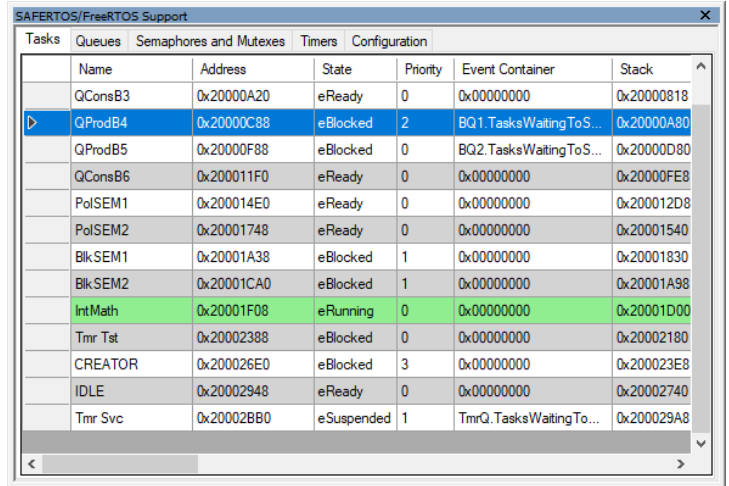


# UDE FreeRTOS™ Support

## Debugging of Real-Time Critical Applications

The **Universal Debug Engine® (UDE)** is a powerful development platform for debugging, testing and system analysis of microcontroller software applications. With an additional add-on, UDE provides extended functions for software development of real-time critical applications, which are under control of the **FreeRTOS™** real-time operating system.

- FreeRTOS™ support is provided as UDE Add-On and extends a UDE basic debugger license
- FreeRTOS Add-On consists of the FreeRTOS Support Window that provides a comprehensive and detailed view to information about FreeRTOS™ resources and objects
- The shown information is directly collected from the target system
- No separate description file or similar is needed
- Available information depends on particular FreeRTOS™ configuration. Configuration is determined at compile time and does not change during run-time.



Tasks	Queues	Semaphores and Mutexes	Timers	Configuration	
Name	Address	State	Priority	Event Container	Stack
QConsB3	0x2000A20	eReady	0	0x0000000	0x20000818
QProdB4	0x2000C88	eBlocked	2	BQ1.TasksWaitingToS...	0x20000A80
QProdB5	0x2000F88	eBlocked	0	BQ2.TasksWaitingToS...	0x20000D80
QConsB6	0x20001F0	eReady	0	0x0000000	0x20000FE8
PolSEM1	0x200014E0	eReady	0	0x0000000	0x200012D8
PolSEM2	0x20001748	eReady	0	0x0000000	0x20001540
BlkSEM1	0x20001A38	eBlocked	1	0x0000000	0x20001830
BlkSEM2	0x20001CA0	eBlocked	1	0x0000000	0x20001A98
IntMath	0x20001F08	eRunning	0	0x0000000	0x20001D00
Tmr Tst	0x20002388	eBlocked	0	0x0000000	0x20002180
CREATOR	0x200026E0	eBlocked	3	0x0000000	0x200023E8
IDLE	0x20002948	eReady	0	0x0000000	0x20002740
Tmr Svc	0x20002BB0	eSuspended	1	TmrQ.TasksWaitingTo...	0x200029A8

The information that is shown in UDE's FreeRTOS Support Window is updated as soon as the target microcontroller enters the HALT state (e.g. at a breakpoint).

### Available Information for Resources and Objects

#### Tasks

Number/ID, name, address, state, stack information and utilization, priority, events, mutexes, error code, etc.

#### Queues

Number/ID, name, address, content, blocked tasks and reason for blocking, storage information, number of items added or removed, etc.

#### Semaphores and Mutexes

Number/ID, name, address, type, task that holds the mutex, semaphore count, blocked tasks, etc.

#### Timers

ID, name and address, timer period, call back, state, etc.

#### Configuration

Current FreeRTOS™ configuration, which was set for the FreeRTOS™ build.

## Licensing

An additional license (UDE FreeRTOS) is required to use the FreeRTOS support add-on within a UDE base license.

## About FreeRTOS™

FreeRTOS™ is an open source real-time operating system kernel available for a large number of microcontroller platforms and small devices. The design follows the principle to be small and simple.

### If you have any questions about our products, please feel free to contact us:

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