Embedded Systems Design

IPC in FreeRTOS part 1: Queues

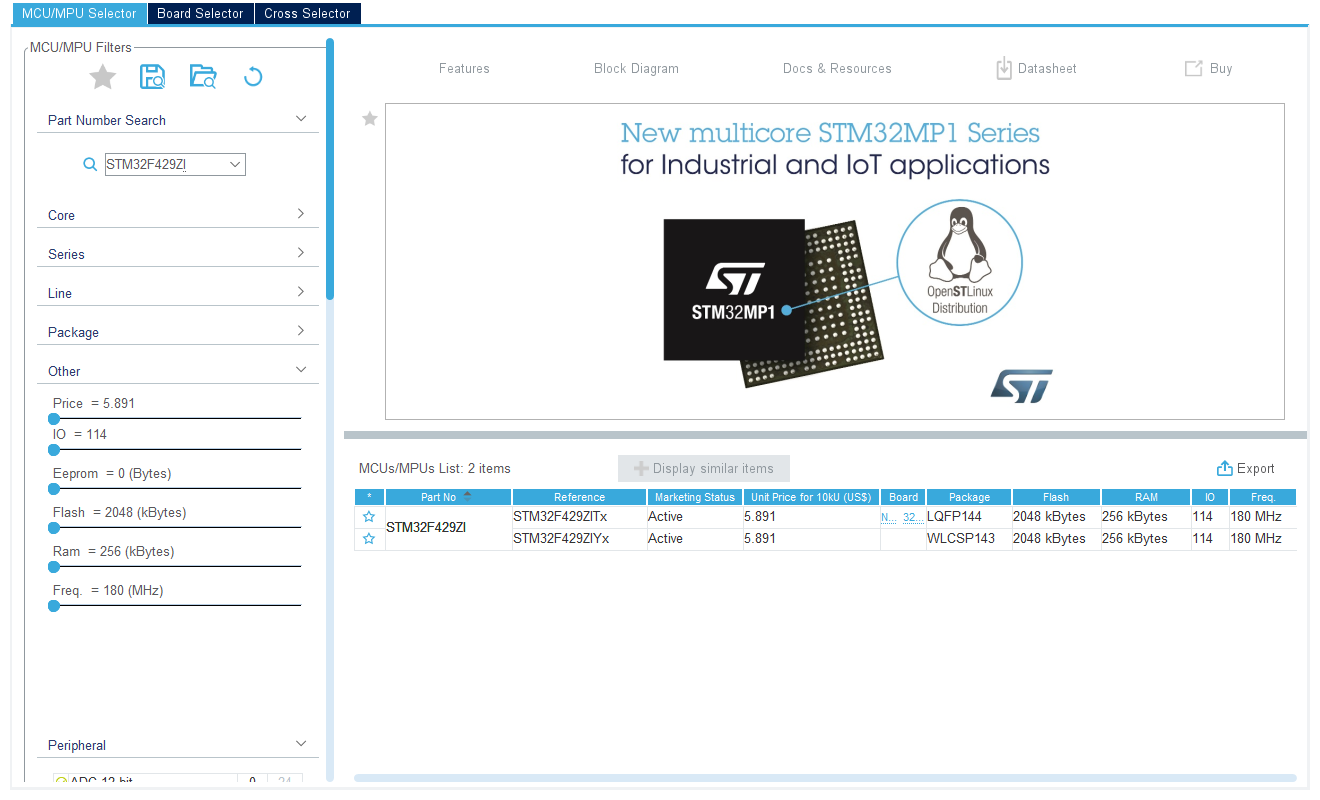
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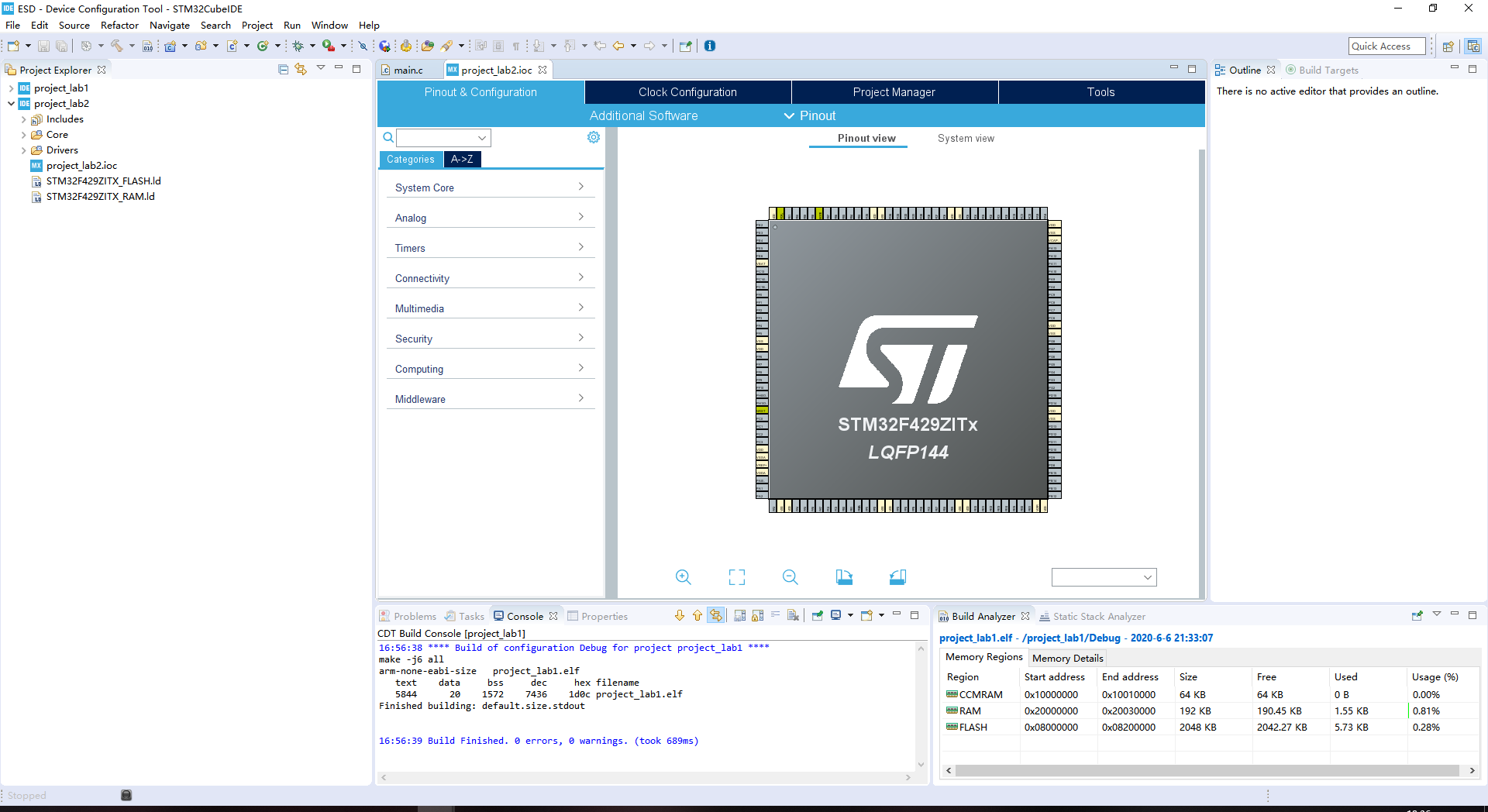
Date: 2020-7-8

1. The creation of project

I search the STM32F429 and choose the first whose package is LQFP144.

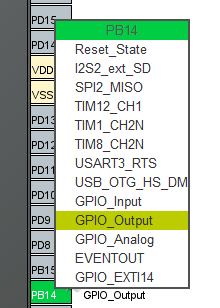


After the set up, I can see the following picture.



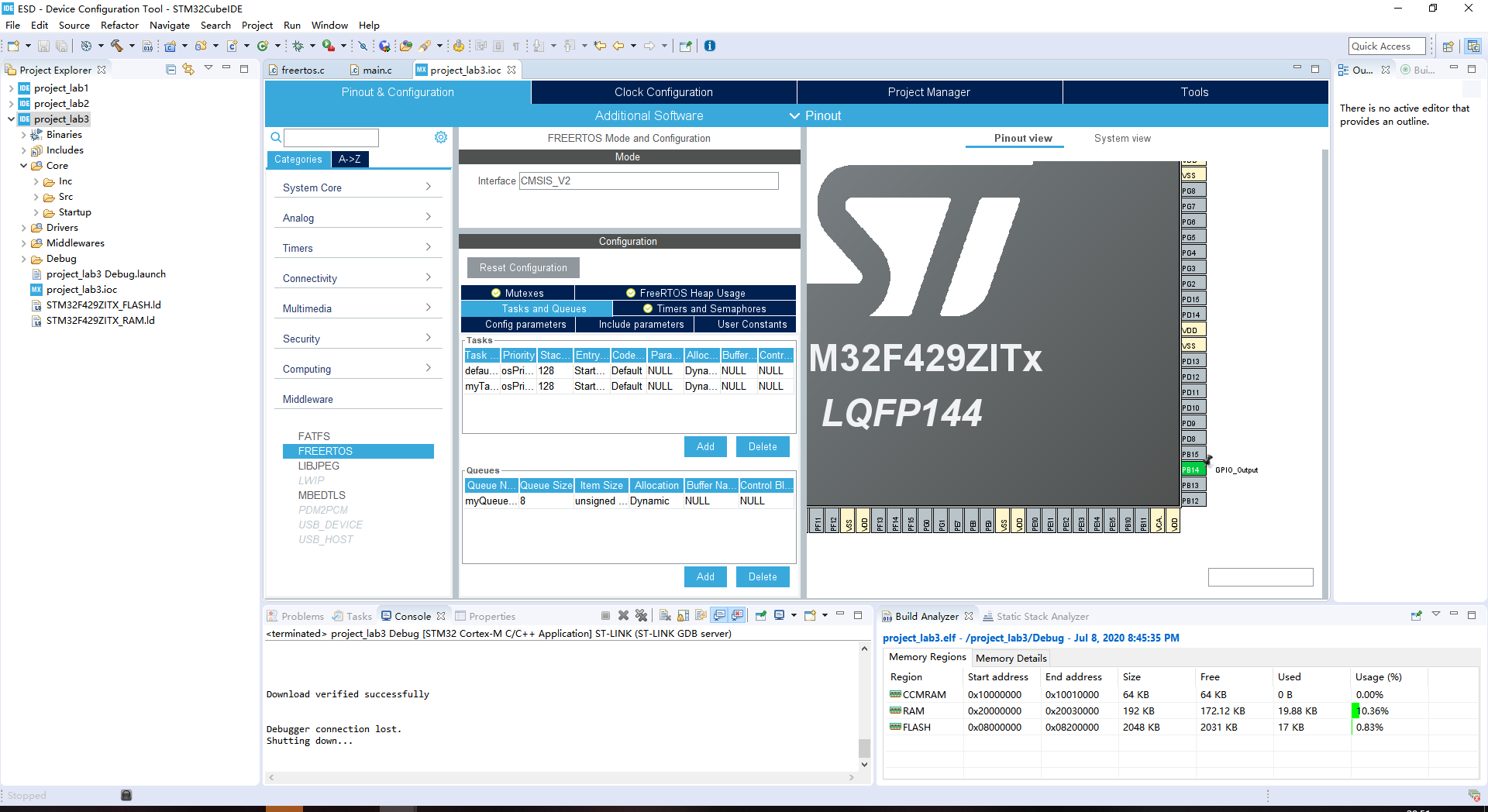
1. Set

I set the PB14 to GPIO\_OUTPUT and save it.



1. Set FreeRTOS

Then I clink Middleware->FREERTOS, and select the Interface to CMSIS\_V2.Then I add a task and a queue.After that, I press ALT+K to generate code.



1. Task and Queue

I write some codes in main.c and click build all.Then I click run and I can see the red LED twinkle as I want.

xQueue = xQueueCreate(8, sizeof(unsigned int)); means create a queue to communicate.

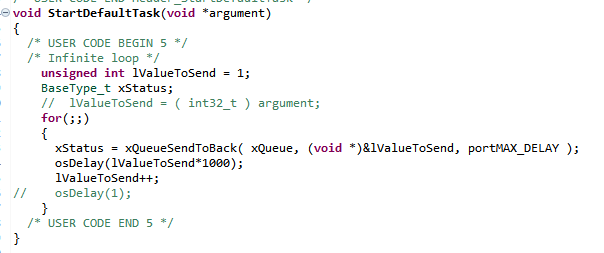
xStatus = xQueueSendToBack( xQueue, (void \*)&lValueToSend, portMAX\_DELAY ); means send the lValueToSend to xQueue.

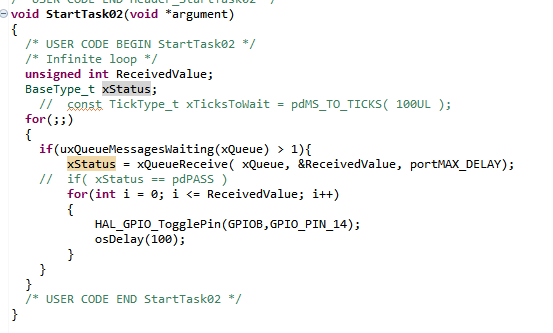
xStatus = xQueueReceive( xQueue, &ReceivedValue, portMAX\_DELAY); means receive the information from xQueue.

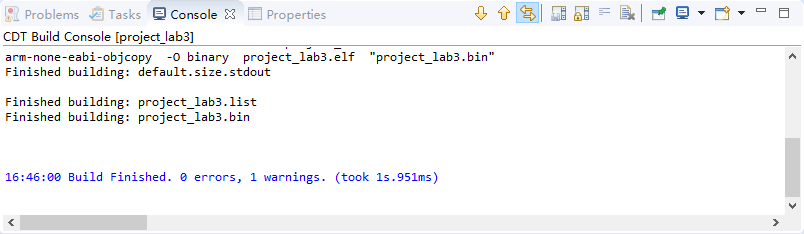
HAl\_GPIO\_TogglePin(GPIOB,GPIO\_PIN\_14) means flip level.











**My github address is https://github.com/sunwei96/ESD\_SunWei\_192050207.git**