Description for Keypad Project

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The program is driven by touching the screen and the procedure of the program is as follows:

1.The LCD screen is touched and the interrupt handler send a binary semaphore to the queue.
2.The LCD control function is stuck until the semaphore is received from the queue.
3.The pressed button number is decided by the coordinates got from the screen.
4.In my implementation, the pressure is not used since the using of printf() and continue using getTouch() causes some task schedule problem. I use getTouch() once in a loop and vTaskDelay for a period of time to avoid getting to much same input in a short period.
5.The point(1,320) is always pushed automatically which leads to interrupt handler continue sending the message. So a judgment of xPos is essential. Only if the xPos is not 1, the pressing is valid.

The printf crash the program down and here I want to conclude some possible reasons:

1.The Task schedule module of FREERTOS define the priority of IO or other relevant interrupt resource higher than EXTINT3.

2. The compiler compile the code and doesn't treat xQueueReceive() as a procedure which stuck the program and should be located before the execution of printf().