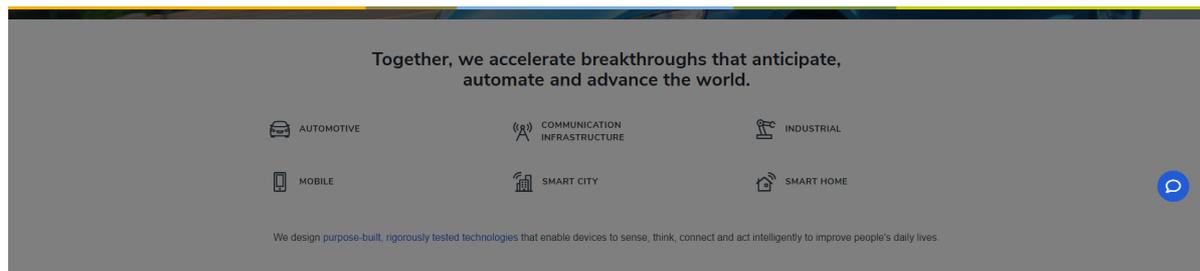
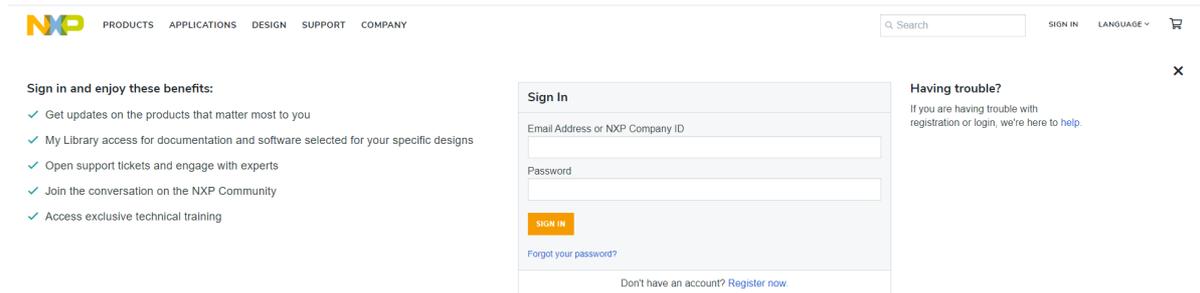


# 1. S32 Design Studio v3.4.1及RTD 2.0.0 HF4安装指南

## 1.1 注册NXP.com账号

获取NXP任何的软件或文档，都需要使用NXP.com的账号。

登陆[www.nxp.com](http://www.nxp.com)，点击右上角SIGN IN。选择Register Now，注册账号（请使用公司邮箱注册），注册步骤请按照网页提示操作，本文不做介绍。



## 1.2 下载并安装S32 Design Studio v3.4

S32 Design Studio（以下简称S32DS）是一款集成开发环境(IDE)软件工具，适用于汽车级微控制器和处理器的开发和下载调试。它基于包括Eclipse IDE、GNU编译器集合(GCC)和GNU调试器(GDB)在内的开源软件，没有代码大小的限制，并且是免费的。

关于其介绍，请访问<https://www.nxp.com.cn/design/software/development-software/s32-design-studio-ide:S32-DESIGN-STUDIO-IDE>

S32DS有多个版本，分为[S32DS for S32 Platform](#)，[S32DS for ARM](#)，以及[S32DS for Power](#)。分别针对不同内核架构的产品，区别见下图。

此图包含所有受支持产品的所有受支持内容。  
如需了解特定产品支持哪些内容的详细信息，请查看版本说明。

支持的产品	配置	集成的恩智浦软件	编译器	调试器	专用工具	
面向S32平台的S32DS	<ul style="list-style-type: none"> <li>S32G2 (S32DS 3.4+)</li> <li>S32K1</li> <li>S32V</li> <li>S32S</li> <li>S32平台设备</li> </ul>	集成的恩智浦工具: <ul style="list-style-type: none"> <li>S32闪存</li> <li>FreeMASTER</li> <li>DDR压力测试 (仅限S32V2)</li> </ul> 集成配置工具: <ul style="list-style-type: none"> <li>S32配置</li> <li>引脚向导</li> <li>时钟配置</li> <li>外设/驱动器配置</li> <li>DCD配置</li> <li>IVT配置</li> <li>QuadSPI配置</li> <li>DDR配置</li> </ul>	<ul style="list-style-type: none"> <li>S32 RTD</li> <li>S32 SDK</li> <li>FreeRTOS</li> <li>AMMCLib</li> <li>视觉SDK</li> <li>Linux BSP</li> </ul>	<ul style="list-style-type: none"> <li>恩智浦GCC 6.3.1*</li> <li>恩智浦GCC 9.2</li> <li>Green Hills</li> <li>IAR</li> </ul>	内置的GDB接口: <ul style="list-style-type: none"> <li>S32调试器 + S32硬件调试器</li> <li>P&amp;E Multilink / Cyclone / Open SDA</li> <li>SEgger J-Link</li> </ul> 支持Lauterbach、iSystem和IAR	视觉: <ul style="list-style-type: none"> <li>恩智浦APU编译器</li> <li>ISP汇编器</li> <li>ISP和APEX图形工具</li> </ul>
S32DS for Arm	<ul style="list-style-type: none"> <li>S32K1</li> <li>KEA</li> <li>MAC57D54H</li> </ul>	集成的恩智浦工具: <ul style="list-style-type: none"> <li>FreeMASTER</li> </ul> 集成配置工具: <ul style="list-style-type: none"> <li>Processor Expert</li> <li>引脚向导</li> <li>外设/驱动器配置</li> </ul>	<ul style="list-style-type: none"> <li>S32K1 SDK</li> <li>FreeRTOS</li> <li>面向KEA和S32K的AMMCLib</li> <li>KEA SDK</li> <li>面向MAC57D54H的MQX OS/MQX驱动器</li> </ul>	<ul style="list-style-type: none"> <li>恩智浦GCC 6.3.1*</li> <li>Green Hills</li> <li>IAR</li> <li>恩智浦GCC 4.9*</li> </ul>	内置的GDB接口: <ul style="list-style-type: none"> <li>P&amp;E Multilink / Cyclone / Open SDA</li> <li>SEgger J-Link</li> </ul> 支持Lauterbach、iSystem和IAR	
S32DS for Power Architecture	<ul style="list-style-type: none"> <li>S32R</li> <li>MPC57xx</li> <li>MPC56xx</li> </ul>	集成的恩智浦工具: <ul style="list-style-type: none"> <li>FreeMASTER</li> </ul> 集成配置工具: <ul style="list-style-type: none"> <li>Processor Expert</li> <li>引脚向导</li> <li>外设/驱动器配置</li> </ul>	<ul style="list-style-type: none"> <li>面向MPC57xx和S32R的S32 SDK</li> <li>FreeRTOS</li> <li>面向MCP5xxx的AMMCLib</li> <li>雷达SDK</li> </ul>	<ul style="list-style-type: none"> <li>恩智浦GCC 4.9*</li> <li>Green Hills</li> <li>Diab</li> </ul>	内置的GDB接口: <ul style="list-style-type: none"> <li>P&amp;E Multilink / Cyclone / Open SDA</li> </ul> 支持Lauterbach、iSystem和PLS	雷达: <ul style="list-style-type: none"> <li>SPT汇编器</li> <li>SPT资源管理器</li> <li>SPT图形工具</li> </ul>

## 1.2.1 下载 S32DS v3.4

1. 登陆 <https://www.nxp.com.cn/design/software/development-software/s32-design-studio-ide/s32-design-studio-for-s32-platform:S32DS-S32PLATFORM>
2. 选择“下载”标签页面

### S32 Design Studio for S32 Platform

关注 消息 分享

概述	文档	下载	开发工具	培训与支持	
跳转至 概述与特性 支持的器件	<b>概述</b> S32 Design Studio for S32 Platform是一套附送的集成开发环境(IDE)，适用于汽车和基于Arm®的超可靠控制器和处理器，为您的设计提供编辑、编译和调试功能。 S32DS for S32 Platform为设计人员提供了一个简单的开发工具，它基于包括Eclipse IDE、GNU编译器集合(GCC)和GNU调试器(GDB)在内的开源软件，没有代码大小的限制。 恩智浦软件与S32 Design Studio IDE一起提供全面的支持 <a href="#">更多 &gt;</a>		<b>特征</b> <ul style="list-style-type: none"> <li>带有GCC编译器的恩智浦GNU工具链(版本6.3.1 20170509)，用于裸机Arm 32位和64位以及Linux®目标设备</li> <li>带有GCC编译器的恩智浦GNU工具链(版本9.2.0 20190812)，用于裸机Arm 32位和64位以及Linux®设备</li> <li>包括NewLib、NewLib Nano、EWL和EWL Nano库</li> <li>用于Arm 32和AArch64®裸机工具链的半主机</li> </ul>		

3. 选择“S32 Design Studio 3.4 – Windows/Linux”，进入S32DS v3.4的下载页面

### IDE与构建工具 (3)

	<b>S32 Design Studio 3.4 – Windows/Linux</b> FLEXERA Rev 3.4 2020-12-21 17:31:00 1 KB S32DS-3.4	<input type="button" value="下载"/>
	<b>S32 Design Studio 3.3 – Windows/Linux</b> FLEXERA Rev 3.3 2020-06-22 13:28:00 1 KB S32DS-3.3	<input type="button" value="下载"/>
	<b>S32 Design Studio 3.2 – Windows/Linux</b> FLEXERA Rev 3.2 2019-09-27 15:18:00 1 KB S32DS_3.2	<input type="button" value="下载"/>

如弹出下图页面，请选择Automotive SW - S32G2 - S32 Design Studio

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[Automotive SW - S32G2 - S32 Design Studio](#)

S32 Design Studio IDE

4. 进入后, 则会看到S32DS v3.4 和 S32DS v3.4.1。先安装S32DS v3.4, 再安装Update1更新包升级到v3.4.1

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3.4	S32 Design Studio for S32 Platform v.3.4	<a href="#">Download Log</a>

5. 选择“S32 Design Studio for S32 Platform v.3.4” 下载

点击“I Agree”

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## Software Terms and Conditions

### S32 Design Studio for S32 Platform v.3.4

Please read the following agreement and click "I AGREE" at the bottom before downloading your software.

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**IMPORTANT. Read the following NXP Software License Agreement ("Agreement") completely. By selecting the "I Accept" button at the end of this page, or by downloading, installing, or using the Licensed Software, you indicate that you accept the terms of the Agreement and you acknowledge that you have the authority, for yourself or on behalf of your company, to bind your company to these terms. You may then download or install the file.** In the event of a conflict between the terms of this Agreement and any license terms and conditions for NXP's proprietary software embedded anywhere in the Licensed Software file, the terms of this Agreement shall control. If a separate license agreement for the Licensed Software has been signed by you and NXP, then that agreement shall govern your use of the Licensed Software and shall supersede this Agreement.

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## 6. 根据你的PC系统环境，选择下载Linux或者Windows安装程序，及S32 Design Studio Installation Guide

NXP > Software & Support > S32 Design Studio IDE > S32 Design Studio for S32 Platform v.3.4 : Files  
You are a member of multiple licensing accounts and are currently viewing [redacted] Software Account. (Switch Account)

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+ S32 Design Studio 3.4 development packages for offline use	3.7 GB	SW32 S32DS 3.4.0 D2012.zip
+ S32 Design Studio 3.4 development packages for offline use, support for S32G2 family	1.3 GB	SW32G2 S32DS 3.4.0 D2012.zip
+ S32 Design Studio 3.4 Release Notes	72.5 KB	S32DS Release Notes 3.4.0.pdf
+ S32 Design Studio 3.4 S32G2 Development Package Release Notes	48 KB	S32G2xx Development Package Release Notes 3.4.0.pdf
+ S32 Design Studio 3.4 S32K1 Development Package Release Notes	47.5 KB	S32K1xx Development Package Release Notes 3.4.0.pdf
+ S32 Design Studio 3.4 S32K1xx Service Pack 1 for offline use	2.6 GB	SW32K1 S32DS 3.4.1 D2106.zip
+ S32 Design Studio 3.4 S32S2TV Development Package Release Notes	49.6 KB	S32S2xxTV Development Package Release Notes 3.4.0.pdf
+ S32 Design Studio 3.4 S32V2 Development Package Release Notes	46 KB	S32V2xx Development Package Release Notes 3.4.0.pdf
+ S32 Design Studio Installation Guide	1.2 MB	S32DS Installation Guide 3.4.0.pdf
+ S32 Design Studio v3.4 Linux installer	1.1 GB	S32DS.3.4 b201217 linux.x86 64.bin
+ S32 Design Studio v3.4 Windows installer	1.5 GB	S32DS.3.4 b201217 win32.x86 64.exe

### 1.2.2 获取激活码

在你刚刚点击下载S32DS v3.4的时候，系统会自动给你发送了一封邮件，其中含有一串16位数字+字母的激活码（见下图红框处）。请记住该激活码，一会儿安装的时候会用到。

NXP Software Notification- Thank you for your interest in S32 Design Studio version v.3.4 - Message (HT...)

File Message Help Tell me what you want to do

Delete Archive Respond Quick Steps Move Tags Chinese Conversion Editing Speech Zoom Save to Evernote Share to Teams Insights Report Message

NXP Software Notification- Thank you for your interest in S32 Design Studio version v.3.4

nxp@flexnetoperations.com To [redacted] Thu 5/20/2021 2:08 PM

Thank you for downloading S32 Design Studio version v.3.4.

This free software product has been added to Jianlong Zhang Software Account.

The latest versions can be downloaded from your [Software Account](#)

Below is your Software Activation Code to begin using the product

[redacted]

Support for this product is available on the [NXP Community](#).

[www.nxp.com](#) | [Privacy](#) | [Terms of Use](#) | [Contact Us](#)

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如果你找不到该邮件，或者后期重新安装S32DS时，可以登陆NXP账户获取这个激活码。方法如下：  
在刚才的下载页面，选择License Keys标签，即可以看到激活码。

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+	File Description	File Size	File Name
+	S32 Design Studio 3.4 development packages for offline use	3.7 GB	SW32 S32DS 3.4.0 D2012.zip
+	S32 Design Studio 3.4 development packages for offline use, support for S32G2 family	1.3 GB	SW32G2 S32DS 3.4.0 D2012.zip
+	S32 Design Studio 3.4 Release Notes	72.5 KB	S32DS Release Notes 3.4.0.pdf
+	S32 Design Studio 3.4 S32G2 Development Package Release Notes	48 KB	S32G2xx Development Package Release Notes 3.4.0.pdf
+	S32 Design Studio 3.4 S32K1 Development Package Release Notes	47.5 KB	S32K1xx Development Package Release Notes 3.4.0.pdf
+	S32 Design Studio 3.4 S32K1xx Service Pack 1 for offline use	2.6 GB	SW32K1 S32DS 3.4.1 D2106.zip
+	S32 Design Studio 3.4 S32S2TV Development Package Release Notes	49.6 KB	S32S2xxTV Development Package Release Notes 3.4.0.pdf
+	S32 Design Studio 3.4 S32V2 Development Package Release Notes	46 KB	S32V2xx Development Package Release Notes 3.4.0.pdf
+	S32 Design Studio Installation Guide	1.2 MB	S32DS Installation Guide 3.4.0.pdf
+	S32 Design Studio v3.4 Linux installer	1.1 GB	S32DS.3.4 b201217 linux.x86 64.bin
+	S32 Design Studio v3.4 Windows installer	1.5 GB	S32DS.3.4 b201217 win32.x86 64.exe

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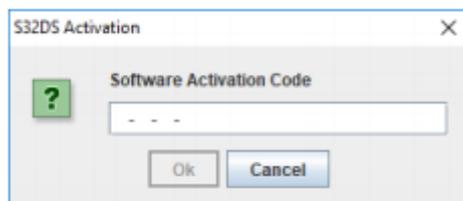
Item Description	S32 Design Studio version v.3.4
Order Number	S32DS-3-4_84643867
Purchase Order Number	
Total Number of Licenses:	101
Activation Code	[redacted]
License Applicable to Product(s):	
<u>Version</u>	<u>Description</u>
3.4	S32 Design Studio for S32 Platform v.3.4 (View EULA)
100 Available	
License Quantity: 1 Fulfillment ID: 184421197 Expiration Date: May 19, 2025 Product: S32 Design Studio for S32 Platform v.3.4 Machine: [redacted] Activation Code: [redacted]	

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### 1.2.3 安装S32DS v3.4

详见刚才下载的S32 Design Studio Installation Guide.pdf，按照安装向导一步步安装，中间需要输入激活码，并且选择“在线激活”或者“离线激活”。

通常，在网络通常的情况下，选择在线激活即可。如遇到网络受限或者其他问题需要离线激活，请参考S32 Design Studio Installation Guide.pdf，其中有详细的操作步骤。



# 1.3 安装S32 Design Studio Update1 更新包，升级至 S32DS v3.4.1

## 1.3.1 下载Update1更新包

在刚才的下载页面，下载S32 Design Studio 3.4 Update1，点击I Agree之后，会看到一个压缩包和一份 Release Note文档。请将它们都下载下来。

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#### S32 Design Studio IDE

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3.4.1	S32 Design Studio 3.4 Update 1, support for S32G2 family Offline package includes Update 1 for S32 Design Studio v.3.4 and S32G2 development package. This update should be installed on top of S32 Design Studio v.3.4.	<a href="#">Download Log</a>
3.4	S32 Design Studio for S32 Platform v.3.4	<a href="#">Download Log</a>

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### Product Download

#### S32 Design Studio 3.4 Update 1, support for S32G2 family

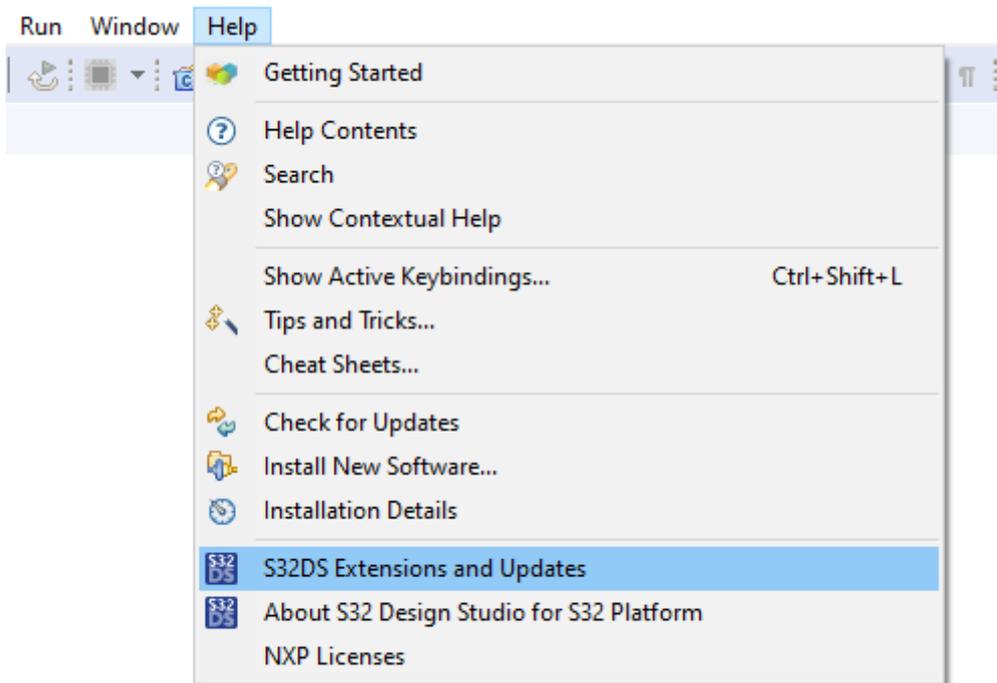
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File Description	File Size	File Name
+ S32 Design Studio 3.4 Update 1, support for S32G2 family	1.8 GB	SW32G2 S32DS 3.4.1 D2104.zip
+ S32G2 Development package 3.4.1 release notes	50.2 KB	S32G2xx Development Package Release Notes 3.4.1.pdf

## 1.3.2 安装Update1更新包

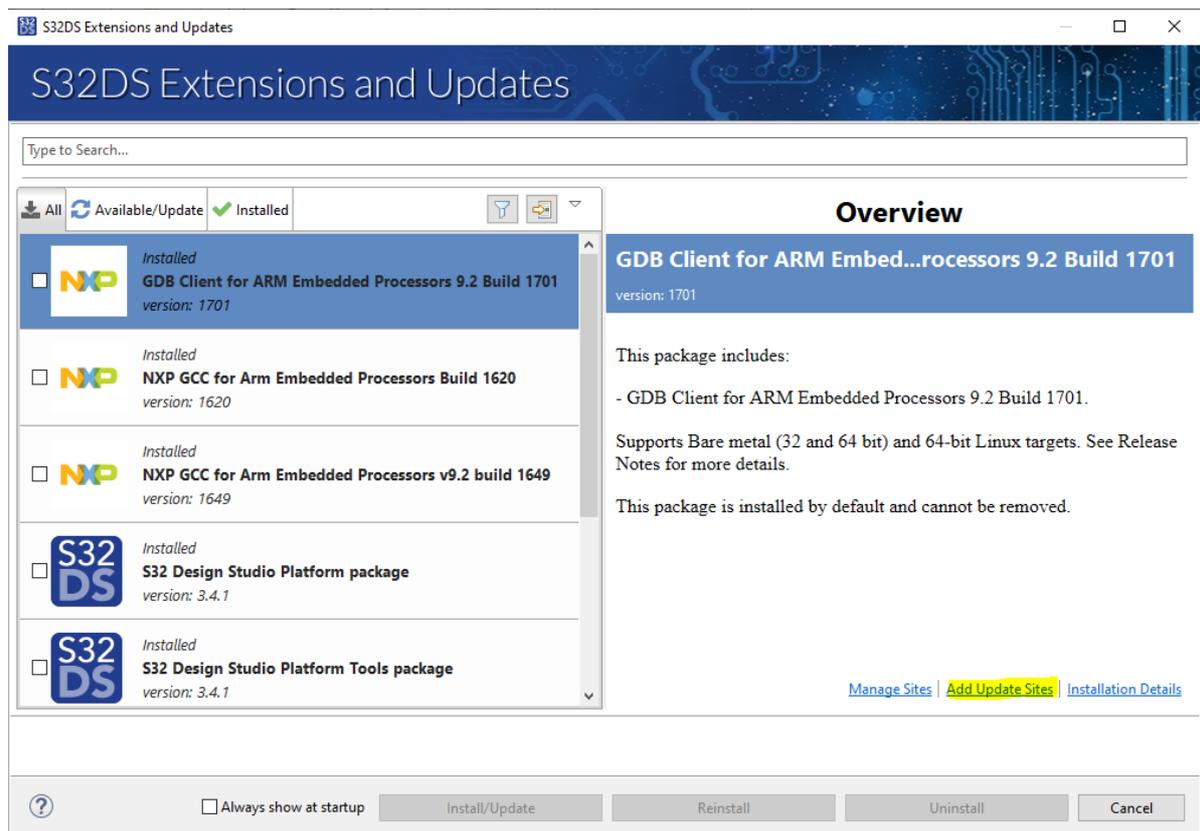
打开刚才安装的S32DS v3.4，进入workspace后，选择Help - S32DS Extension and Updates



选择Add Update Sites，然后在弹出的Browse对话框中选择干刚刚下载的zip文件，点击Open后，即可在左侧看到相应的软件包。

选择如下4个包，然后选择Install，之后按照安装向导页面一步一步安装。安装完成后会提示重启S32DS

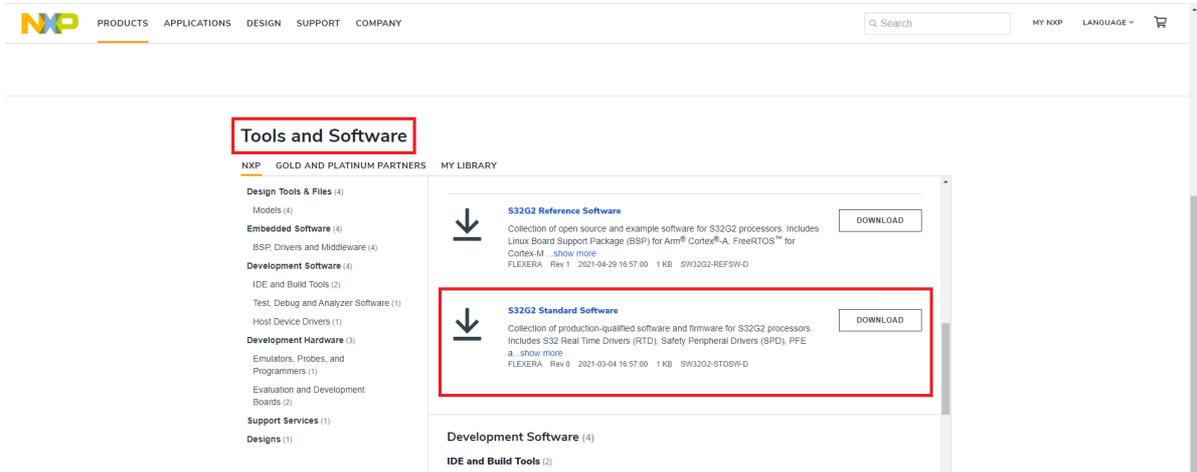
- 1) NXP GCC for Arm Embedded Processors v9.2 build 1649,
- 2) S32 Design Studio for S32 Platform package
- 3) S32 Design Studio for S32 Platform Tools package
- 4) S32G2xx Development Package



# 1.4 安装RTD v2.0.0 HF4安装包

## 1.4.1 下载RTD v2.0.0 HF4安装包

1. 登陆S32G的主页：<https://www.nxp.com/products/processors-and-microcontrollers/arm-processors/s32g-vehicle-network-processors/s32g2-processors-for-vehicle-networking:s32g2>
2. 选择TOOLS&SOFTWARE标签页，在Tools and Software的位置拖动位置条找到S32G2 Standard Software，点击进入。



3. 选择Automotive SW – S32G2 Standard Software -> Automotive SW - S32G2 - Real Time Drivers (RTD) (Cortex-M7)

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- [Automotive SW - S32G2 - Real Time Drivers \(RTD\) \(Cortex-M7\)](#)
- [Automotive SW - S32G2 - Safety Peripheral Drivers \(SPD\) \(Cortex-M7\)](#)
- [Automotive SW - S32G2 - Inter-Platform Communication Framework \(IPCF\) \(Cortex-A53 and Cortex-M7\)](#)
- [Automotive SW - S32G2 - PFE Driver + Standard Firmware](#)
- [Automotive SW - S32G2 - LLCE Driver + Firmware](#)
- [Automotive SW - S32G2 - HSE Firmware](#)

4. 选择S32DS Real Time Drivers Version 2.0.0 HF04，进入后点击"I Agree"

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## Product Information

### Automotive SW - S32G2 - Real Time Drivers (RTD) (Cortex-M7)

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Version	Description	
2.0.0	S32G2 Real Time Drivers Version 2.0.0 HF04 This is the S32 RTD release Version 2.0.0 HF04, supporting AUTOSAR 4.4 and non-AUTOSAR, with functionality and testing on S32G2 family of processors. It can be used standalone or should be installed on top of S32 Design Studio IDE v3.4 Update 1. For more details check the Release notes document.	<a href="#">Download Log</a>
2.0.0	S32G2 Real Time Drivers Version 2.0.0 HF02 This is the S32 RTD release Version 2.0.0 HF02, supporting AUTOSAR 4.4 and non-AUTOSAR, with functionality and testing on S32G2 family of processors. It can be used standalone or should be installed on top of S32 Design Studio IDE v3.4. For more details check the Release notes document.	<a href="#">Download Log</a>
	<a href="#">SW32G2 RTD 'List Of Known Defects' weekly report</a>	<a href="#">Download Log</a>
1.0.0_HF01	S32G2 Real Time Drivers 4.4 Version 1.0.0 HF01 This is the NXP S32 Real Time Drivers AUTOSAR 4.4 Version 1.0.0 HF01 release for the S32G274 platform. This release contains all drivers from previous release on top of which the new versions of the affected drivers are present.	<a href="#">Download Log</a>

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## Software Terms and Conditions

### S32G2 Real Time Drivers Version 2.0.0 HF04

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5. 在RTD 2.0.0 HF4的下载页面中，你会看到几种安装文件。这是因为RTD支持AUTOSAR和非AUTOSAR软件框架，所以它支持独立安装或者以更新包形式安装到S32DS中。

- Software & Support
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## Product Download

### S32G2 Real Time Drivers Version 2.0.0 HF04

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	File Description	File Size	File Name
+	SW32G2_RTD_4.4_2.0.0_HF04_D2107.exe	47.5 MB	SW32G2 RTD 4.4 2.0.0 HF04 D2107.exe
+	SW32G2_RTD_4.4_2.0.0_HF04_D2107_SCR.txt	1.8 KB	SW32G2 RTD 4.4 2.0.0 HF04 D2107 SCR.txt
+	SW32G2_RTD_4.4_2.0.0_HF04_DS_updatesite_D2107.zip	80.9 MB	SW32G2 RTD 4.4 2.0.0 HF04 DS_updatesite D2107.zip
+	SW32_RTD_4.4_2.0.0_HF04_ReleaseNotes.txt	8.2 KB	SW32 RTD 4.4 2.0.0 HF04 ReleaseNotes.txt

S32G2 RTD对这两种软件框架的支持，是这样的：

1) AUTOSAR软件框架用户，NXP提供MCAL版本的RTD和EB Tresos配置工具，你需要下载 **SW32G2\_RTD\_4.4\_2.0.0\_HF04\_D2107.exe**独立安装。该安装方法会在另外一份文档中详细介绍。

2) 非AUTOSAR软件框架用户，NXP提供RTD和S32 Config Tool配置工具，它们是集成到S32DS中的。本文主要介绍这一种安装方法。因此，你需要下载

**SW32G2\_RTD\_4.4\_2.0.0\_HF04\_DS\_updatesite\_D2107.zip**

## 1.4.2 RTD Release Note

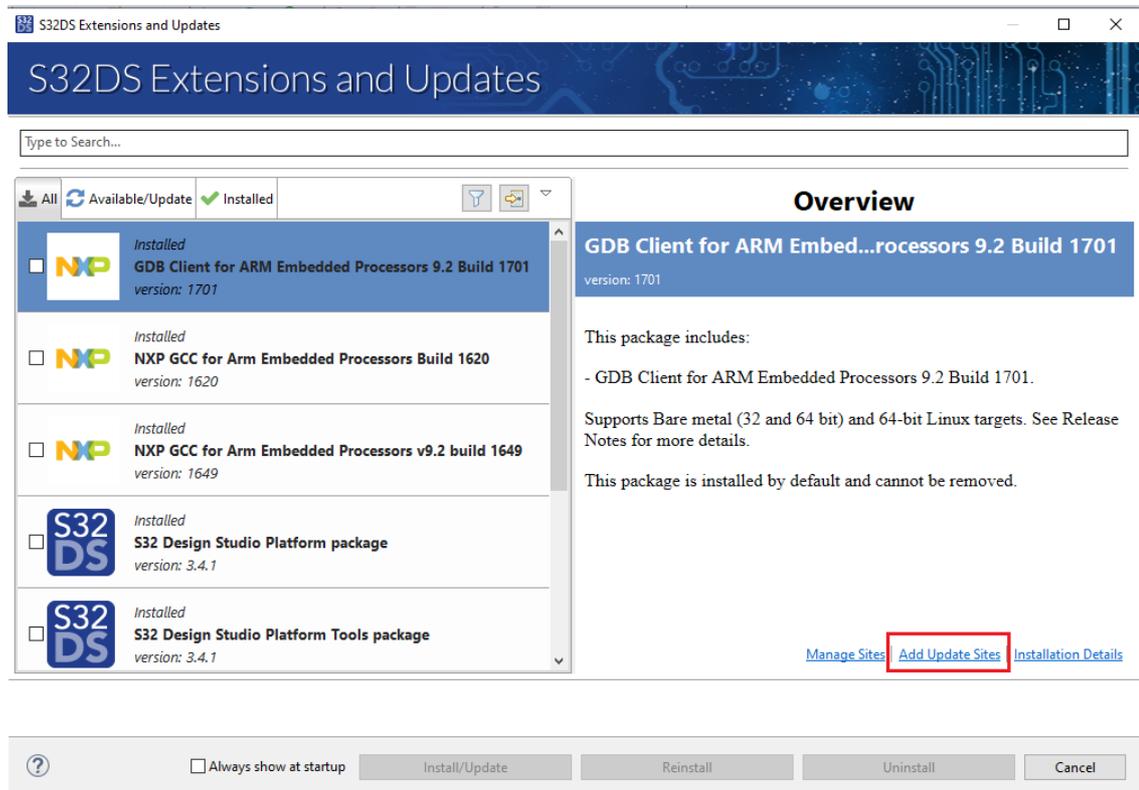
NXP发布的任何软件都会附带一份名为“Release Note”的文档，有的是PDF格式的，有的是TXT格式的。这份中档详细描述了此次发布的软件包含哪些更新（或者修复），以及安装步骤。

如RTD v2.0.0 HF4的Release Note，它描述了如何安装，接下来我们就按照它的描述来操作。

```
*****
Installation
*****
- Installation Design Studio
  o Bundled in S32 Design Studio:
    S32 RTD is delivered bundled in the S32 Design Studio. In this case,
    it already configured and ready to use. New S32DS project wizard and New S32DS project
    from Example can be used to create S32 RTD based projects.
  o Delivered as an extension for S32 Design Studio
    S32, RTD is delivered as an Update Site for S32 Design Studio "S32 Design Studio IDE v3.4 Update 1".
    In this case, it must be installed by opening Help -> S32DS Extensions and Updates -> Add Update Sites
    and selecting the archive file containing the S32 RTD software.
    Select the RTD package and click install.
    After it is installed, New S32DS project wizard and New S32DS project from Example can be used to create S32 RTD based projects.
- Installation EB Tresos
  Follow the installer steps. By default, the installer will create a link between the
  installation target directory and a selected EB Tresos installation. If you choose not to
  create a link, you can later create one manually or you can copy all "<mod>_TS_I40D11M20IOR0"
  directories and .JAR files to the "<Tresos Install Path>\plugins" directory.
```

## 1.4.3 安装RTD v2.0.0 HF4

1. 和安装Update1更新包的方法一样，打开S32DS，选择Help - S32DS Extension and Updates，选择Add Update Sites



2. 然后在弹出的Browse对话框中选择干刚刚下载的zip文件，点击Open后，即可在左侧看到相应的软件包。勾选该包，点击Install/Update 1 items，等待进度条完成，按照提示点击下一步。

(期间可能会询问是否信任该证书，选择该证书，点击Accept Selected，即可)

S32DS Extensions and Updates

# S32DS Extensions and Updates

Type to Search...

All Available/Update Installed

**S32 DS** Update available  
**S32 RTD AUTOSAR 4.4 Version 2.0.0 Hot Fix 03**  
 version: 2.0.0

## Overview

### S32 RTD AUTOSAR 4.4 Version 2.0.0 Hot Fix 04

version: 2.0.0

The S32 Real Time Drivers AUTOSAR 4.4 Version 2.0.0 is AUTOSAR 4.4.0 compliant. The S32 Real Time Drivers AUTOSAR 4.4 Version 2.0.0 can be used also in a non-AUTOSAR environment, as a collection of peripheral drivers designed to simplify and accelerate application development on NXP microcontrollers.

This package supports development with the following devices:

- S32G233A
- S32G234M
- S32G254A
- S32G274A (Revisions 1 and 2)

[Manage Sites](#) | [Add Update Sites](#) | [Installation Details](#)

Always show at startup

S32DS Extensions and Updates

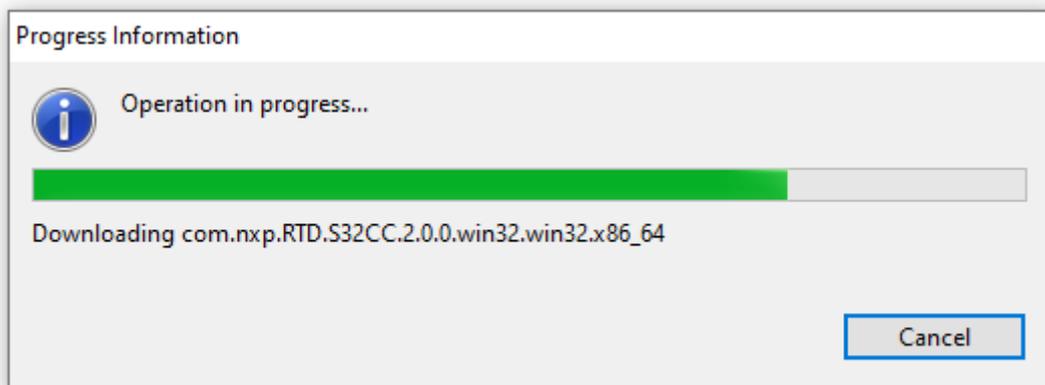
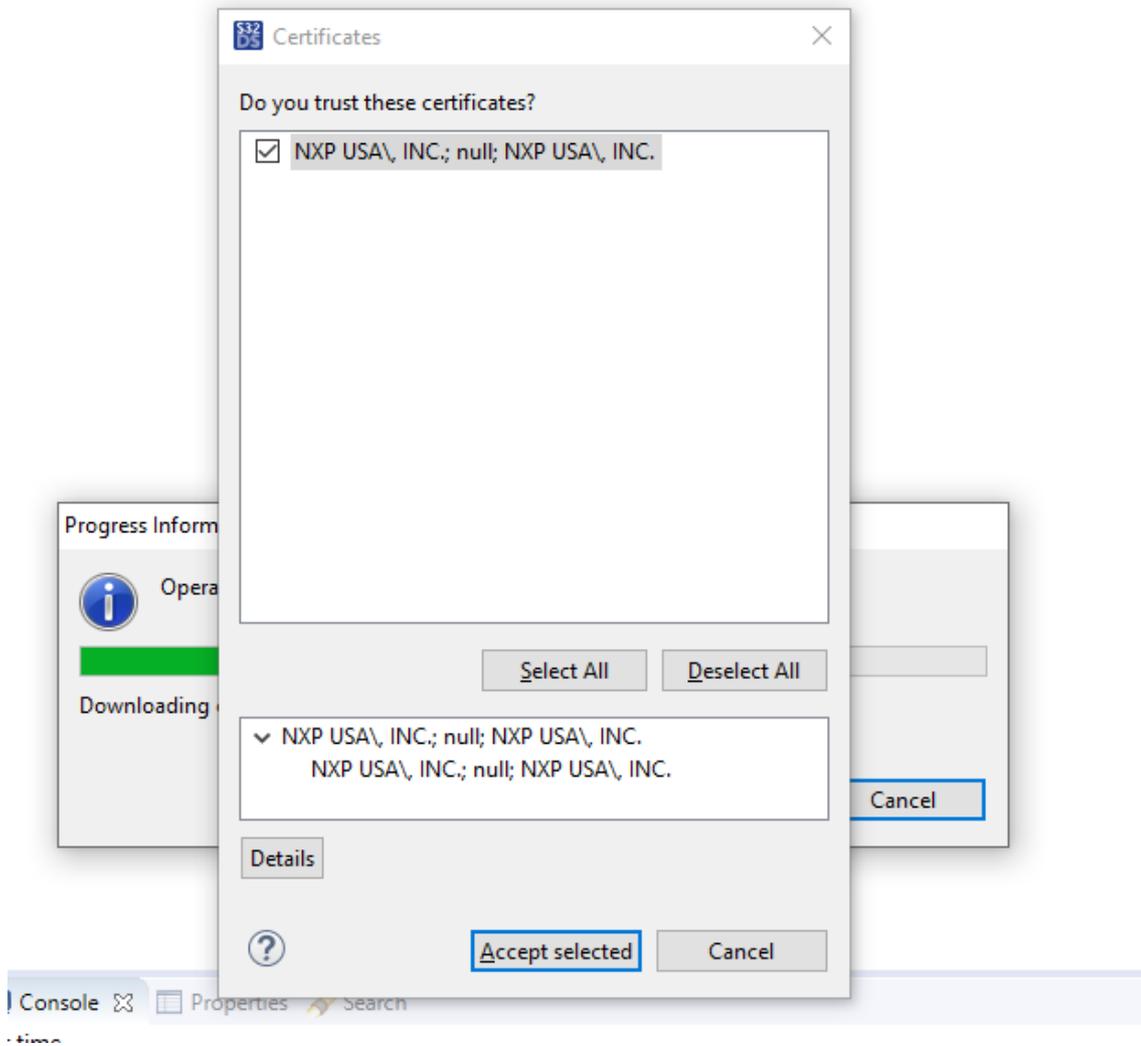
# S32DS Extensions and Updates

**Confirm your action(s):**  
 Press 'Next/Finish' to continue with your action. Or go back to choose more packages to install or update.

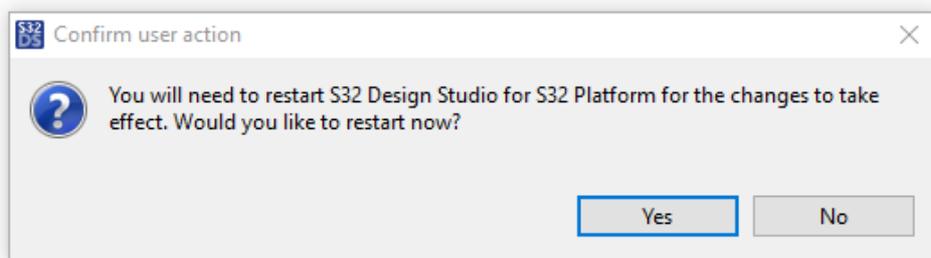
**The following items will be installed:**

**S32 DS** S32 RTD AUTOSAR 4.4 Version 2.0.0 Hot Fix 04  
 version: 2.0.0

Always show at startup



3. 安装完成后，重新启动S32DS，完成安装。

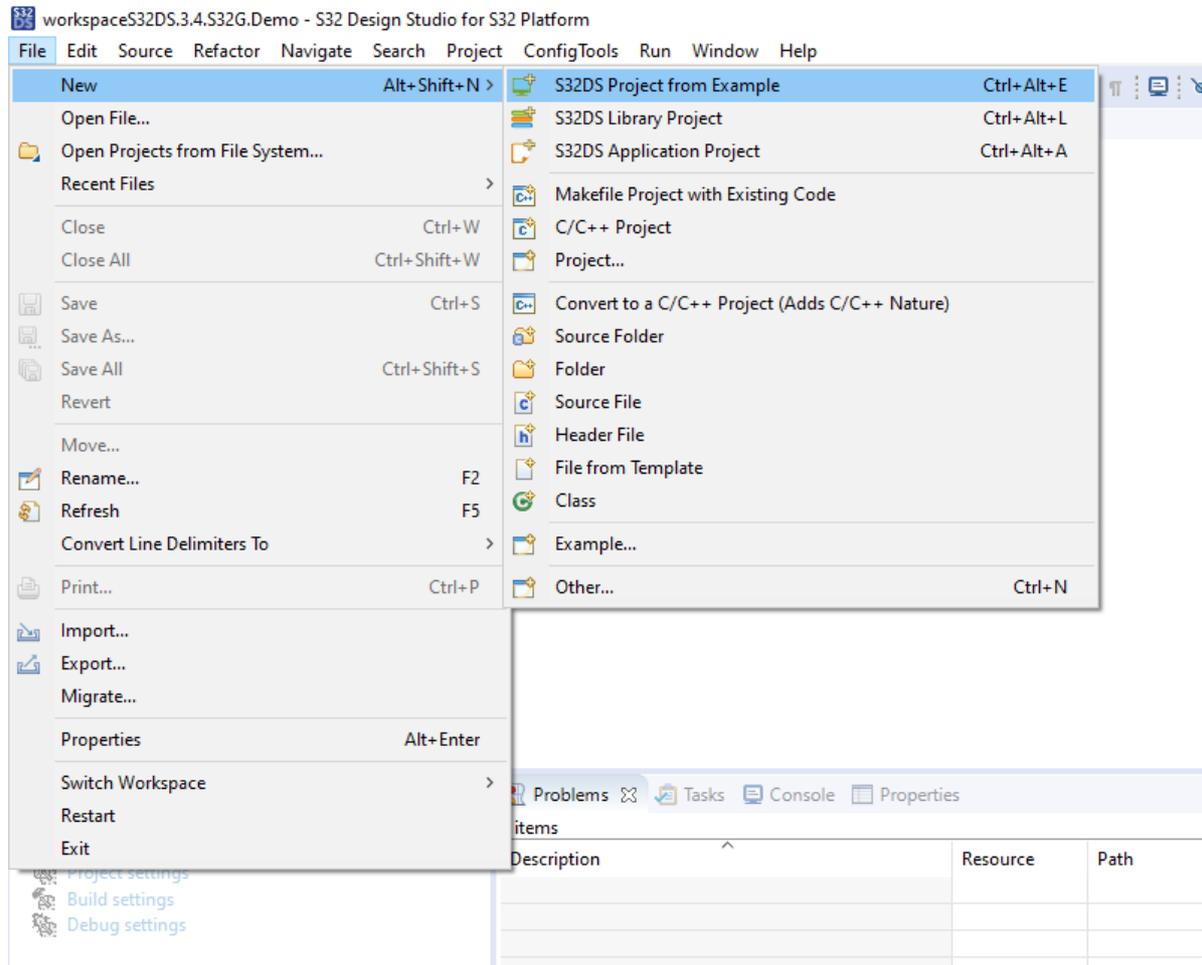


## 2. RTD样例工程使用指南

### 2.1 打开样例工程

按照上述流程完成安装后，即可使用S32DS IDE做开发了。RTD软件包提供了丰富的样例工程，供用户学习和参考。下文介绍如何打开并编译RTD的样例工程。

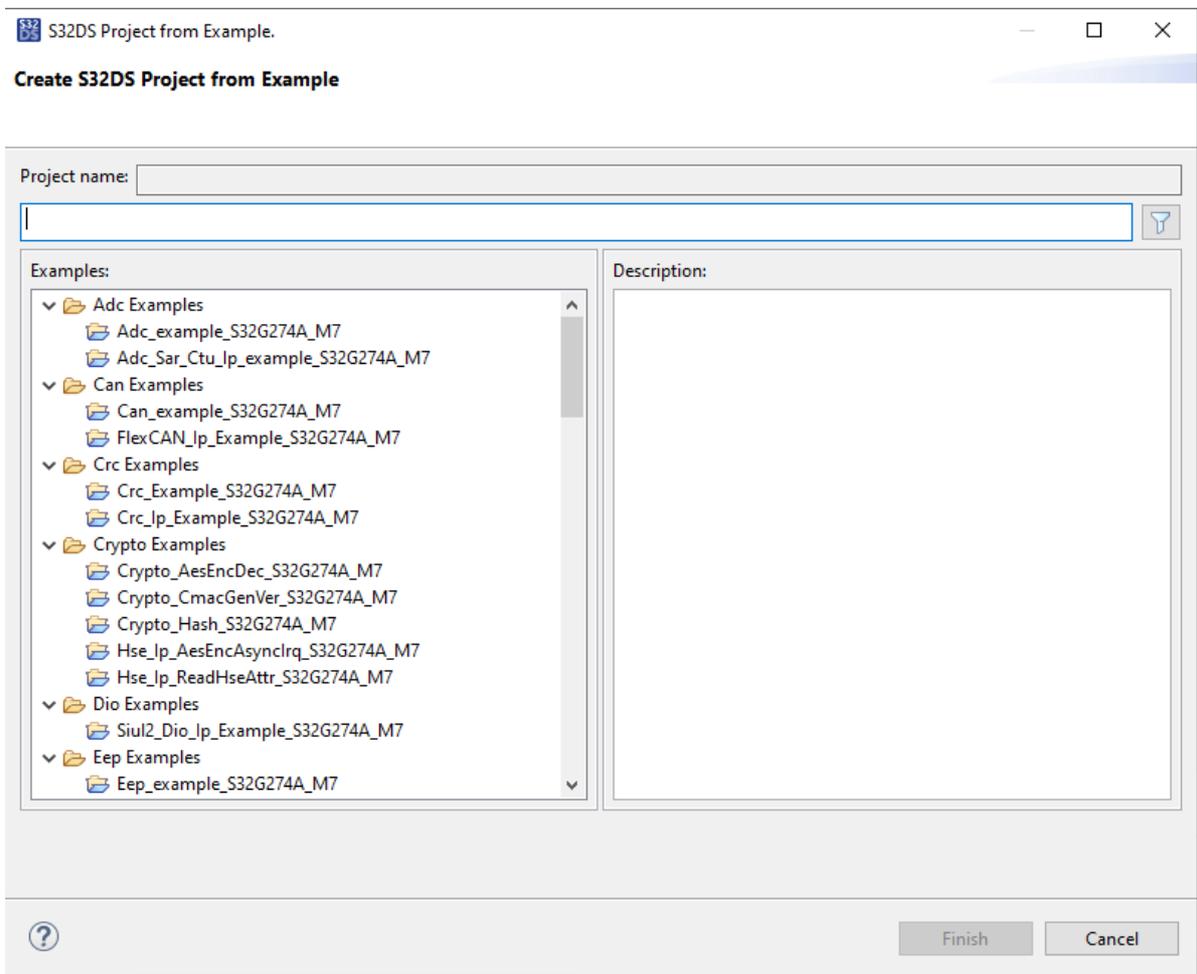
打开一个Workspace，选择File - New - S32DS Project from Example



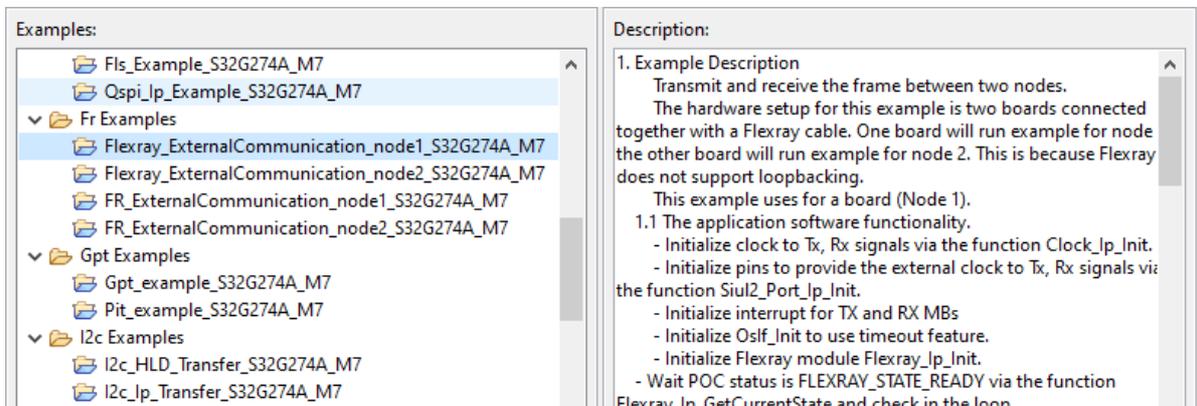
如4.1节所述，RTD支持的“AUTOSAR”和“非AUTOSAR”两种软件框架的开发工具链是不同的，非AUTOSAR的软件框架可以使用S32DS的配置工具Config Tool来进行配置。因此在弹出的窗口中，你会看到很多以外设命名的文件夹，里面的工程既有AUTOSAR框架的，也有非AUTOSAR框架的。

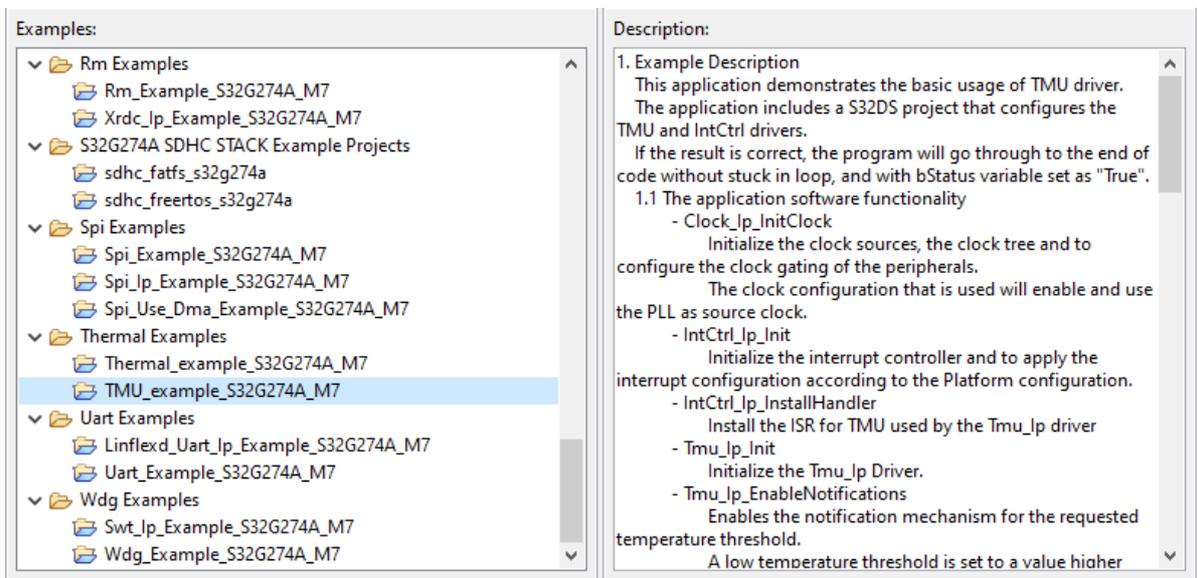
这里我们使用非AUTOSAR框架的样例工程，如需使用AUTOSAR框架的工程，可参考另外文档《RTD-MCAL软件使用指导》。

在如下的窗口，**打开一个带有“lp”字样的工程**，这个就是非AUTOSAR框架的样例工程。



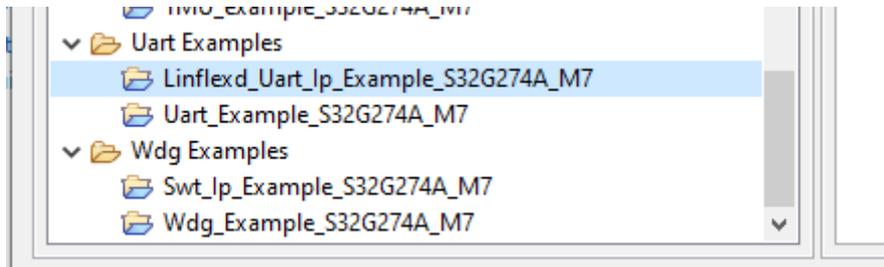
有的样例工程的命名并不直观，比如FlexRay，Thermal的工程。这时需要看一下有右边的介绍，其中会介绍这个工程主要使用了哪些函数，看到带“Ip”字样命名的函数，即是非AUTOSAR框架的样例工程。



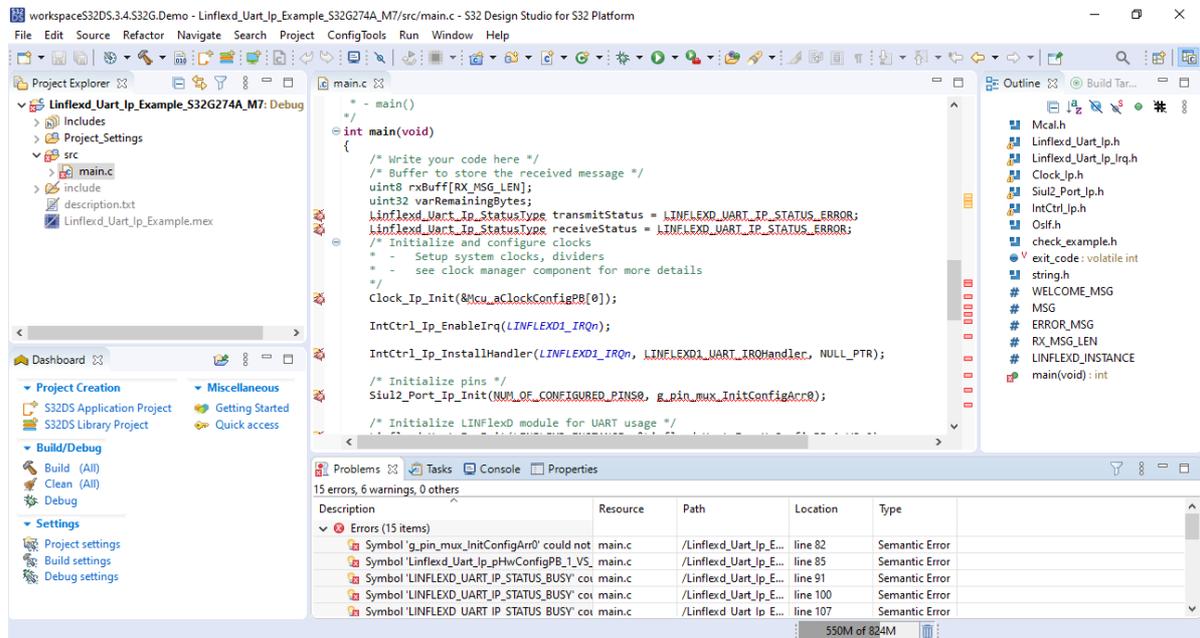


## 2.2 使用Config Tool生成配置文件

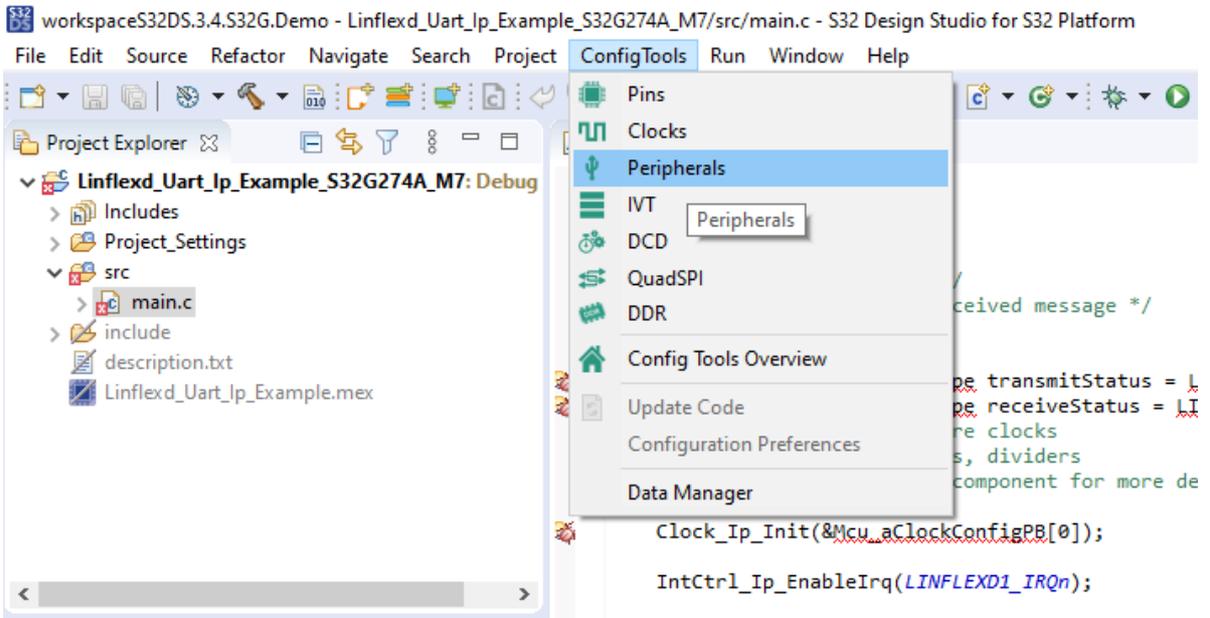
我们以UART为例，讲解如何使用Config Tool生成代码，打开"Linflexd\_Uart\_lp\_Example\_S32G274A\_M7"



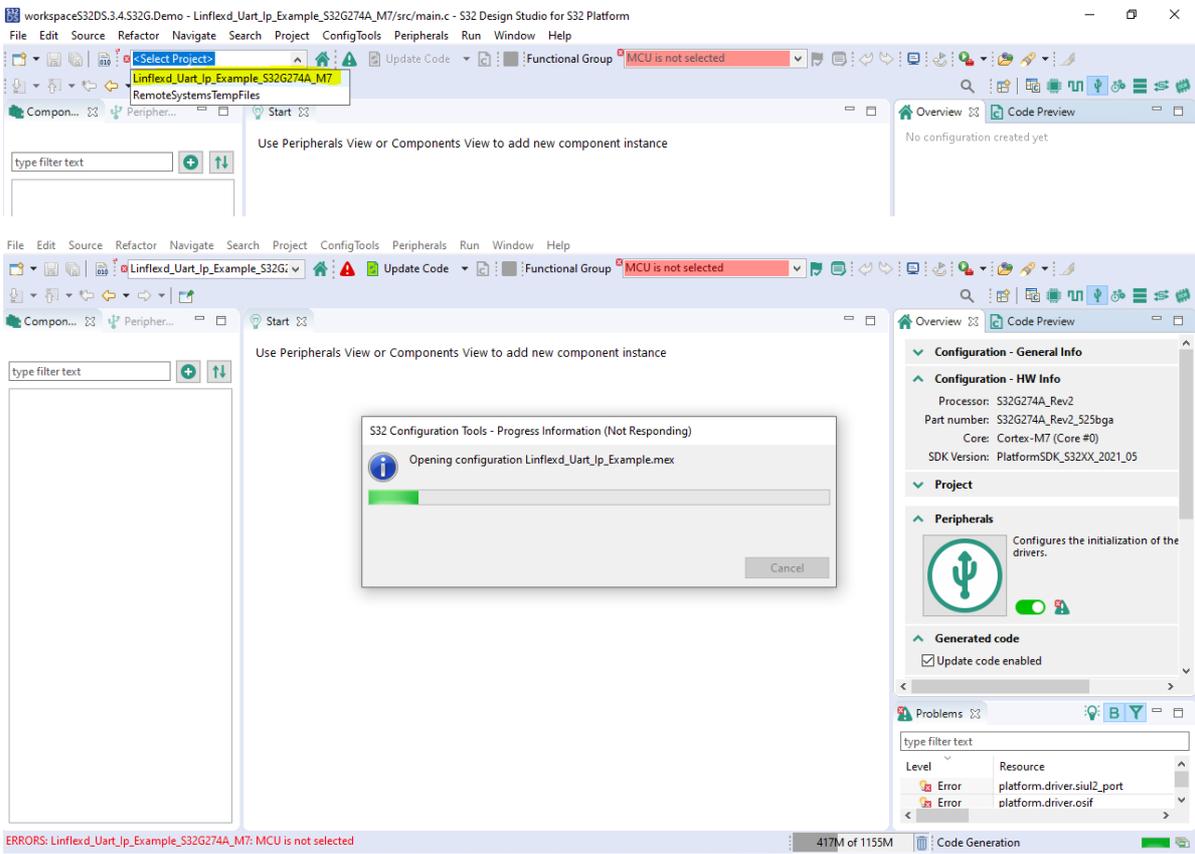
打开后，在Problems的窗口会报很多错误。这是因为我们还没有生成配置文件。



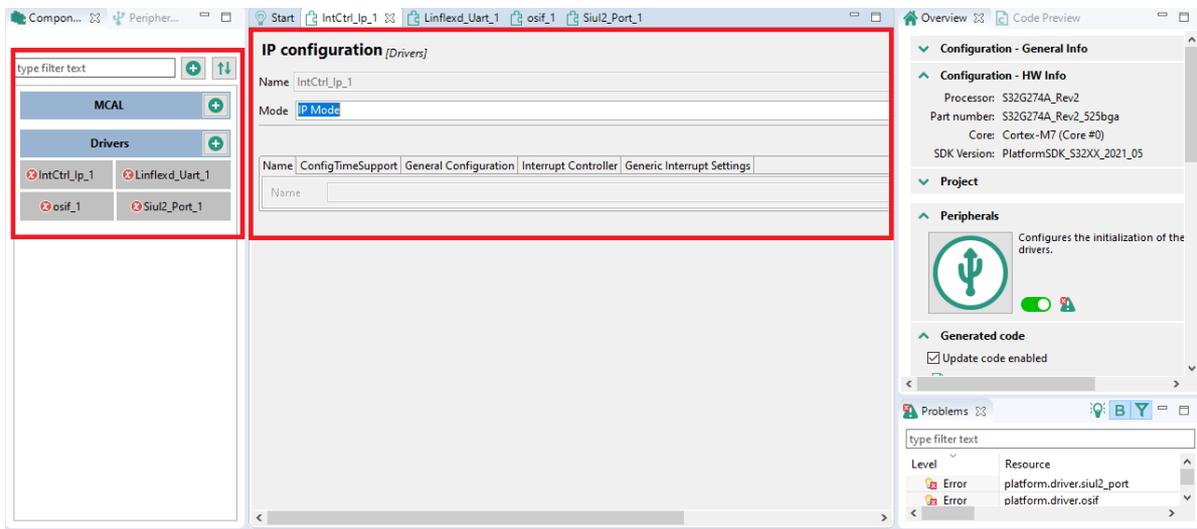
选择ConfigTools - Peripherals打开外设配置页面，见下图：



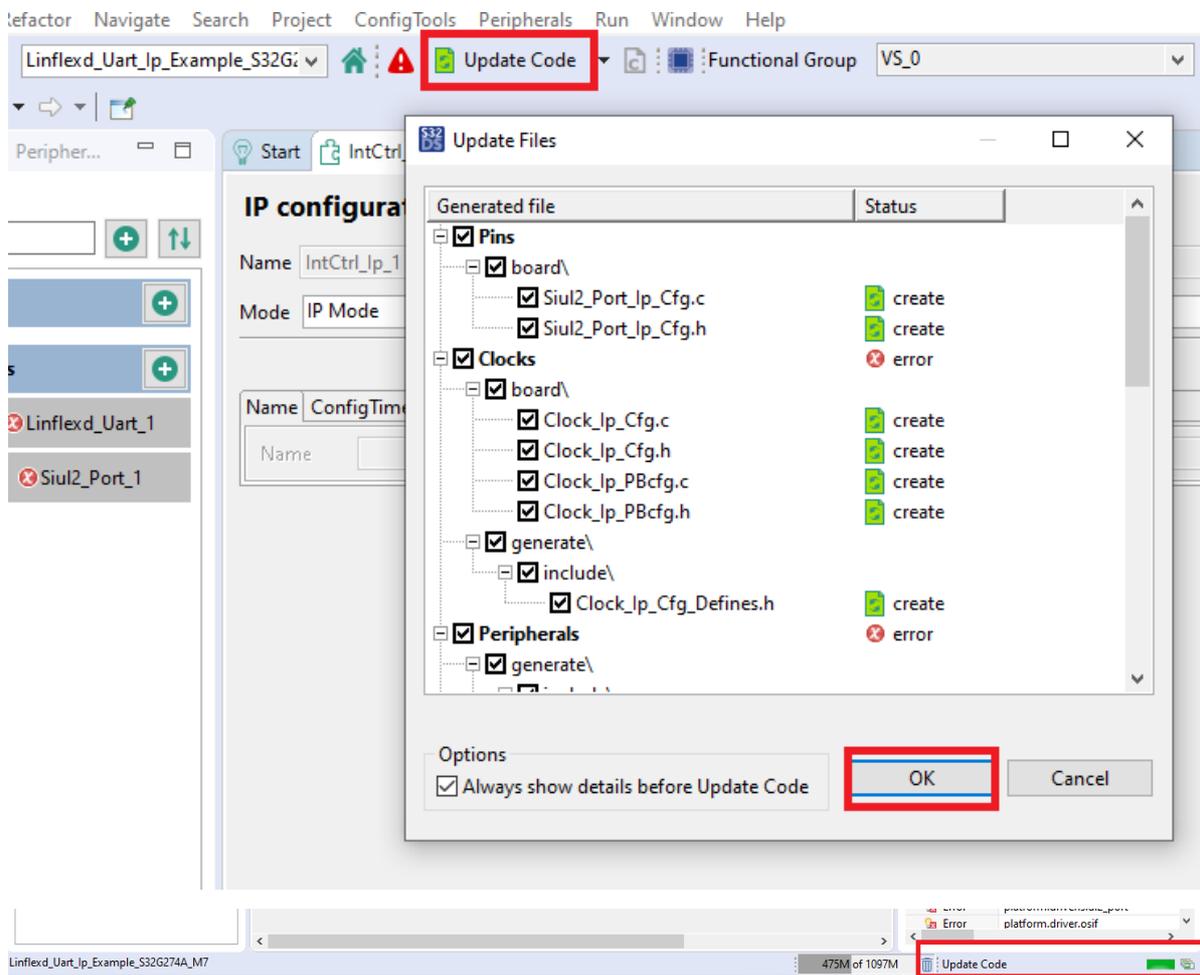
选择当前工程，等待进度条完成，见下图：



打开后可以看到左侧是该工程使用的外设模块，右侧是具体的配置界面。

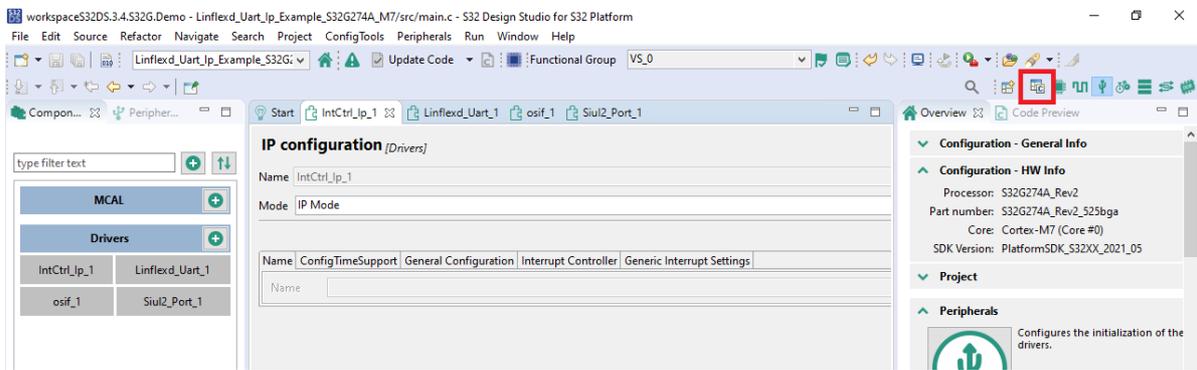


样例工程都是已经配置好的，只需要生成代码即可。点击Update Code，弹出的窗口显示各个模块将会生成的文件，点击OK，等待右下角进度条完成。

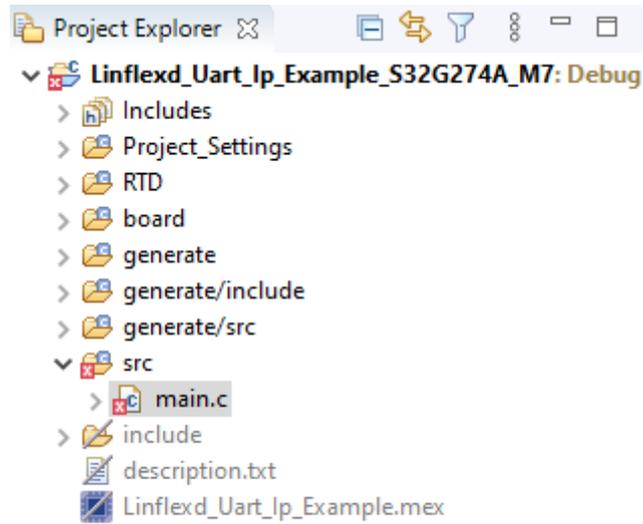


## 2.3 编译工程

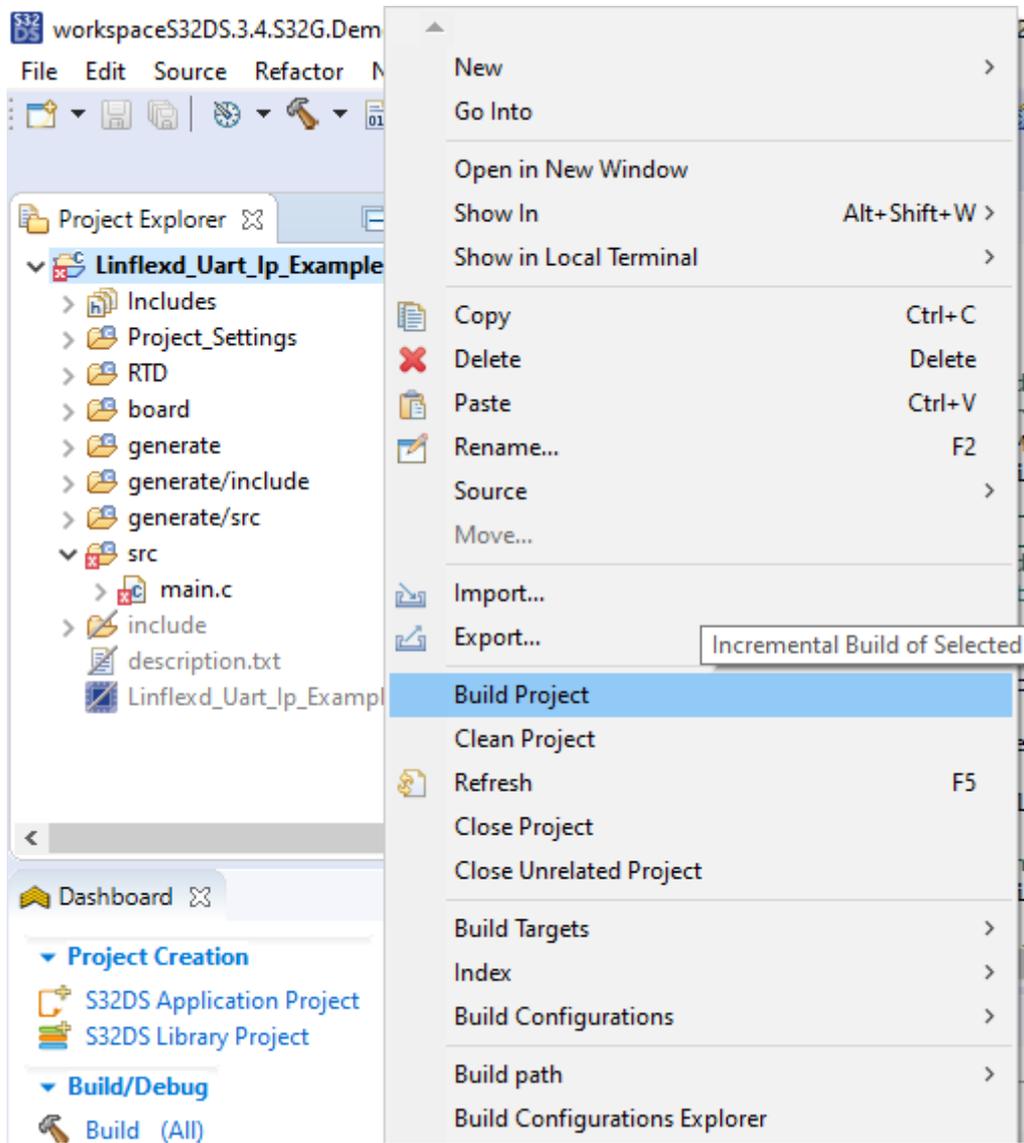
完成Config Tool代码生成后，点击右上角C/C++图标，回到工程编辑页面。



这时，你会发现工程目录下，多了几个文件夹，就是刚才config tool中生成的。



点击工程名，右键选择Build Project，等待Console窗口显示编译结果。至此，编译成功。



```
CDT Build Console [Linflexd_Uart_Ip_Example_S32G274A_M7]
arm-none-eabi-gcc -o "Linflexd_Uart_Ip_Example_S32G274A_M7.elf" "@Linflexd_Uart_Ip_Example_S32G274A_M7.args"
Finished building target: Linflexd_Uart_Ip_Example_S32G274A_M7.elf

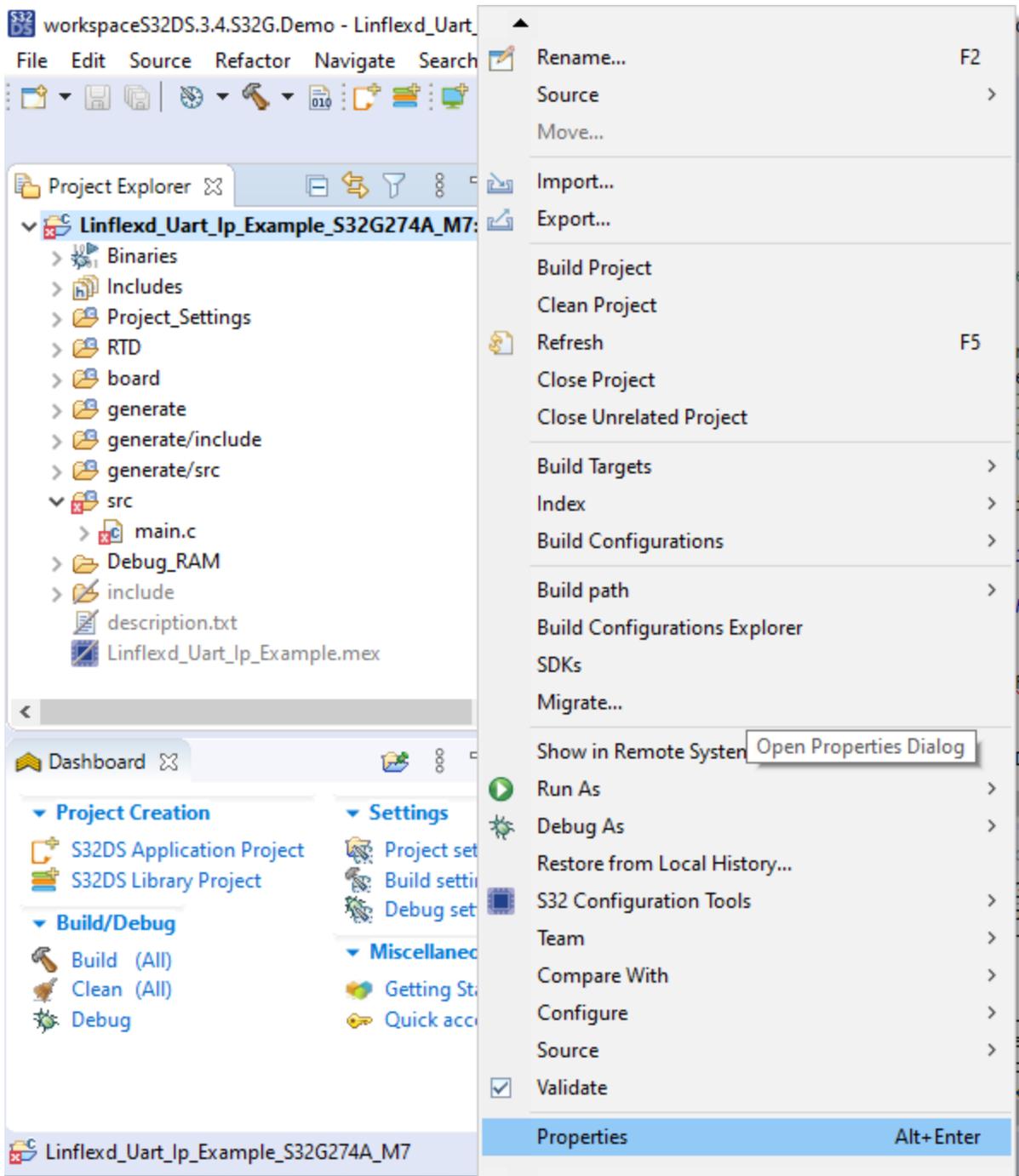
Invoking: Standard S32DS Print Size
arm-none-eabi-size --format=berkeley Linflexd_Uart_Ip_Example_S32G274A_M7.elf
text  data  bss  dec  hex filename
284864  0  12288  297152  488c0 Linflexd_Uart_Ip_Example_S32G274A_M7.elf
Finished building: Linflexd_Uart_Ip_Example_S32G274A_M7.siz

11:43:24 Build Finished. 0 errors, 0 warnings. (took 30s.973ms)
```

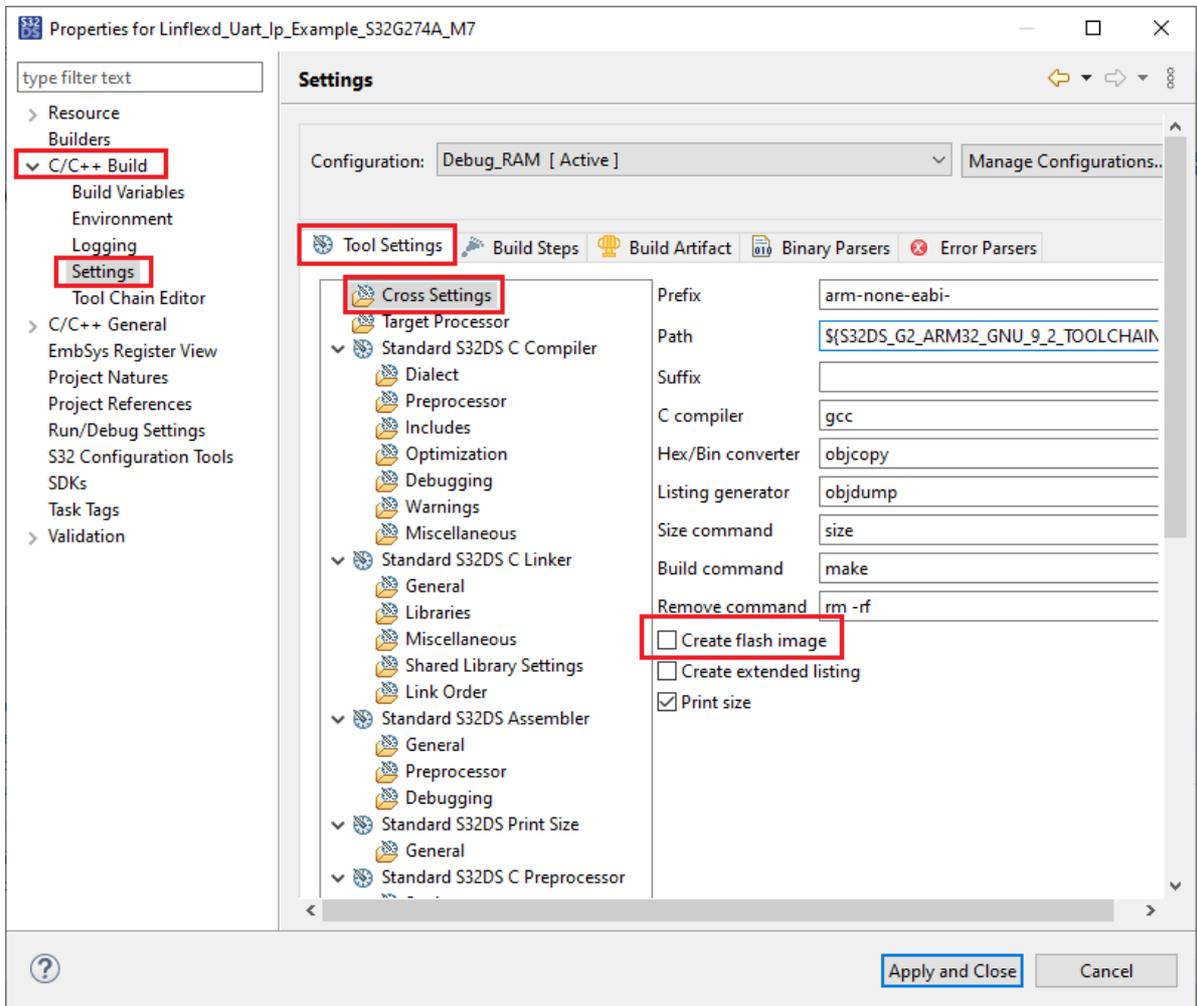
## 2.4 生成BIN文件

在日常使用时，尤其是使用IVT Tool时，需要编译生成BIN文件。

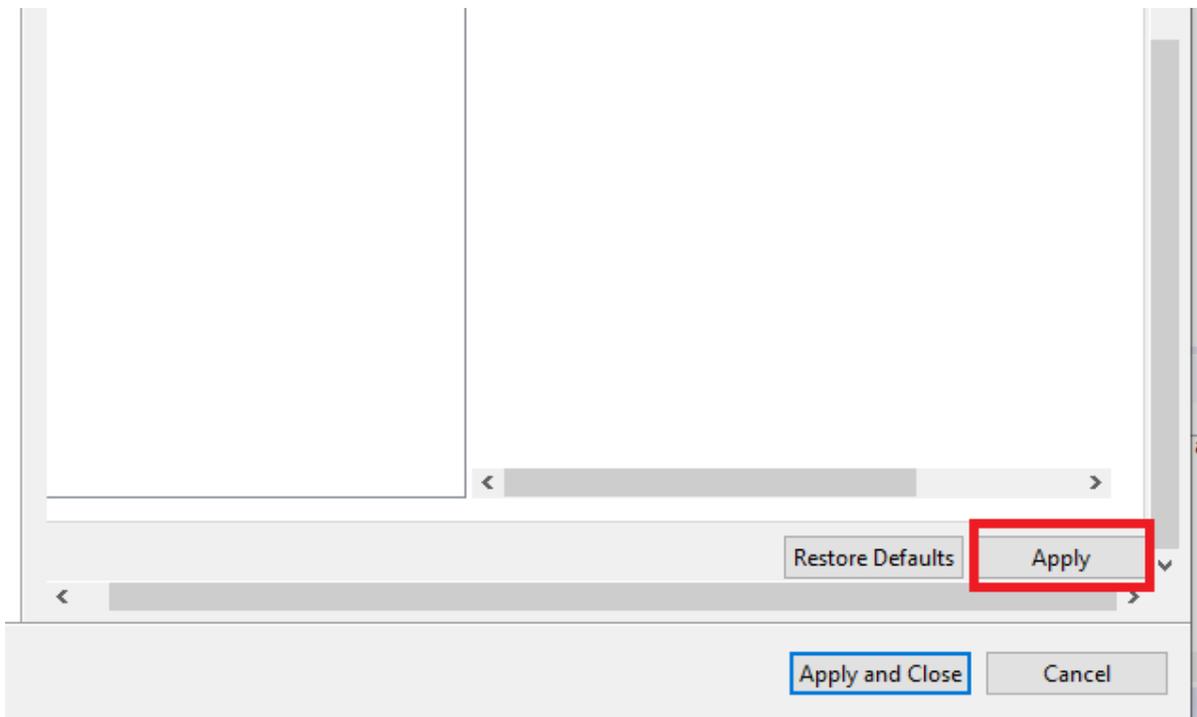
点击工程名，右键选择Properties，



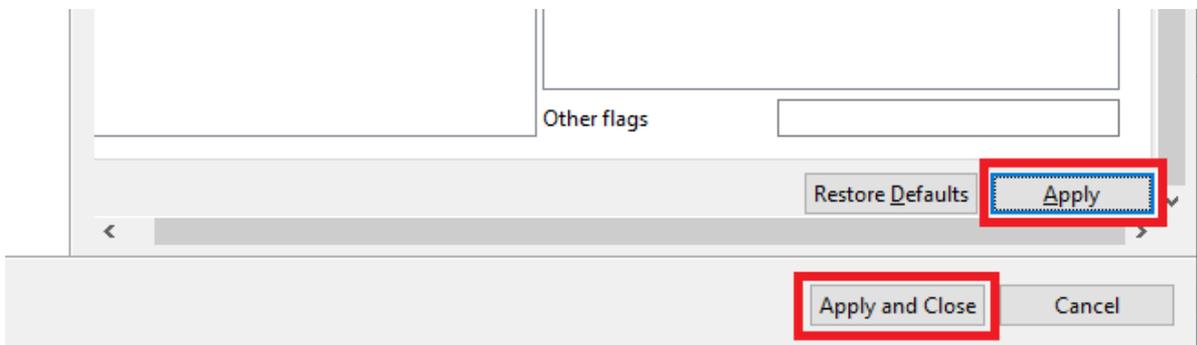
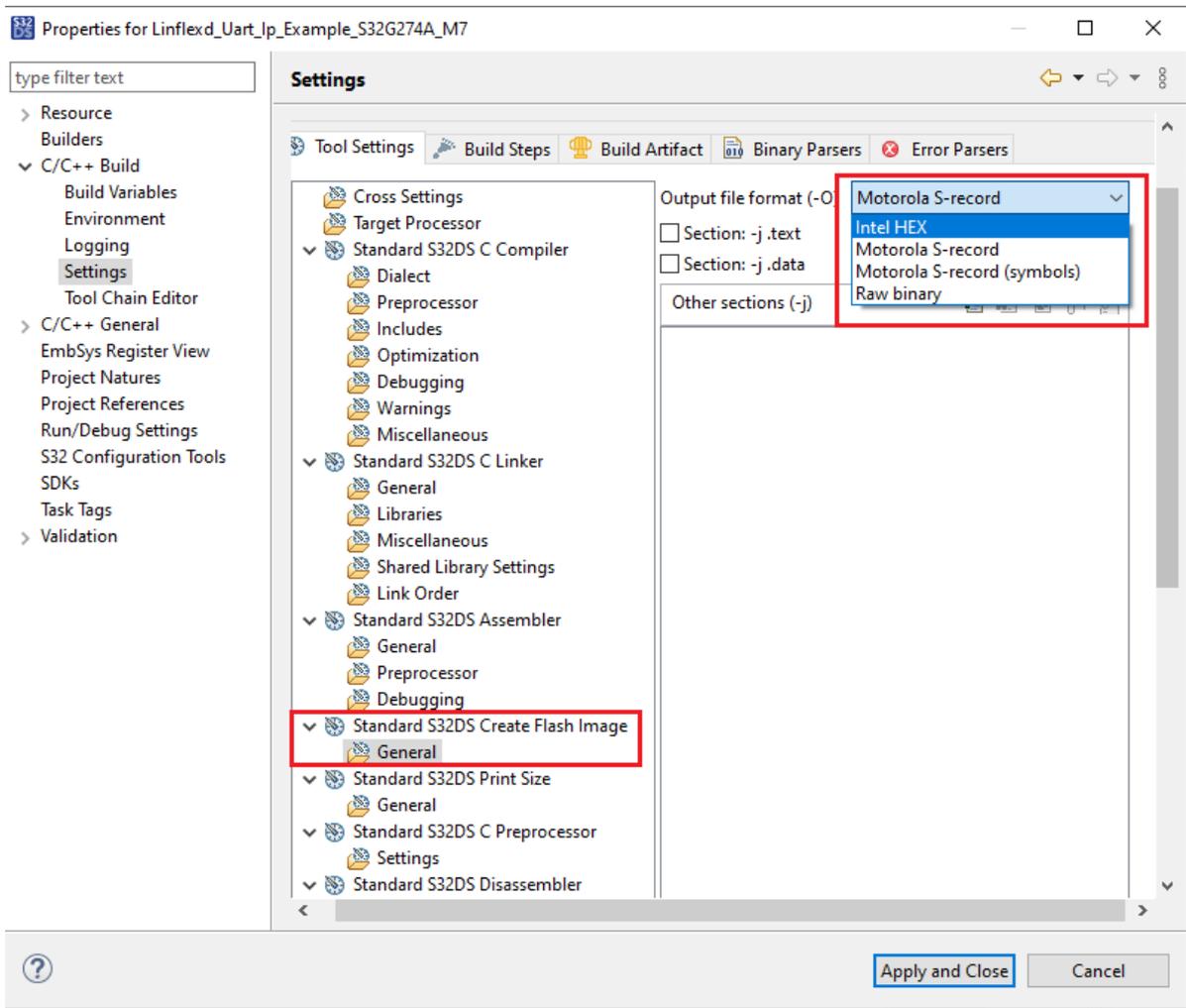
在弹出的窗口，选择C/C++ Build - Settings，在右侧Cross Settings勾选Creat flash image



拖动右边侧边条到最后，点Apply



再选择Standard S32DS Creat Flash Image - General，右侧Output file format选择Raw Binary。然后再拖动侧边条至最底，点击Apply，然后点击 Apply and Close



回到工程页面，再次编译工程，则会产生bin文件。

当然，你也可以按照此方法生成S19或者Hex文件。

