder where SETUP will install files.	
SETUP will install µVision4 in the following folder. To install to this folder, press 'Next'. To install to a different fold folder.	er, press 'Browse' and select another
Destination Folder D:\Keil 选择安装路径	Biowse
Update Installation: Create backup tool folder Backup old files to D:\Kei\Backup.001 忽略它。我的已经安了	点击
你们不会出现它	<

自己随便填点字母吧

Setup MDK-ARM	/4.22	×
Customer Inform Please enter yo	ur information.	
Please enter you	r name, the name of the company for whom you wor	k and your E-mail address.
First Name:		
Last Name:	这里就随便与吧	
Company Name	wyj	
E-mail:	wyj	点击
— Keil µVision4 Se	n	
	<< Be	ck Next Carcol

安装中,完成后关闭窗口

Setup Status	
µVision Setup is performing the reques Install Files 耐心等很 Installing DARMST 合成后う	sted operations. 寺吧,开始安装, 长闭窗口

(4) 现在开始激活, 找到 keil4 图标, 右击并以管理员权限运行



点击 file, 找到 license management 并点击



点确定



复制自己的 CID

Floating License Floating License Administre	ator
wyi	Computer ID CID: CH5FA-L6M7W
	Get LIC via Internet
ctrl+c	复制它

(5) 找到注册机存放目录,运行它



把 CID 粘贴到图中位置,在下拉长的中选择 ARM,点击 Generate 生成代码,并复制

下来,关闭注册机



粘贴在图中位置,点击 add lic,你已经激活它了;到此安装完成;

Name:	formation 武英伯	t wyi	Computer ID CID: CH5FA-L6M7W
Company: Email:	wyj wyj		Get LIC via Internet
Product MDK-ARM S	itandard	License ID Code (LIC) JL2X7-EDKBQ-5T73W-QZI4J-RD7A0-VQKNQ	Support Period Expires: Apr 2020
		1粘贴在这里	2点击add lic
New Licens	e ID Co	de (LC): GMZJJ-UF551-74ZS0-BD7QS-RD7A	Q-5MK03 Add LIC Uninstall

注意事项: 一定要按步骤做,记得以管理员权限运行才可以激活的

- 3. Keil V4 配置,需要 JLink v8 及我公司的工控板
 - (1) 将 JLlink v8 USB 插到电脑,另一端 20 芯排线接上我公司的转接线,将转接线的 4 芯端子接到工控板的 4 芯插座(有核心板的 4 芯插座在核心板上);将工控板加电;
 - (2) 用 keil v4 打开例程,按 Alt+F7,打来"Options for Target ",按下图选择

	Uutput Listing User C/C++	Asm Linker	Debug Utilities
C Use <u>S</u> imulator	Real-Time	gs • Use: J-LINH	(/ J-TRACE Cortex Settings
 Load Applicati Initialization File: 	on at Startup 🔽 Run to main()	Load Applica Initialization File:	tion at Startup 🔽 Run to main()
Restore Debug Breakpoint Watch Wi Memory D	Session Settings ts	Restore Debug F Breakpoir F Watch W F Memory D	Session Settings its IV Toolbox indows Visplay
CPU DLL:	Parameter:	Driver DLL:	Parameter:
SARMCM3.DLL	-REMAP	SARMCM3.DLL	
Dialog DLL:	Parameter:	Dialog DLL:	Parameter:

(3) 点击 Settings,如下图

-J-Link / J-Trace Adapter ——	SW Devi	ce	
SN: 12345678	-	IDCODE Device Name	Move
Device: J-Link ARM	SWDI(⊙ Ox1BAO ARM CoreSight SW-DP	Up
HW : V8.00 dll V4.76	d		Down
FW : J-Link ARM V8 compile	d.	I	
ort: Max	C Auto	omatic Detectic ID CODE:	
SW 💌 2MHz	- C Man	ial Configurati Device Name:	
		and a state of the	
Auto C	Ik Add	Delete Update IR len:	
Auto C	Add Add	Delete Update IR len:	
Auto C	Add Add	UpdateIR len:	
Auto C	Add Add	Delete Update IR len:	d Options
Auto C Connect & Reset Options Connect: Normal V leset	lk Add	Delete Update IR len:	d Options fy Code Downlo
Auto C -Connect & Reset Options Connect: Normal V leset Reset after Conn	Add Add	Delete Update IR len:	d Options fy Code Downlo load to Flash
Auto C Connect & Reset Options Connect: Normal ▼ leset V Reset after Conn	lk Add	Delete Update IR len:	d Options fy Code Downlo load to Flash
Auto C Connect & Reset Options Connect: Normal 💌 Veset V Reset after Conn Interface TCP/I	lk	Delete Update IR len:	d Options fy Code Downlo load to Flash Misc
Auto C Connect & Reset Options Connect: Normal Veset Reset after Conn Interface CUSB C TCP/IP	lk Add	Delete Update IR len:	d Options fy Code Downlo load to Flash Misc TLink Info
Auto C Connect & Reset Options Connect: Normal Veset Reset after Conn Interface CUSB C TCP/IP Scan	lk Add	Delete Update IR len:	d Options fy Code Downlo load to Flash Misc <u>JLink Info</u>

点击 Flash Download,选择 MCU 芯片(除 EMB8612IA 外):

whiload Function C Erase Full C V P Erase Sector V O Do not Erase T R	rogram erify eset and Run	RAM for Algorith	n D ize: 0x08	00
rogramming Algorithm	Device Size	Devi ce Trme	Address	Ranga
STM32F10x Connectivity Line	256k	On-chip Flash	08000000X -	0803FFFF
	m			
<	ш	:art:	ize: [•
< [TII Add	:art:	ize:	•
< [III Add	:art:	ize:	•
< [III Add	:art:	ize:	· · · ·
•	III Add	:art:	ize:	· · ·

只有: EMB8612IA 按下图选择:

Description	Device Size	Device Type	Address	Range
STM32F10x High-density Flash	512k	On-chip Flash	- X00000080	0807FFFF
٠ [Ш.			•
		:art: [5x0800000) ize: 0x00	080000

(4) 点击 Settings 也可能不出现(3)的界面,出现如下界面,更新仿真器 JLink V8 固件;

Do you want to update to the latest firmware version ? NOTE: Updating to the latest firmware version is strongly recommended. New features / improvements may not be available without a firmware update.	6	A new firmware version is available for the connected emulator.
NOTE: Updating to the latest firmware version is strongly recommended. New features / improvements may not be available without a firmware update.	6	Do you want to update to the latest firmware version ?
New features / improvements may not be available without a firmware update.		NOTE: Updating to the latest firmware version is strongly
		recommended.
		recommended. New features / improvements may not be available without a firmware update.

选择是,显示如下:

Waiting for em Waiting for em Sending firmwar Waiting for new Waiting for em Waiting for em	ulator to detach Ti ulator to attach OK e data OK (56320 firmware to boot ulator to detach Ol ulator to attach	meout, assuming emulal . after Oms. bytes). < after 128ms.	or has already re-enumerated.	
				-
17%			7844ms of max. 45000ms	s elapsed

如果更新失败,则仿真器固件会丢失,则需要按仿真器固件更新文档更新固件。

(5) 编译程序按下图:

File	Edit	View	Pro	ject	Flash	D
	12 G		×	-	2	-1
0		🖞 🥔		LOAD	EMB	86x
Proje	t 👔	B <mark>uild (F</mark> Build ta	7) rget f	iles		



下载程序:



Build Output	
ROMTableAddr = 0xE00FF003	
Target info:	
Device: STM32F107VC	
VTarget = 3.325V	
State of Pins:	
TCK: 0, TDI: 0, TDO: 0, TMS: 0, TRES: 1, TRST: 1	
Hardware-Breakpoints: 6	
Software-Breakpoints: 8192	
Watchpoints: 4	
JTAG speed: 2000 kHz	
4	
Build Output 🗔 Find In Files	
Erase: 08015000H	
点击运行:	
W E:\用户程序\EM886xxI测试程序-UCOSII_V1.04	
File Edit View Project Flash Debug Peripl	
🗋 🗅 🚰 🛃 🐉 🐁 🖓 🙈 🛹 👳 🖌 🚧 👘	
8 0 0 0 0 0 0 0 0 0	
Project	
Start code execution	
I includes.h	
也可先打断点(按 F9 键),在点击运行,单步调试:	
TaskADC.c 66 int main (void)	
E 3 ISRHook.c 67 ₽ (
B- TaskFile.c = 68 CPU_INTOSU os_err;	
中→ TaskDAC.c 70日 #if (APP IAPCODE EN == 1) // 需要IAP功能	
Hefine NVIC VectTab_FLASH ((INT32U) 0x08000000	
田一園 TaskIO.c 72 NVIC_SetVectorTable(NVIC_VectTab_FLASH, 0x4000); // 彼重 73 <mark>#endif</mark>	,一町回重衣,赵
the inskrwwr/Lik.c 75 CPU_IntDis();	// Disable
TaskSync.c /0 OSInit();	// Initial
TaskModbus.c	
TaskDTU.c TaskDTU.c	// 喂狗
H- TaskLCD.c 81 WatchDog_Ctrl(IWDOG_CLEAR);	

- 4. J-Flash 安装与设置:
 - (1) 安装 Setup_JLink_V510c.exe,用这个软件可以下载用户编译好的程序; 双击运行,并选择 "Next"、"I Agree",显示选择如下图,再选择 Next

Choose optional components	
Choose optional components to be installed.	Link
Choose optional components that should be installed:	
☑ Install US8 Driver for J-Link	
Choose options for creating shortcuts:	
Create entry in start menu	
Add shortcuts to desktop	

renuired: 50 3MB	
te required, botono	
ce available: 27.0GB	

选择 Install, 等待安装完成:

he following 3rd IAR Embedd Keil MDK V4	I-party applications using JLinkA ed Workbench Evaluation for A 73 (DLL V4.76d in "D:\Keil\AR	RM.dll have been found: RM 5.20 (DLL V3.92a in ''d:\Progra M\Segger'')	m Files\IAR Systems\Embed	ded Workbench 5.0 Evalu	uation\ARM\bir
Select All	Select None	version			

如图选择更新 Keil MDK (或者 IAR) 驱动,单击 OK/Finish 完成安装;

(2) 配置 J-FLASH

在桌面或者用户程序里打开 J-Flash



STM32F103ZE.jflash(EMB8612IA 板子选择这个)

出现如下界面,并参照下图选择 STM32F107VC.jflash 或者

Welcome to I-Flash	22	
Please select one of the following start options: C Open existing project: STM32F107VC.jilash C Create project from template:		A
Open J-Flash project file		
G v k SEGGER + JLink_V510c + Sam	nples + JFlash + ProjectFiles + ST	 ◆ 4 投索 ST
组织 ▼ 新建文件夹		
3345下载 ↓ 2345下载 ↓ 下载	JFLASH 文件 1.92 KB	ash JFLASH 文件
■ 桌面 2 最近访问的位置	STM32F107VC,jflash JFLASH 文件 2.05 KB	STM32F107VC_AllowOptBytes.jfl ash JFLASH 文件
Edit View Target Options W come to J-Flash	/indow Help	
Please select one of the following start options:	i	
C Open existing project: STM32F1	07VC.jflash	
Create project from template: ProjectFiles	\ST\STM32F107VQjflash	
Create a new project.		
Do not show this message again.		
Do not show this message again. f checked, J-Flash will open the last opened p	roject in the future.	

点击 Start J-Flash 启动

点击 Alt+F7 或者如图:

SEGGER J-	-Flash V5.10c -	C:\Program Files (x86)\SEGGER\JLink_
File Edit	View Target	Options Window Help
D Project	STM.	Project settings Alt-F7
Name	Value	Global settings

按下图选择设置:

Project - ST	M 💿 🔍	Project settings
Name Connection Target interface Init JTAG speed JTAG speed TAP number IRPre MCU Endian	Value USB [Device 0] SWD 4000 kHz 4000 kHz <not used=""> <not used=""> ST STM32F107 Little</not></not>	General Target Interface CPU Flash Production SWD SWD SWD speed before init C Auto selection © 2000 V KHz VC
ject settings eneral Target	Interface CPV	Plash Production
oject settings eneral Target ┌─ Use J-Link scri ┌─ Core	Interface CPU ptfile	Flash Production
ieneral Target Use J-Link scri Core © Dev ST STM32F107V(Little endian 👻	Interface CPU pt file vice	Flash Production Image: Check core ID Image: Image
ject settings eneral Target Use J-Link sori Core © Der ST STM32F107V1 Little endian 💌 Init steps	Interface CPU pt file vice	Flash Production Image: Check core ID Image: Check core ID ID 3BA00477 Mask FFFFFFFF Image: Use target RAM (faster) Addr 20000000 48 KB
General Target General Target Use J-Link scri Core © Dev ST STM32F107VC Little endian Init steps # Action	Interface CPU pt file vice C Value0	Flash Production Image: Check core ID Image: Check core ID Image: Image

点击应用、确定设置完成

(3) 下载 HEX 文件

点击 Ctrl+O 或者如下图:

SE	GGER	J-Flash	V5.10c -	[C:\Progra	m Files (x8	6)\SEGGER	ULink_V51
File	Edit	View	Target	Options	Window	Help	
	Open	data fi	e			Ctrl+O	

打开 HEX 文件

ile Edit View	v Target Options	Window Help	р																
🔒 Project - ST	M 🖸 🖾	F:\Embed	JARN	/\EN	1B86	121\8	EMB	3612	[生产	测试	工作	EM8	8612	2I生产	≃测词	C BIN	\E M I	B861	.2IA_Test.hex 🗖 🔍 💌
Name	Value	Address:	0.80	10000	6	-	1	v2	v4										
Connection	USB (Device 0)	Agaress.	0100		8		1.07	<u>~</u>	<u>~2</u>										
Target interface	SWD	Address	0	1	2	3	4	5	6	7	8	9	A	B	С	D	Ε	F	ASCII
		8000000	50	FF	00	20	E9	DB	03	08	69	15	00	08	6D	15	00	08	···· ····i····
hit JTAG speed	2000 kHz	8000010	71	15	00	08	75	15	00	08	79	15	00	08	00	00	00	00	an
AG speed	2000 KHZ	8000020	00	00	00	00	00	00	00	00	00	00	00	00	7D	15	00	08	
RPre	<not used=""></not>	8000030	70	15	00	08	7D	15	00	08	7F	21	01	08	59	15	00	08	>>¥
		8000040	97	DC	01	08	A1	DC	01	08	AB	DC	Ø1	08	B5	DC	01	08	
ICU ndian	ST STM32F107VC	8000050	BF	DC	01	08	C9	DC	01	08	D3	DC	01	08	DD	DC	01	08	
			1	22				22											

按 F7 或者如图点击 Auto 下载 HEX 文件

ile Edit View T	arget Options Windo	ow Hel	р					
Project - STM	Connect		ARM\EMB8612I\E					
Name	Disconnect	isconnect						
Connection	Show CFI info		Ø	1	2	3	4	
l'aigecintenace	Test		70	FF	00	20	ES	
Init JTAG speed	Test	icst ,				08	7	
JTAG speed	Secure chip		00	00	00	00	G	
	11 11	00	40	00	00	୍ ଅ ଅ		
Incle	Unsecure chip		70	15	99	80	1	
MCU	Charle blank	E2	97	DC	61	68	A:	
Endian I	Check blank	F2	BF	DC	01	08	C	
Check core Id	Fill with zero		E7	DC	01	08	F	
Core Id	Frase sectors	E3	ØF	DD	01	08	1	
Use target RAM			37	DD	Ø1	08	4	
HAM address	Erase chip	F4	SR	DD	Q1	0.9	6	
ham size	D		07	DD	01	00	0.	
Flash memory	Program	FD	87	עע	01	00	7.	
Manufacturer	Program & Verify	F6	HF	DD	61	68	B.	
Size	Auto	F7	D7	DD	01	08	E:	
Flash Id I	AND	1.4	FF	DD	01	08	0	

如果下载出错请检查仿真器和板子的硬件连接;

注意:如果 JLink V8 出现红灯 3 秒闪烁一下,说明丢失固件;