ARM ASM

# 编程环境KEIL MDK

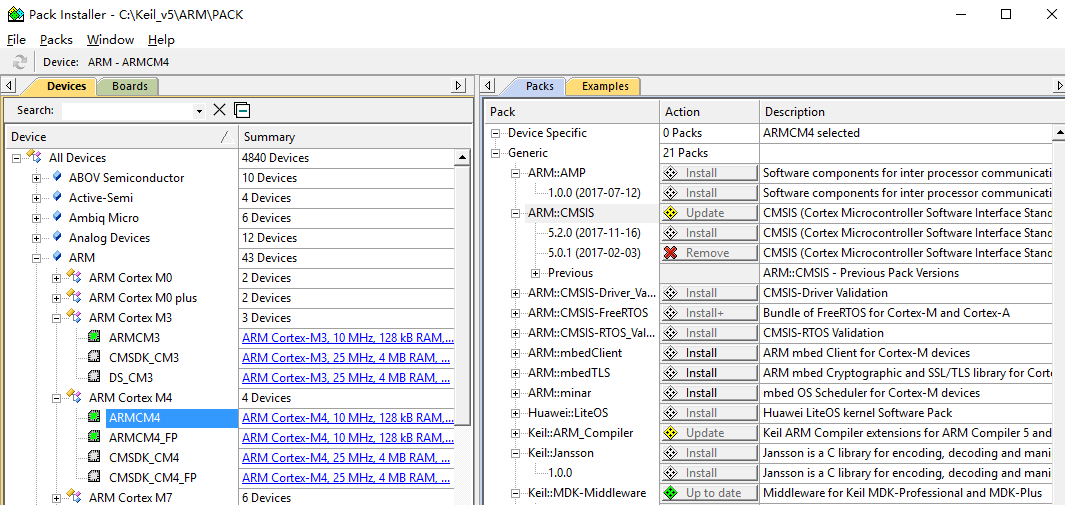
## 工程配置

### 导入目标CPU的启动代码

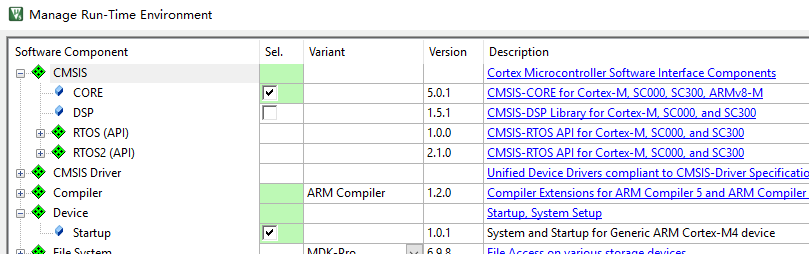
针对每个ARM CPU，keil都提供的有相关的启动代码，是CMSIS组件的一部分。

**安装CMSIS**(Cortex Microcontroller Software Interface Standard)**:**

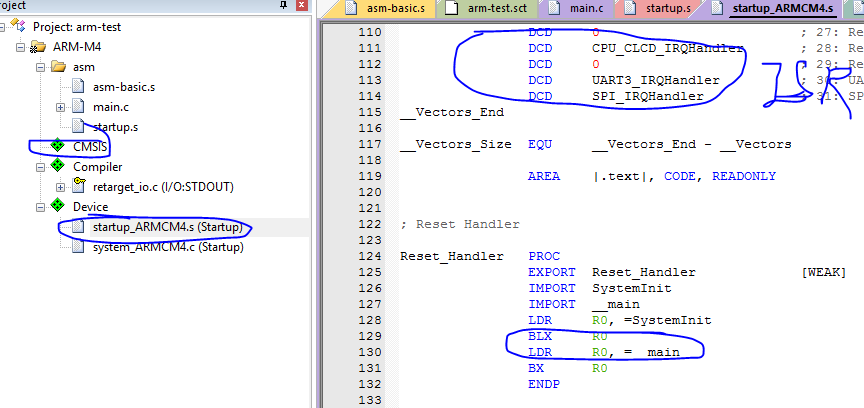
首先通过project->manage->pack installer安装最新的CMSIS：



**为工程添加启动代码：**project->manage-> Run-Time Environment

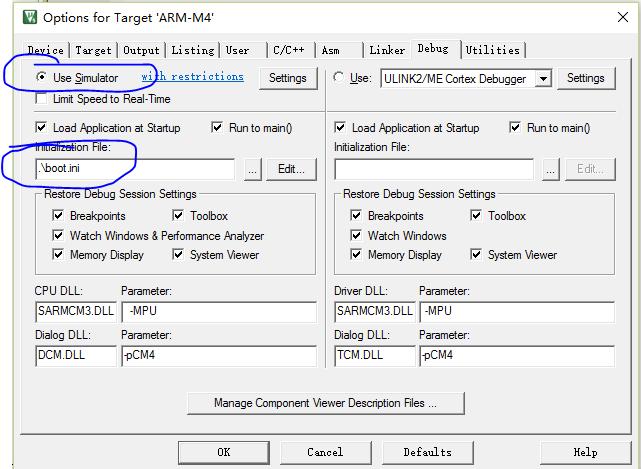


**启动代码：**默认从0地址启动，并在该位置设置中断向量，之后由Reset\_Handler跳转到main函数执行。



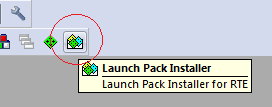
## uvision仿真环境

### 配置仿真环境

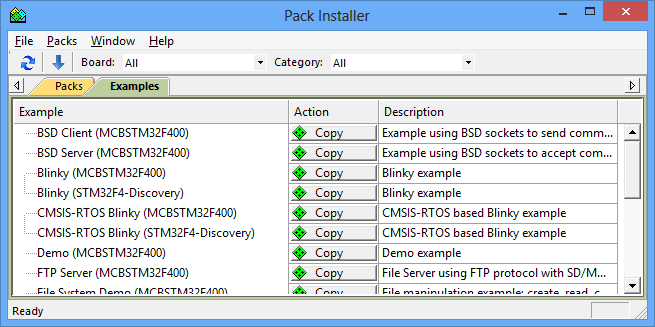


### uvision工程模板

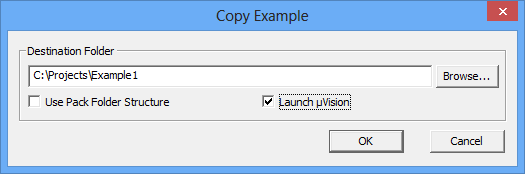
Project - Manage - Pack Installer或



选择device，转到example标签：



选择 “示例”，点击Copy，保存到其它目录即可使用：



### 初始化文件

**指定启动地址：**

|  |
| --- |
| /\*-------------------------------------------\*/  /\* Change the program start address \*/  /\*-------------------------------------------\*/  $=0x0000 |

**初始化SP与PC指针：**

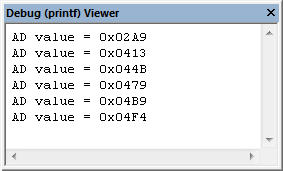
|  |
| --- |
| FUNC void Setup (void)  {  SP = \_RDWORD(0x00040000); // Setup Stack Pointer  PC = \_RDWORD(0x00040004); // Setup Program Counter  \_WDWORD(0xE000ED08, 0x00040000); // Setup Vector Table Offset Register  }  LOAD \_OBJ\lpc1788\_rtx\_blinky.axf INCREMENTAL // Download  Setup(); // Setup for Running |

|  |
| --- |
| /\*-------------------------------------------\*/  /\* Run the Program (stop at main) \*/  /\*-------------------------------------------\*/  g, main |

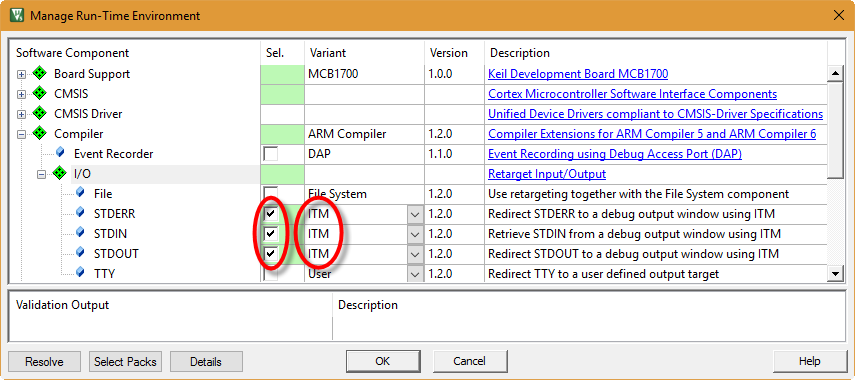
### 打开IO输入输出

参考：http://www.keil.com/support/man/docs/ulink2/ulink2\_trace\_itm\_viewer.htm

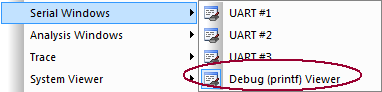
**效果图：**



**配置ITM仿真输出：**project->manage->Run-Time Environment



**打开Debuf(printf) Viewer窗口：**view -> Serial Windows – Debug(printf) Viewer



# 附录

## 关于RTOS

