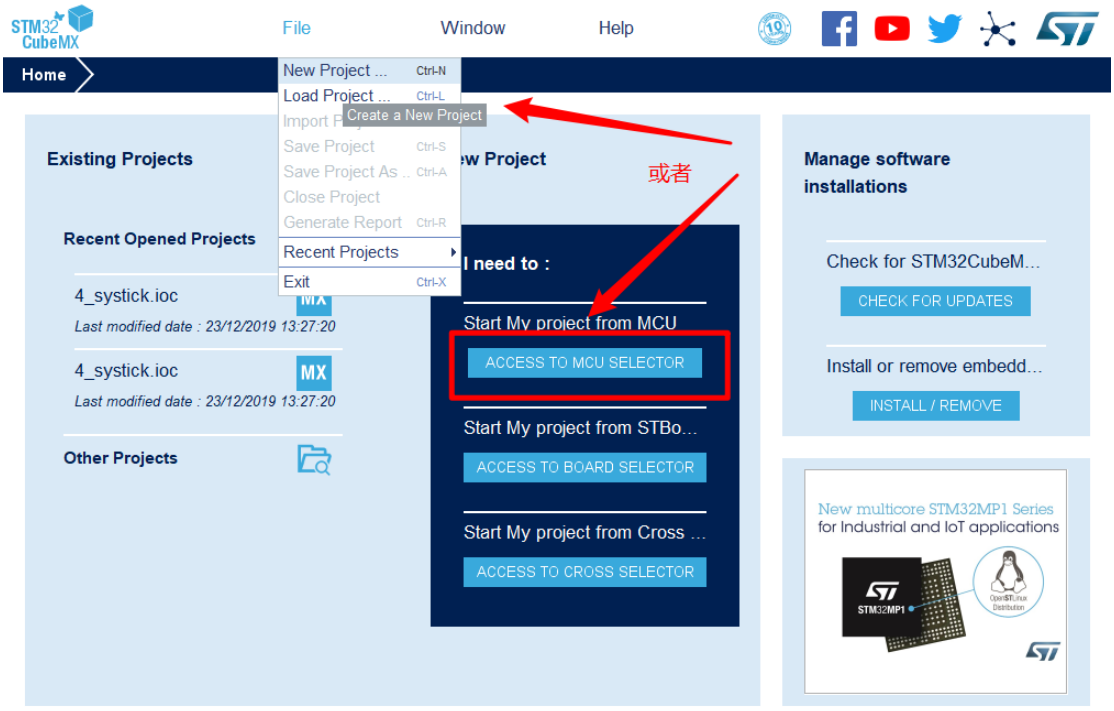
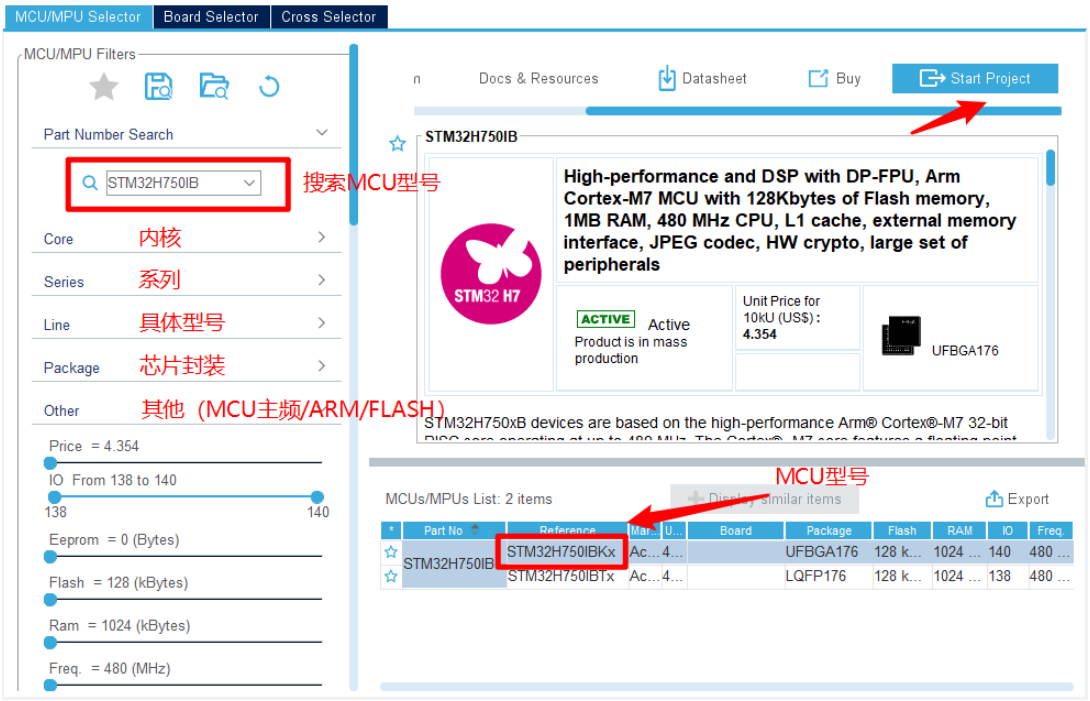
STM32CubeMX 教程三十——USB_MSC 实验

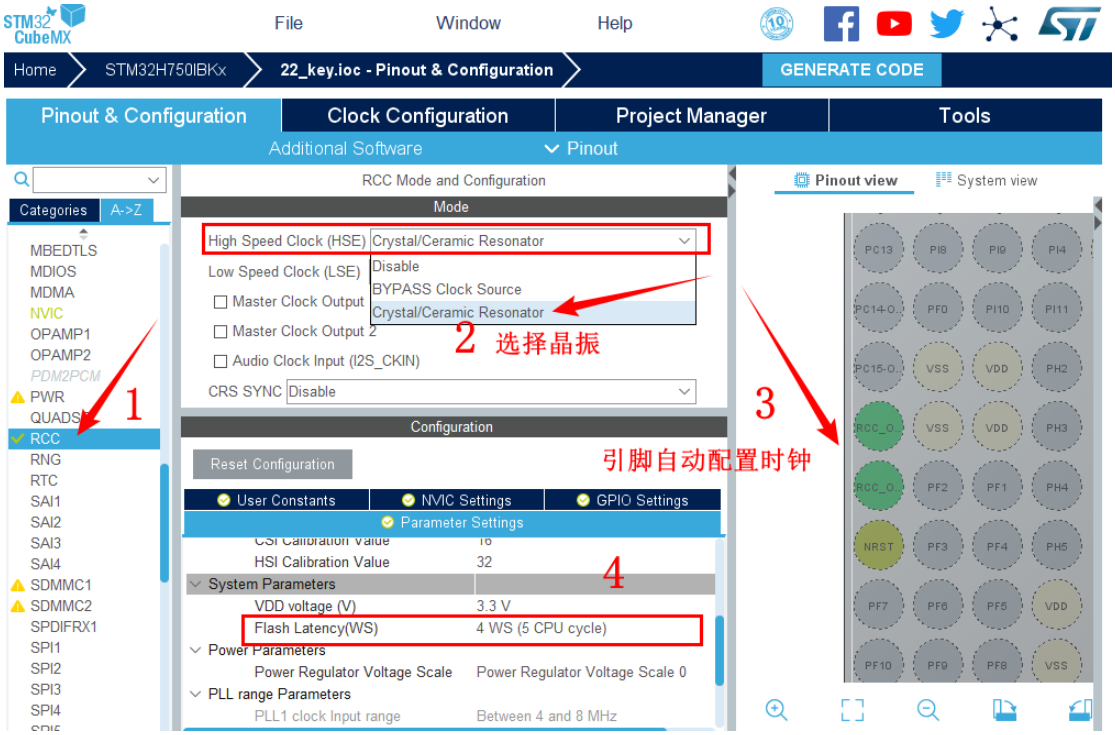
1. 在主界面选择 File-->New Project 或者直接点击 ACCEE TO MCU SELECTOR



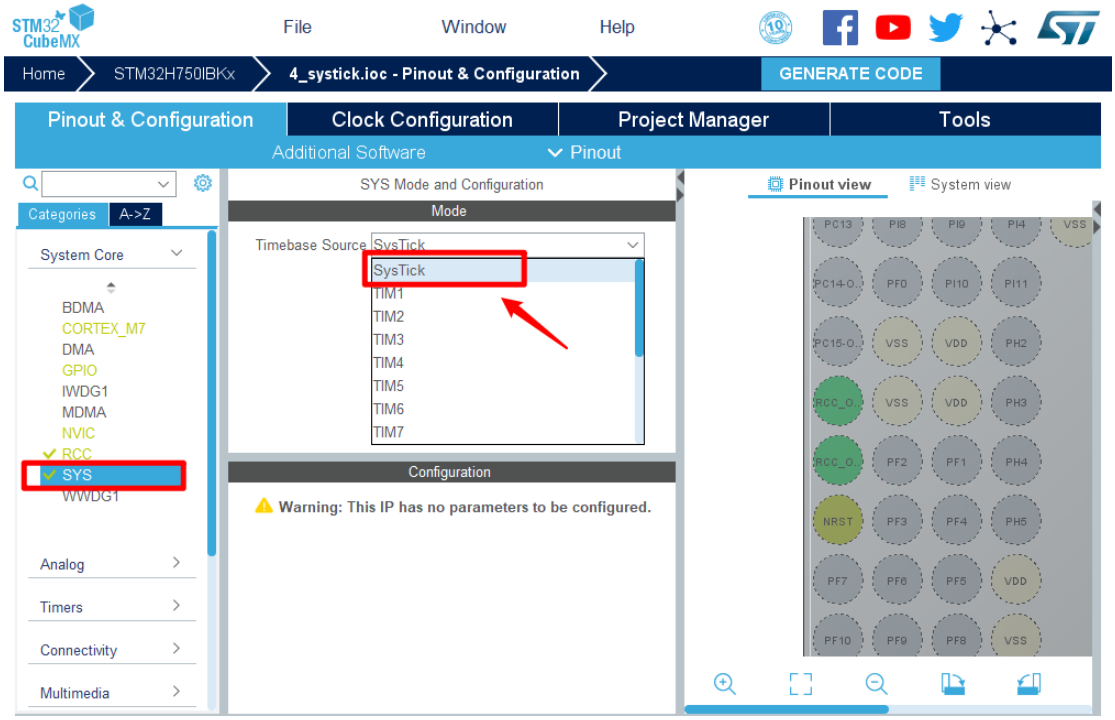
2. 出现芯片型号选择，搜索自己芯片的型号，双击型号，或者点击 Start Project 进入配置在搜索栏的下面，提供的各 种查找方式，可以选择芯片内核，型号，等等，可以帮助你查找芯片。本实验选取的芯片型号为：STM32H750IBKx。



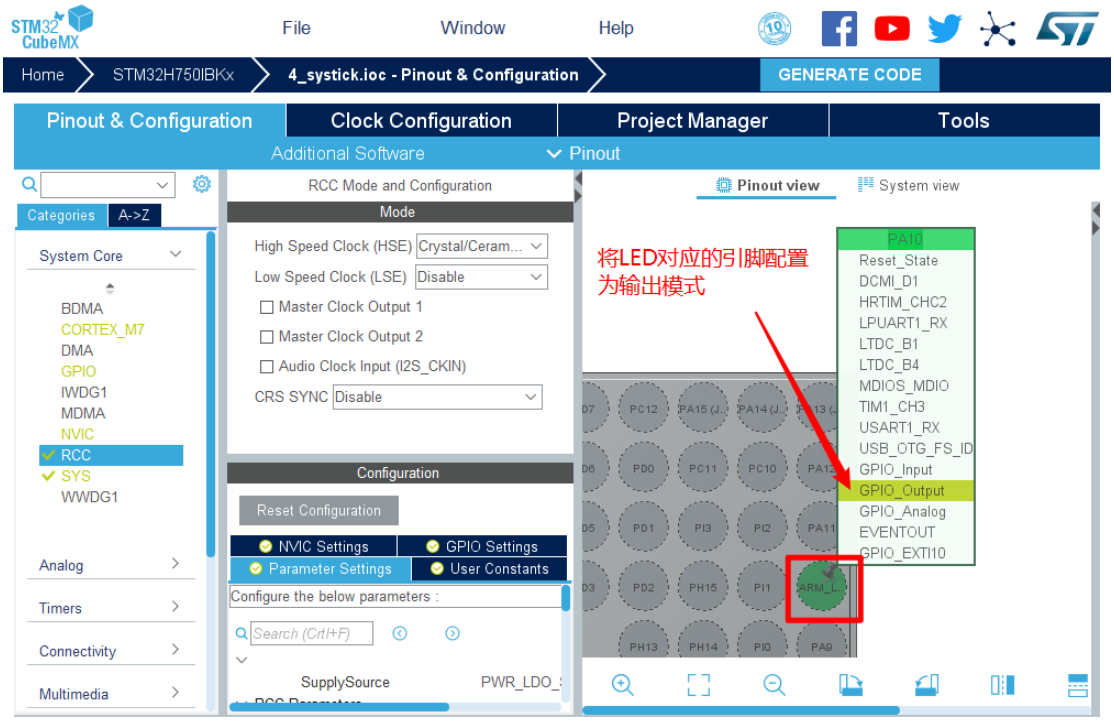
3. 配置 RCC，使用外部时钟源



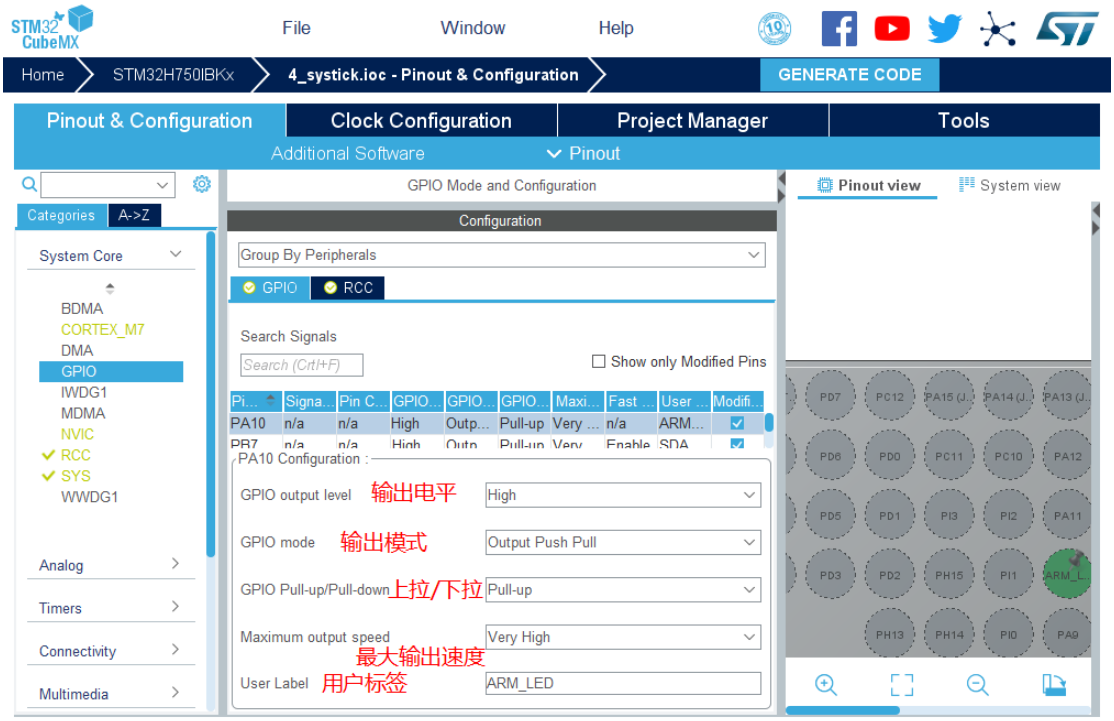
4. 时基源选择 SysTick

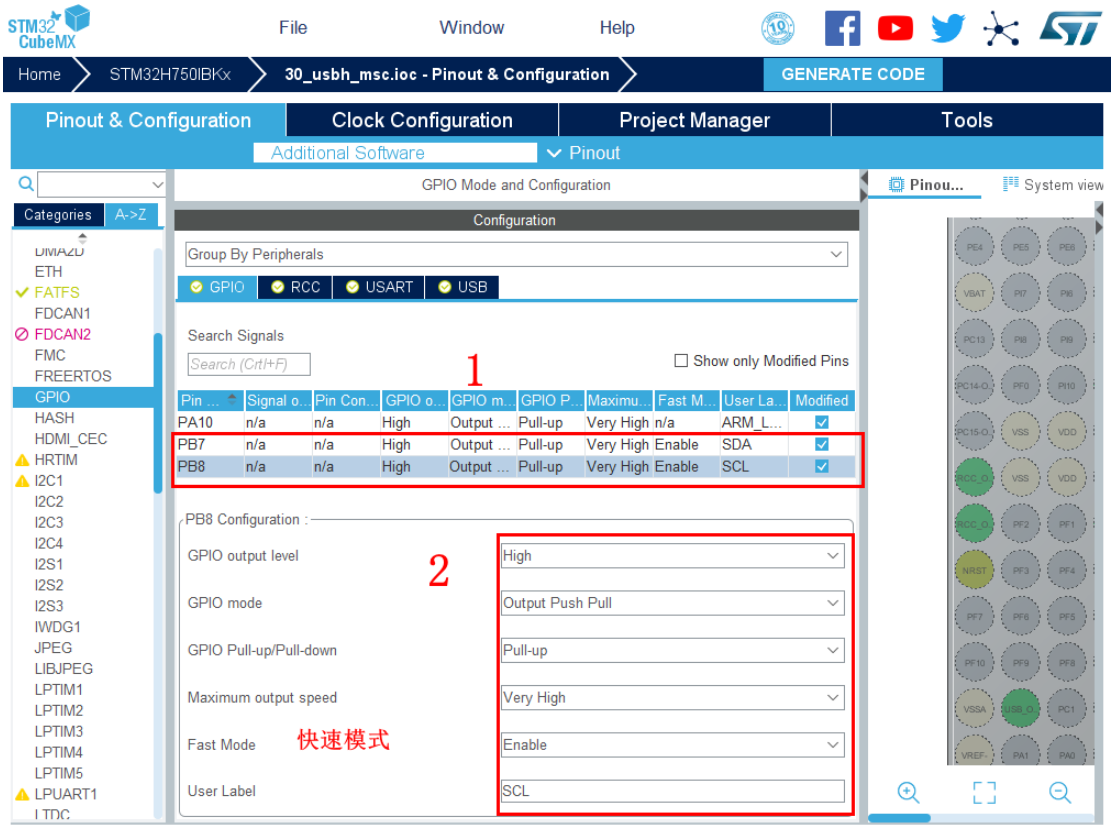


5. 将 PA10,PB7,PB8 设置为 GPIO_Output

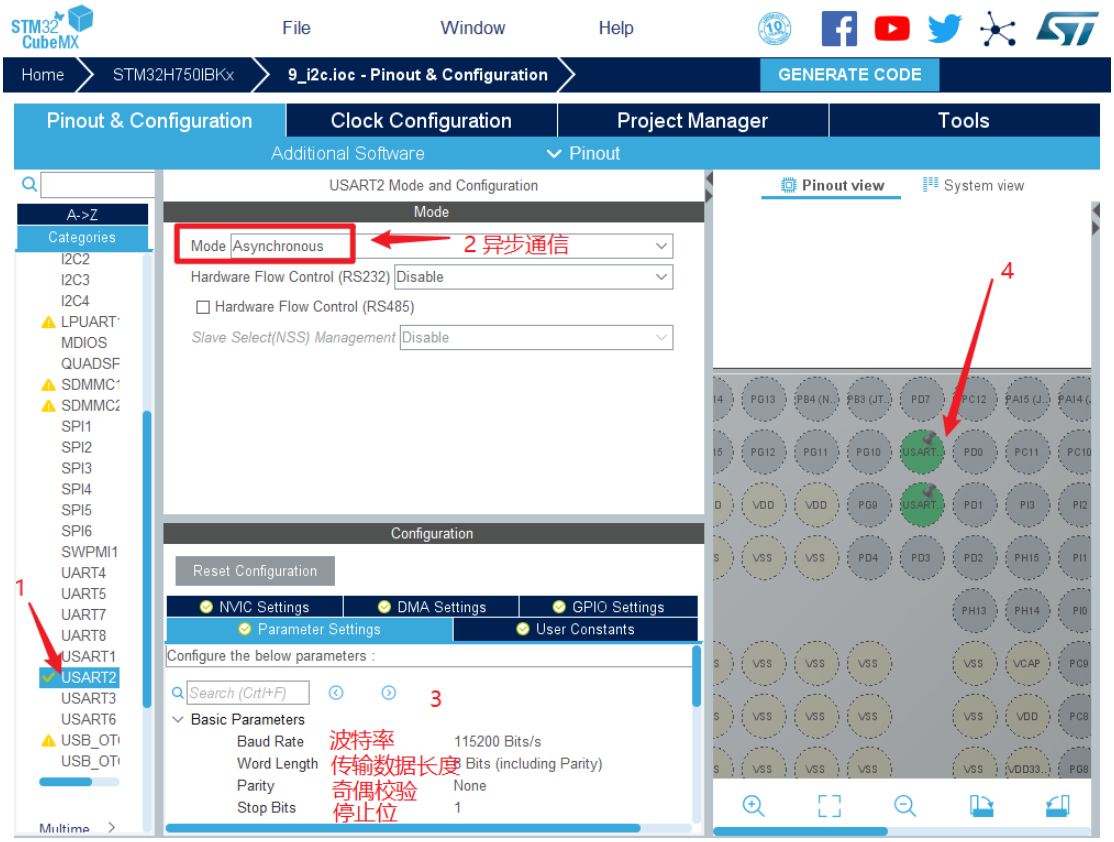

File
Window
Help
Home
STM32H750IBKx
4_systick.ioc - Pinout & Configuration
GENERATE CODE
Pinout & Configuration
Clock Configuration
Project Manager
Tools
Additional Software
Pinout
RCC Mode and Configuration
Mode
High Speed Clock (HSE)
Crystal/Ceram...
Low Speed Clock (LSE)
Disable
Master Clock Output 1
Master Clock Output 2
Audio Clock Input (I2S_CKIN)
CRS SYNC
Disable
Configuration
Reset Configuration
NVIC Settings
GPIO Settings
Parameter Settings
User Constants
Configure the below parameters :
Search (Crtl+F)
SupplySource
PWR_LDO_
Pinout view
System view
将LED对应的引脚配置为输出模式
PA10
Reset_State
DCMI_D1
HRTIM_CHC2
LPUART1_RX
LTDC_B1
LTDC_B4
MDIOS_MDIO
TIM1_CH3
USART1_RX
USB_OTG_FS_ID
GPIO_Input
GPIO_Output
GPIO_Analog
EVENTOUT
GPIO_EXTI10
Categories
A->Z
System Core
BDMA
CORTEX_M7
DMA
GPIO
IWDG1
MDMA
NVIC
RCC
SYS
WWDG1
Analog
Timers
Connectivity
Multimedia

6. 引脚模式配置

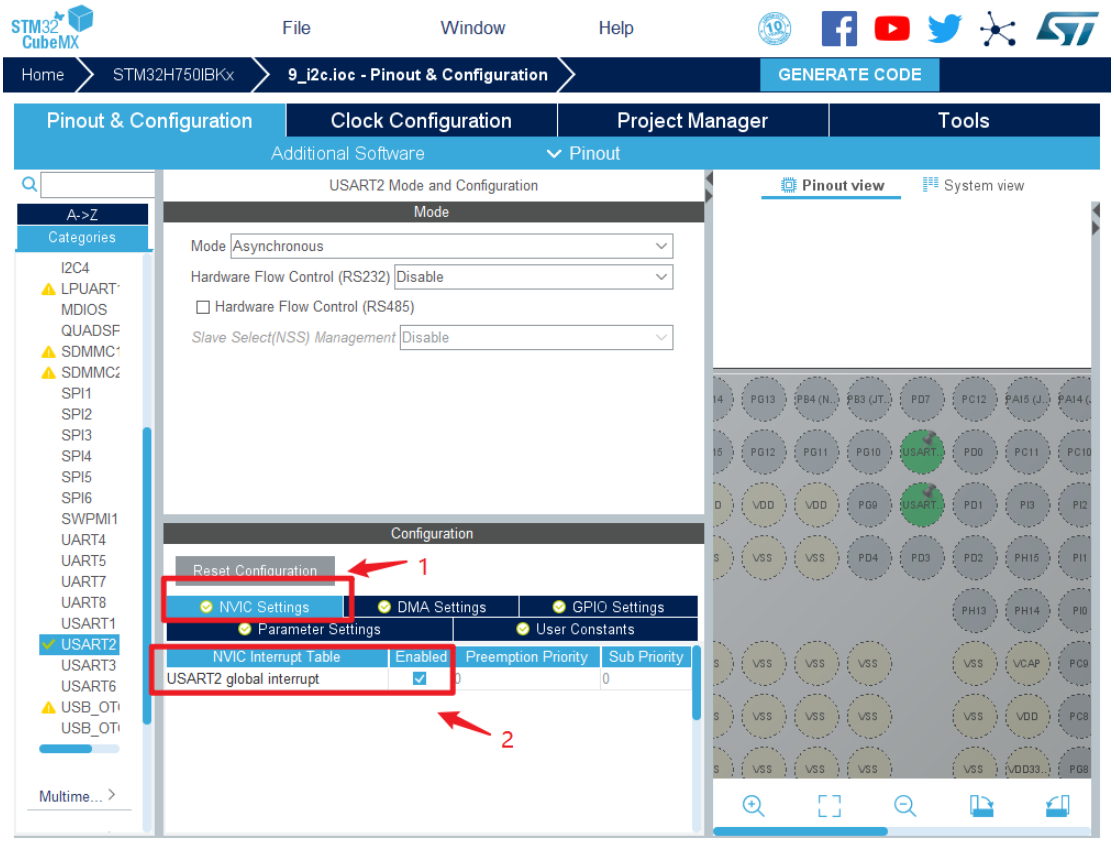

File
Window
Help
Home
STM32H750IBKx
4_systick.ioc - Pinout & Configuration
GENERATE CODE
Pinout & Configuration
Clock Configuration
Project Manager
Tools
Additional Software
Pinout
GPIO Mode and Configuration
Configuration
Group By Peripherals
GPIO
RCC
Search Signals
Search (Crtl+F)
Show only Modified Pins
PA10 Configuration :
GPIO output level
输出电平
High
GPIO mode
输出模式
Output Push Pull
GPIO Pull-up/Pull-down
上拉/下拉
Pull-up
Maximum output speed
最大输出速度
Very High
User Label
用户标签
ARM_LED
Pinout view
System view
Categories
A->Z
System Core
BDMA
CORTEX_M7
DMA
GPIO
IWDG1
MDMA
NVIC
RCC
SYS
WWDG1
Analog
Timers
Connectivity
Multimedia



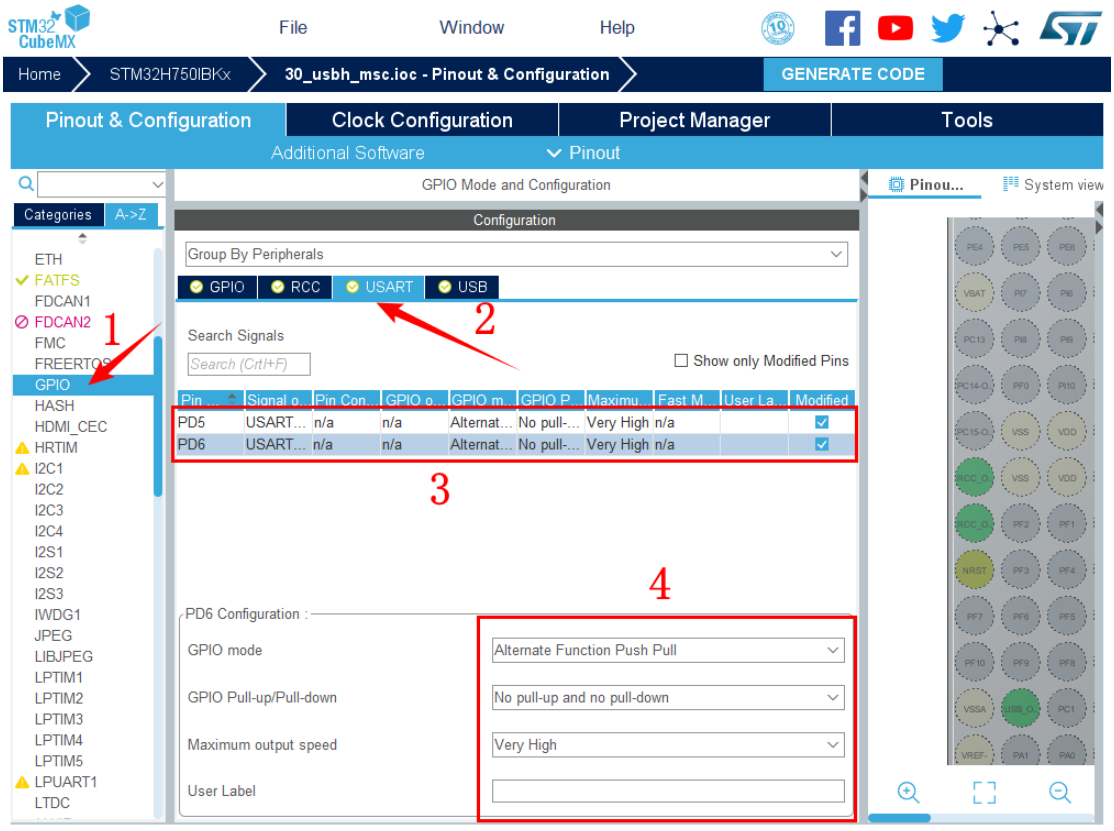
7. 配置串口



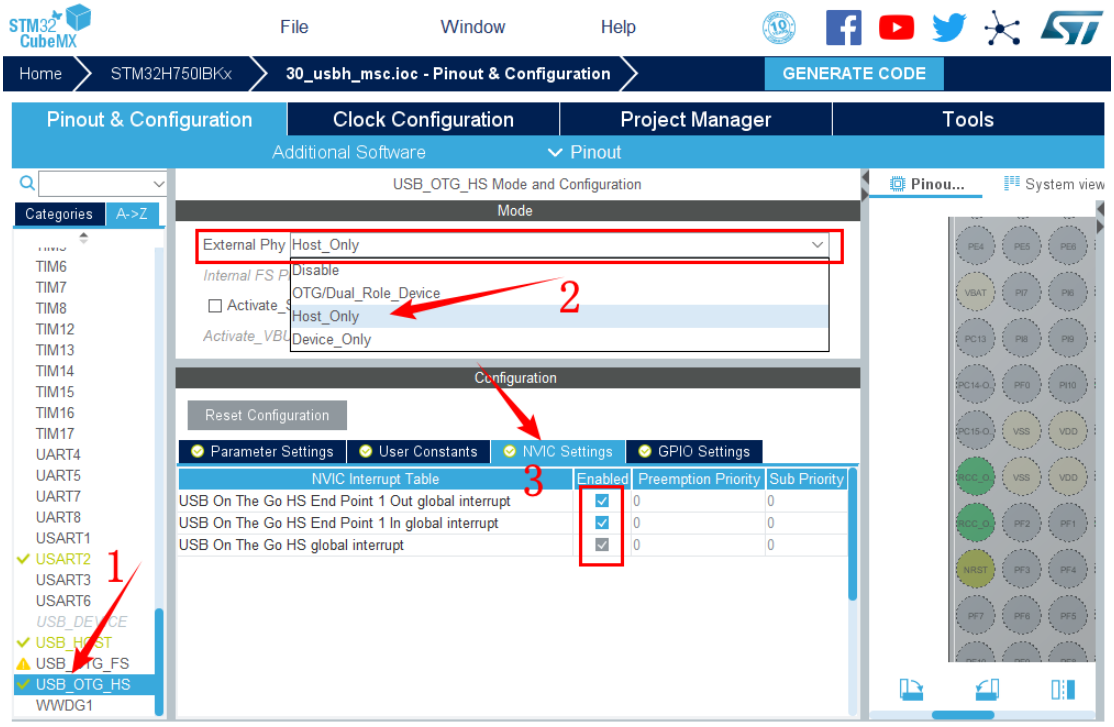
在 NVIC Settings 一栏使能接收中断



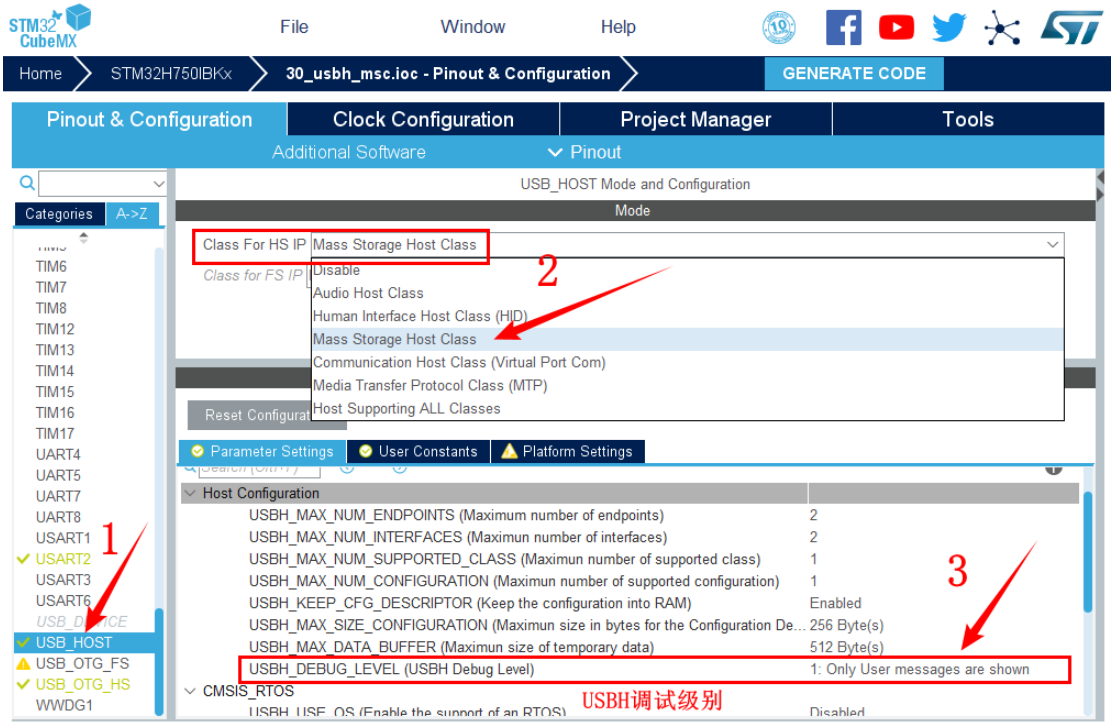
引脚配置



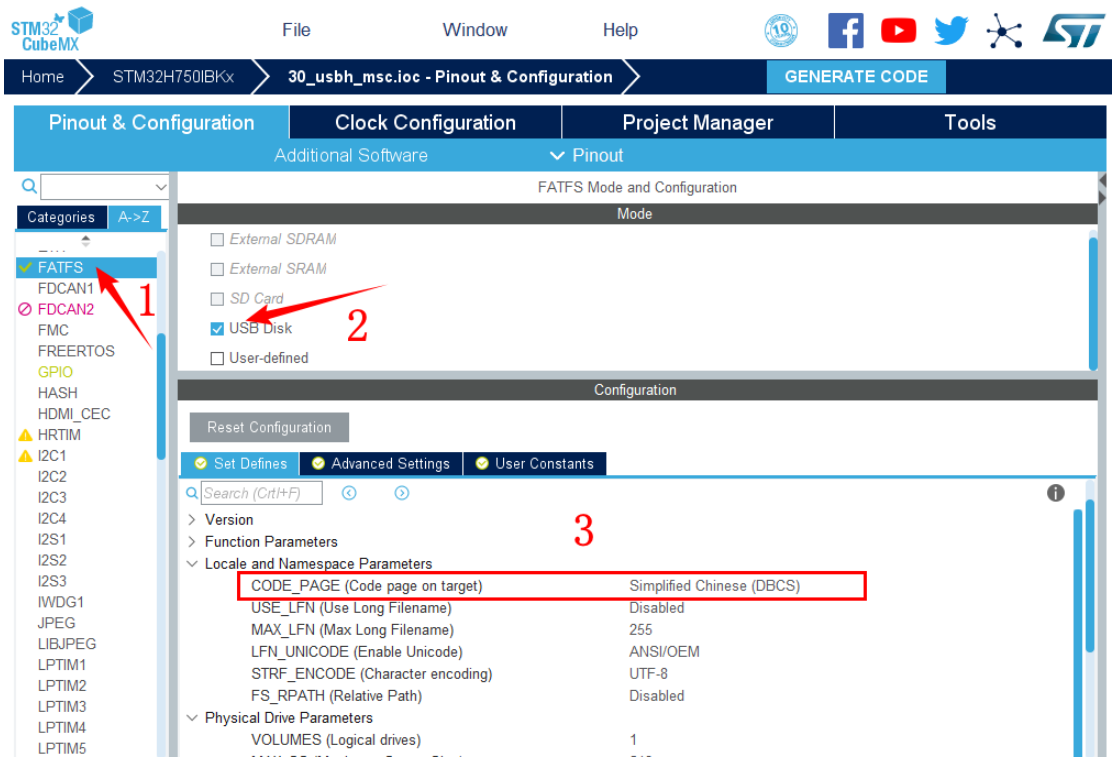
8. 配置 USB_OTG_HS



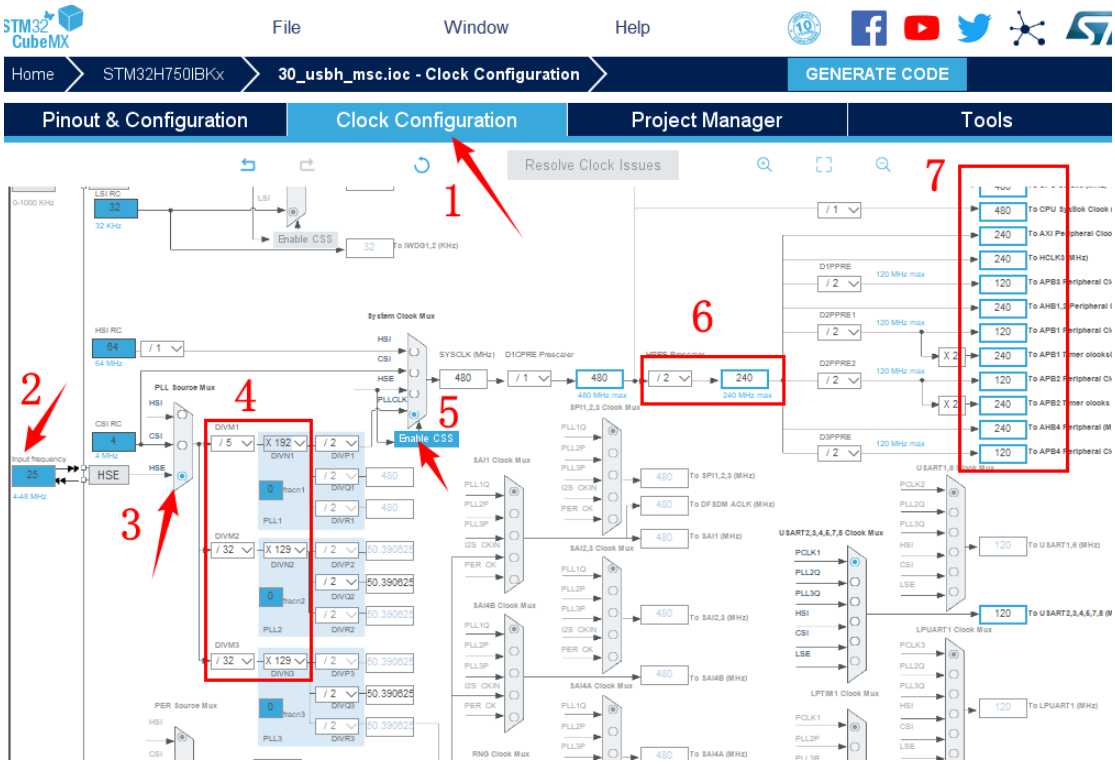
9. 配置 USB_HOST



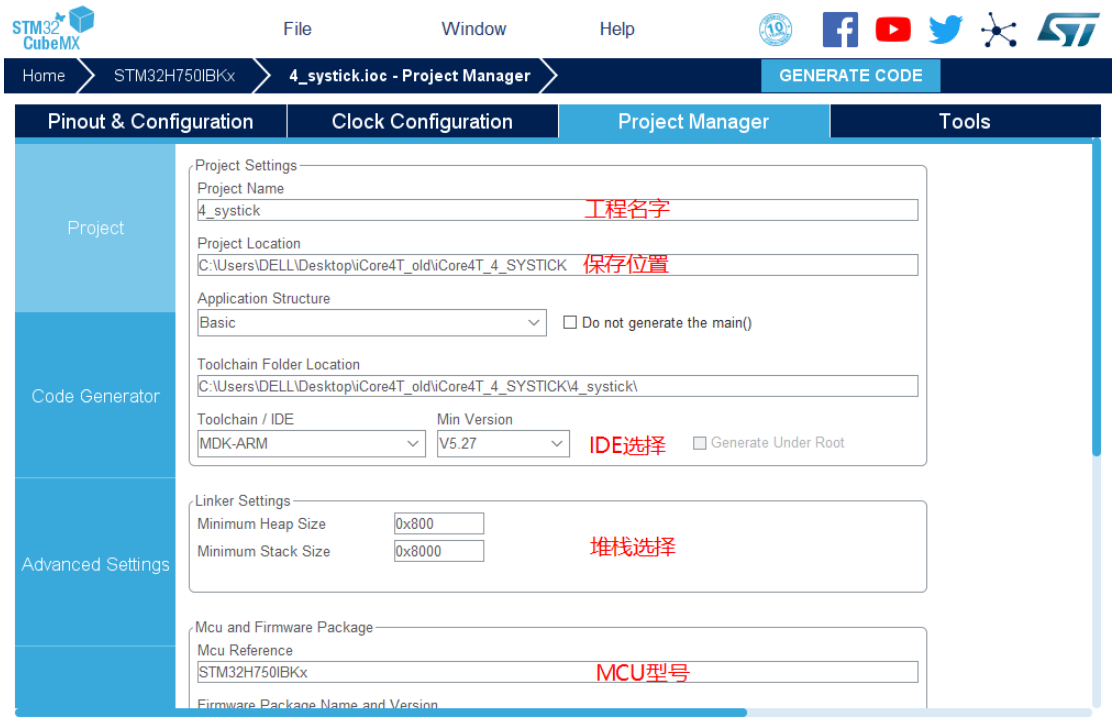
10. 配置 FATFS



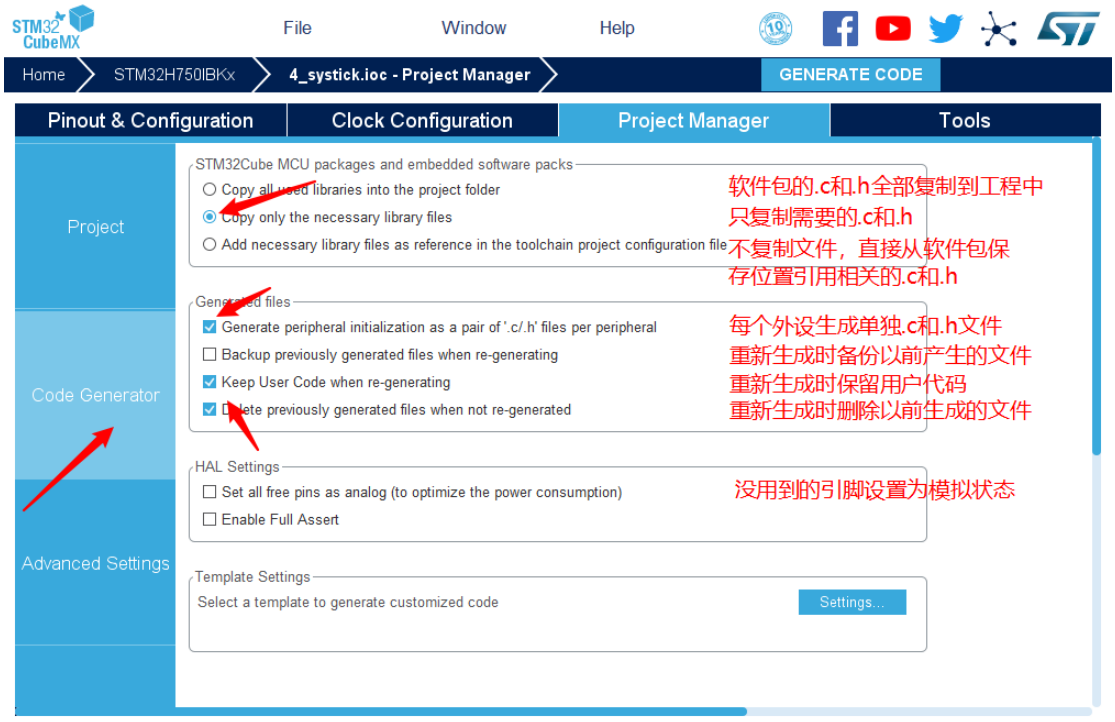
11. 时钟源设置，选择外部高速时钟源，配置为最大主频



12. 工程文件的设置，这里就是工程的各种配置 我们只用到有限几个，其他的默认即可 IDE 我们使用的是 MDK V5.27



13. 点击 Code Generator，进行进一步配置



● Copy all used libraries into the project folder

将 HAL 库的所有.C 和.H 都复制到所建工程中

优点：这样如果后续需要新增其他外设又可能不再用 STM32CubeMX 的时候便会很方便

缺点：体积大，编译时间很长

● Copy only the necessary library files

只复制所需要的.C 和.H（推荐）

优点：体积相对小，编译时间短，并且工程可复制拷贝

缺点：新增外设时需要重新用 STM32CubeMX 导入

● Add necessary library files as reference in the toolchain project configuration file

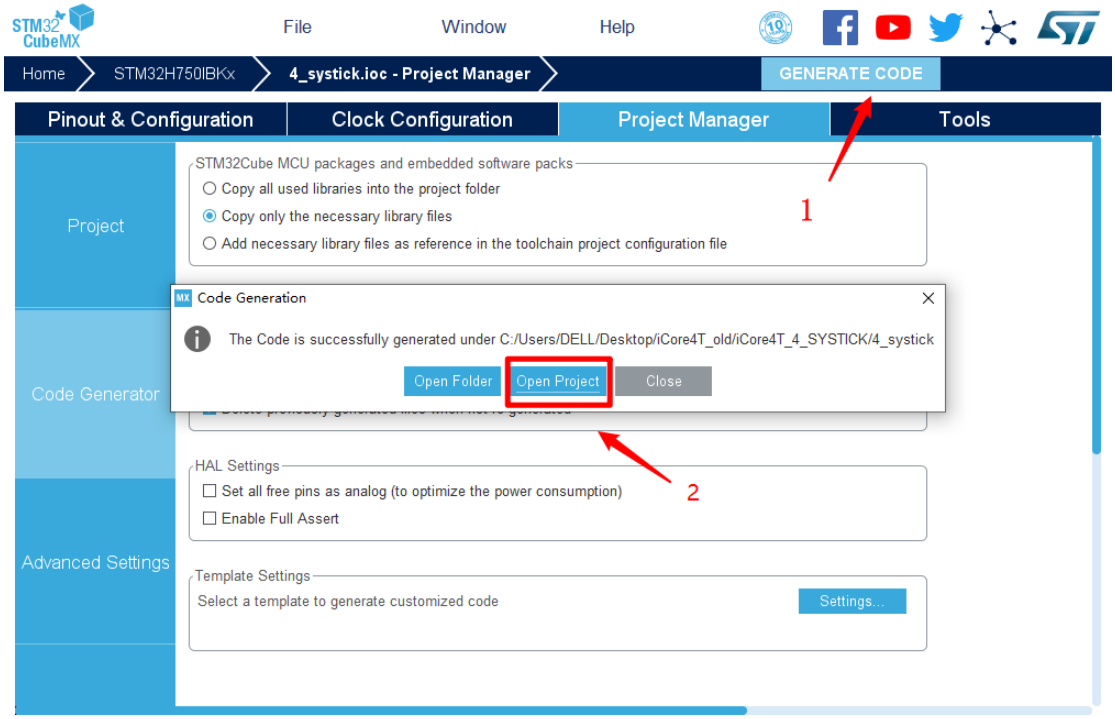
不复制文件，直接从软件包存放位置导入.C 和.H

优点：体积小，比较节约硬盘空间

缺点：复制到其他电脑上或者软件包位置改变，就需要修改相对应的路径

自行选择方式即可

14. 然后点击 GENERATE CODE 创建工程



创建成功，打开工程。