

# CC32xx FreeRTOS Application

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## Overview

FreeRTOS is an opensource RealTime Operating system. Its implements only a very minimalist set of functions: very basic handle of tasks and memory management, and nothing is provided for network communication, drivers for external hardware, or access to a filesystem. However, among its features are the following characteristics:

1. Preemptive tasks
2. Small footprint
3. Written in C and compiled with various C compiler
4. Unlimited number of tasks can run at the same time
5. Implements queues, binary and counting semaphores and mutexes.
6. Inter Task communication is accomplished using queues.

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## Application details

The objective of this application is to showcasing the FreeRTOS feature like Multiple task creation, Inter task communication using queues. Two tasks and one queue is created. one of the task sends a constant message into the queue and the other task receives the same from the queue. after receiving every message, it displays that message over UART.

## Source Files briefly explained

- **main** - Main file that showcases the two tasks communicating with each other using a queue.
- **pinmux** - Pinmux configurations as required by the application.
- **uart\_if** - To display status information over the UART.

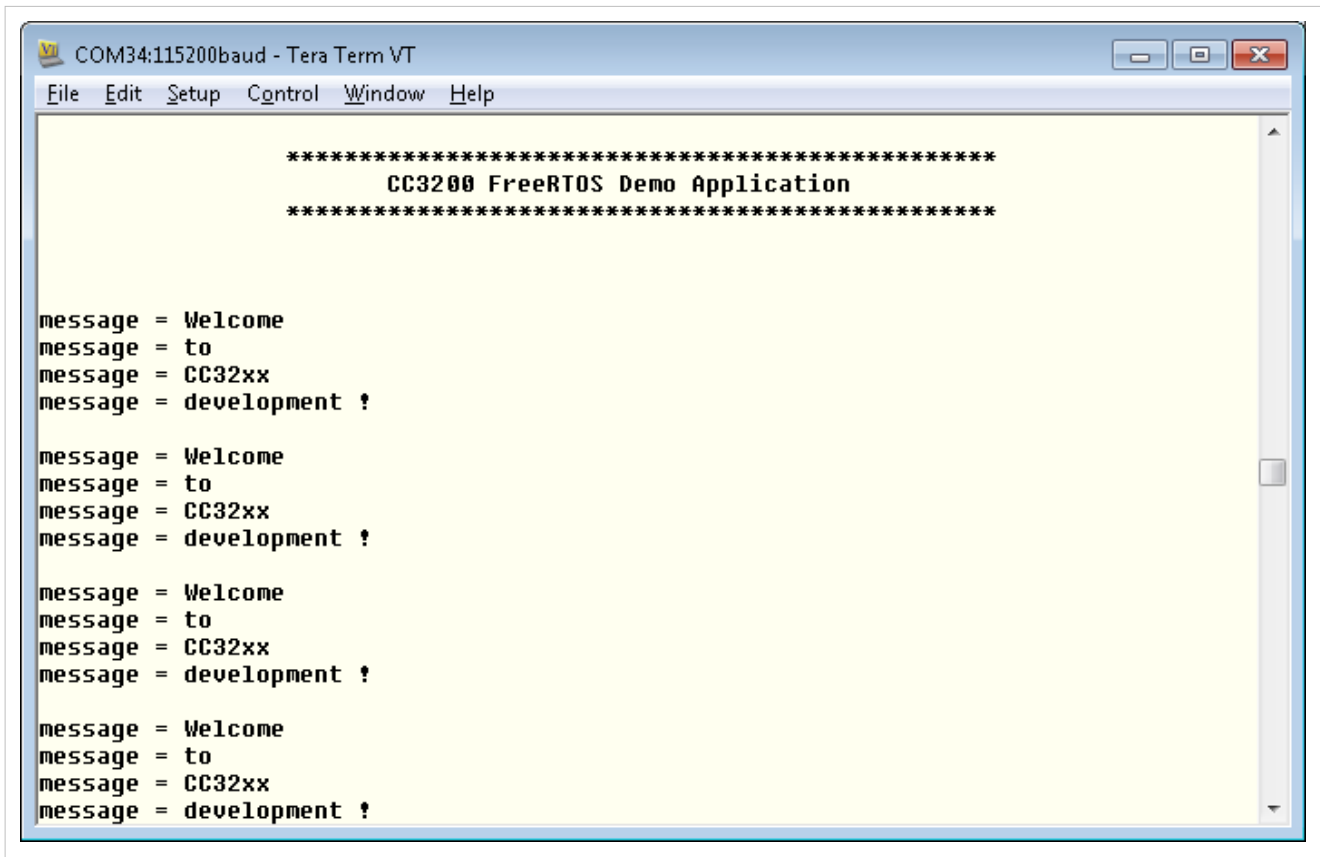
## Usage

- Setup a serial communication application (HyperTerminal/TeraTerm). For detail info visit Terminal setup

On the host PC. The settings are:

- **Port:** Enumerated COM port
- **Baud rate:** 115200
- **Data:** 8 bit
- **Parity:** None
- **Stop:** 1 bit
- **Flow control:** None
- Run the reference application (Flashing the bin/IAR/CCS).
- Observe the status messages displayed by second task on the host over COM port.

Snapshot of terminal when application runs on device:



```
COM34:115200baud - Tera Term VT
File Edit Setup Control Window Help

*****
CC3200 FreeRTOS Demo Application
*****

message = Welcome
message = to
message = CC32xx
message = development !

message = Welcome
message = to
message = CC32xx
message = development !

message = Welcome
message = to
message = CC32xx
message = development !

message = Welcome
message = to
message = CC32xx
message = development !
```

## Limitations/Known Issues

None.

# Article Sources and Contributors

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