

WM_W800_CDS 使用手册

V0.2

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1 引言

1.1 编写目的

指导 W800 相关的开发和测试人员使用 CDS 集成开发环境;

1.2 预期读者

所有 W800 相关的开发人员和测试人员;

1.3 术语定义

SWD: Serial Wire Debug, 串行线调试

1.4 参考资料



2 CDS 简介

CDS 为杭州中天微系统有限公司研发的嵌入式集成开发环境,全称为 C-SKY Development Suite,使用 CDS 进行基于 XT804 嵌入式 C/C++工程的开发,能使软件的开发、调试等工作更高效的进行。

2.1 安装 CDS

在官网 https://occ.t-head.cn 平头哥芯片开放社区-技术部落-资源下载中可以找到 CDS 集成开发环境下载链接,下载 CDS 安装包之后,双击压缩包中的 setup.exe 即可启动安装。

C-Sky Development Sui	te Install 🔀
	Welcome to install C-Sky Development Suite
	C-Sky Development Suits is an IDE for developping and debugging csky project.
	< Back Next > Cancel

安装中需要用户输入一些信息,根据界面提示输入即可:

C-Sky Development Suite Install	
Set your name and your company.	
<u>U</u> ser Name:	
li l	
<u>C</u> ompany Name:	
c-sky	
Install this application for:	
⊙ Anyone who uses this computed in the second s	iter (all users)
🔘 Only for <u>m</u> e (ljr)	
nstallShield	
	Back <u>N</u> ext > Cancel

Winner Micro 联盛德微电子

C-Sky Dev	elopment Suite Install	×
Select The	Directory	24
	Please select the directory which you want to install. C:\Program Files\C-Sky\C-Sky Development Suite	<u>C</u> hange
InstallShield	Choose Folder	
Instalionielo —	Mozilla Firefox	Cancel
	确定 取消	



C-Sky Development Suite Install	
Intall component	
Please select the component which you want to install.	Description Main part of C-Sky Development Stuite, you must select it.
1.11 GB of space required on the C drive 80.20 GB of space available on the C drive InstallShield	
< <u>B</u> ac	ck <u>N</u> ext≻ Cancel

最后,点击 next 启动安装:



C-Sky Development Suite Install	
Start Copying Files Review settings before copying files.	
Setup has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Next to begin copying files.	
User Information: lir c-sky All-users installation Destination Directory: D:\Program Files\C-Sky\C-Sky Development Suite\	
InstallShield	
< <u>B</u> ack <u>N</u> ext > Cancel	

然后请耐心等待安装完成。	
C-Sky Development Suite Install	
Setup Status	No.
C-Sky Development Suite is configuring your new software installation. Copying new files	
InstallShield	
	Cancel



C-Sky Development Su	ite Install	
	InstallShield Wizard Complete Setup has finished installing C-Sky Development Suite on your computer.	
	< <u>B</u> ack Finish Cancel	

2.2 启动 CDS

启动 CDS 有如下两种方法:

可以通过双击桌面图标 CDS Workbench 启动;

可以在开始菜单中找到图标 CDS Workbench 启动;

2.3 卸载 CDS

和常规 Windows 程序卸载方法一样, 可以在 Windows 系统的控制面板(或在设置的应用和功能)中找到

CDS(也可以在开始菜单 C-Sky 中找到 Uninstall CDS),执行卸载操作。



C-Sky Development Suite - InstallShield Wizard	—		×	
Preparing Setup				
Please wait while the InstallShield Wizard prepares the setup.				
C-Sky Development Suite Setup is preparing the InstallShield Wiza through the rest of the setup process. Please wait.	rd, which will g	juide you		
			_	
InstallShield				
		Canc	el	

卸载完成之后,可能有部分文件夹卸载程序不会自动删除,用户自行手动删除掉即可。

注意: 在卸载之前请先关闭 CDS 相关的文件。

3 CDS 使用介绍

3.1 导入工程

按照如下操作导入到 CDS 中:



C/C++ - Eclipse Platform				- 🗆 X
File idit Source Refactor Navigate Search	Project Target Run Window He	elp		1
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 Refresh 	F5			
© Print Ctr	1+P			
Switch Workspace	>			
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Exit				
	Console # Problems	ne.		
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Create new projects fro	m an archive file o	r directory.		
Select an import source				
Select an import source	•			
type filter text				
🗸 🗁 General				
© Archive File				
Existing CSKV Proj	ects into Workspac			
Existing Projects in	ito workspace			
🔍 File System				
Preferences				
>				
> 🖻 CSky Executable				
> 🕞 Install				
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?	< Back	Next >	Finish	Cancel

Finish



🖙 Import			×
Import Projects			
Select a directory to sea	rch for existing Eclipse projects.		
• Select root directory:	D:\202002\W800_SDK_Release\tools\w800\projects\\$	Brows	se
• Select archive file:		Brows	se
Projects:			
J:\202002\W800_SDK_R	elease tools would project SDK_Project (project CDS)	Select	
		Desele	
		Refre	esh
4	>		
	arkspace		
Working sets	inspace		
Add project to worki	ng sets		
Working sets:	×	Select	
?	< Back Next > Finish	Cance	el



CDS						\times
Import F	Projects					
Select v	vhether convert t	he old version pr	ojects.			
The laste	est version is: 4.1	.1				
Conv	Project Name	Version			Select	All
	w800_sdk	4.1.0			Deselect	t All
					_	
					_	
?		< Back	Next >	Finish	Cance	1

完成之后,导入的工程出现在工程管理视图中,如下图所示。



C/C++ - Eclipse Platform		- 🗆 ×
File Edit Source Refactor Navigate Search	Project Target Run Window Help	
	······································	Quick Acce 📑 🗟 C/C++
Project Explorer W800_sdk		8=0utline ≅ □ An outline is not available.
→ e demo		
> e include		
> en la > en lib		
> 😑 platform		
> 🗠 SFC		
	□Console ≈ # Problems	d 8 ≠ 13 ≠ ° 0
	No consoles to display at this time.	
0 items selected		

3.2 编译 SDK

导入 SDK 工程之后,在左侧工程管理视图中右键单击工程,选择 Build Project 开始编译:



C/C++ - Eclipse Platform

File Edit Source Refactor Navigate Search Project Target Run Window Help

(1 • • • • • • • • • •		* / ♡ ♡ @ ▼ & ▼ @ ▼ @ ▼ ☆ ▼ 0 ▼ 0₀ ▼ 0₄	
▶Project Exp	lorer 🛛 🕒 🕏 🗞 🖌 🚳 🔂 🍈 🗖		
 ✓ [™] w800_sdl > > Ø Include > > → demo > > > include 	Go Into Open in New Window	>	
> ॡ ld > ॡ lib > ൙ platforr > ൙ src	 Copy Paste Delete Source Move 	Ctrl+C Ctrl+V Delete	
	Rename	F2	
	import i Export		
	 Options for Project Rebuild Project 		
	Build Project		
	Clean Project [®] Refresh Close Project Close Unrelated Projects	F5	
	Build Configurations	>	
	Make Targets Index	>	
	Convert To		
	Run As	>	
	Profile As	>	
	Team	>	
	Compare With	> blems	
	Restore from Local History	- ble [w800_sdk]	
	Properties	Alt+Enter	

在 CDS 的 Console 窗口会输出编译信息,如果有错误也会在 Problems 中显示,可以根据提示自行修

改。



♦ 🕹 🔄 🖬 🖓 🖆 🔍 💌 😁 🕶 👘 ⊑Console ¤ ⊾Problems CDT Build Console [w800_sdk] crorm, arrivero, pma, mm_pma.o Building target: w800.elf ^ Size of w800.elf: dec bss hex filename text data 9192 245816 984012 729004 f03cc w800.elf sh ..//../../../../tools/w800/utilities//aft_build_project.sh w800 make --no-print-directory post-build 1 generate normal image completed. Outputing file w800.ihex Outputing file w800.bin 10:22:59 Build Finished (took 1m:44s.903ms)

3.3 下载固件

W800 可以使用多种方式下载固件,这里仅以集成 wm_tool 工具下载举例。

首先右键工程依次选择"Make Targets" → "Create...":



🔤 C/C++ - CDS	Work	bench		_			
File Edit Sou	irce F	Refactor Navigate	Search Proje	ect Target	Run Window H D 🗸 🖴 🖘 🖘	lelp	
 Project Expl Project Expl	lorer (eSystem dk ud ud ud fo X	Image: Second state sta	• <\ }- /* (Ctrl+C Ctrl+V Delete	L - E := x		
	2	Import Export Options for Project Rebuild Project Build Project Clean Project Refresh Close Project Close Unrelated Pro Build Configuration	ojects s	F5	CDT Build Conso	ile [w800_sd	kj
		Make Targets Index Convert To Run As Debug As Profile As Team Compare With Restore from Local File Explorer Properties	History	Alt+Enter	Create Build Rebuild Last	Target	Shift+F9 F9

在弹出的对话框中按照下图进行设置:



🚥 Create Make Target	×	
Target name: download		
Make Target		
Make target: download DL_PORT=COM18		
Build Command		
Use builder settings		
Build command: make -f \${project_loc}\\\utilities\download.mk		
Build Settings		
Stop on first build error		
Run all project builders		
OK Cancel		

"Target name"输入 "download";

"Make Target"输入 "download DL_PORT=串口号",如 COM18;

"Build Command" 输入 "make -f \${project_loc}\..\..\..\utilities\download.mk";

这几条配置,除了串口号用户按需修改之外,其余建议用户直接复制粘贴,填完点击 OK 按钮。

然后右键工程依次选择"Make Targets" → "Build…":



C/C++ - CDS	Worl	kbench Reference Newignets Consult Du		Due Weden Ude	
	ce	Call and the search of the sea			
 Project Expl Project Expl<	orer Syster	Mew Go Into Open in New Window Copy Paste Delete Source	Ctrl+C Ctrl+V Delete		
	2	Move Rename Import Export	F2	E Console 🛛 🔐 Prob CDT Build Console [w8	olems = Debug = Pro 100_sdk]
	6 6	Options for Project Rebuild Project Build Project Clean Project Refresh Close Project Close Unrelated Projects Build Configurations	F5		
		Make Targets	>	Create	
		Index	>	Build	Shift+F9
	Ф	Convert To Run As Debug As Profile As Team Compare With Restore from Local History File Explorer	> > > >	Rebuild Last Target	F9
		Properties	Alt+Enter		

在弹出的对话框中选中刚才配好的"download"项目,点击"Edit..."按钮:

			X	Winner Micro 联盛德微电子
🚥 Make Targets			×	
Make Targets for: w800_sd	k			
Target	Location	Add Remov Edit	e	
	Build	Cancel		
这时弹出对话框如下图:				
		*		

W	Winner Micro
M	联盛德微电子

🚥 Modify Make Target	×
Target name: download]
Make Target	
Same as the target name	
Make target: download DL_PORT=COM18	
Build Command	
Use builder settings	
Build command: make -f E:\workdir\WM_W800_{	
Build Settings	
Stop on first build error	
Run all project builders	
OK Cancel	

直接点击 OK 按钮返回即可。

Ж	Winner Micro 联盛德微电子

🚥 Make Targets		×	
Make Targets for: w800_sd	k		
Target	Location	Add	
I download		Remove	
		Edit	
	Build	Cancel	

此时,选中刚才配好的"download"项目,点击"Build"按钮即可开始下载固件:



18:45:24 Build Finished (took 15s.887ms)

下载过程中,有可能需要用户手动复位开发板,请按照 Console 窗口中的提示信息操作即可。

3.4 在线调试

使用 CK-LINK 和设备进行 SWD 连接之后,右键工程选择如下:



∞ C/C++ -	Eclipse Platform			- 🗆 ×
File Edit So	ource Refactor Navigate Search	Project Targe	t Run Window Help	
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	 Import Evport 			
	Export Options for Project			
> 🗟 mai	 Rebuild Project 			
	Build Project			
	Clean Project			
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	Close Uprelated Projects			
	Ruild Configurations	\ \	rohlome	+ + + + = = = = = = = = = = = = = = = =
	Make Targets	>	sole [w800 sdk]	
	Index	>	arget: w800.elf	^
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	Run As	>	00.eir:	
	Debug As	>	1 CSky Application 8b88 w800.elf	
	Profile As	>	Debug Configurations	
	Team	>	////tools/w800/utilities//aft build project.sh	
	Compare With	>		
	Eile Explorer		ormal image completed.	
	Properties	Alt+Enter	and indy compressed.	
		Outputing	file w800 iber	
		Outputing	file w800.bin	
		10.44.07	Deild Timininked (teach des 20- 740)	
		12:44:27 1	sulla rinisnea (took 4m:32s./48ms)	
				~

之后根据界面提示即可进入调试。

关于调试更详细的介绍请参阅《WM_W800_SWD调试配置指南》。

4 更多参考文档

安装中天微 CDS 时,也会安装很多相关的官方参考文档,请在开始菜单 C-Sky 中查看,如:



