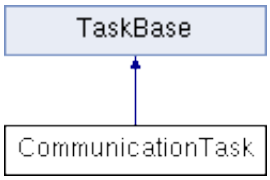
CommunicationTask Class Reference

Implements a task to communicate with serial devices. More...

Inheritance diagram for CommunicationTask:



Public Member Functions

CommunicationTask (const char *a_name, unsigned portBASE_TYPE a_priority, size_t a_stack_size, **emstream** *p_ser_dev)
Construct a Communication task. More...

void **run** (void)
The run method of the Communication task that is repeatedly called by the RTOS scheduler. More...

▸ **Public Member Functions inherited from TaskBase**

Additional Inherited Members

▸ **Static Public Member Functions inherited from TaskBase**

▸ **Protected Member Functions inherited from TaskBase**

▸ **Protected Attributes inherited from TaskBase**

Detailed Description

Implements a task to communicate with serial devices.

This class is an extension of `TaskBase`. The purpose of the class is to handle STM32 hardware and communicate with external serial devices.

Constructor & Destructor Documentation

◆ CommunicationTask()

```
CommunicationTask::CommunicationTask ( const char *              a_name,
                                       unsigned portBASE_TYPE    a_priority,
                                       size_t                    a_stack_size,
                                       emstream *                p_ser_dev
                                     )
```

Construct a Communication task.

Constructor which creates and initializes a Communication task object.

This constructor sets up the task name, priority, stack size, and serial stream.

Parameters

a_name	A character string which will be the name of this task
a_priority	The priority at which this task will initially run (default: 0)
a_stack_size	The size of this task's stack in bytes (default: `configMINIMAL_STACK_SIZE`)
p_ser_dev	Pointer to a serial device (port, radio, SD card, etc.) which can be used by this task to communicate (default: NULL)

This constructor creates a FreeRTOS task with the given task run function, name, priority, and stack size. Its purpose is to talk to external serial devices and interface with the STM32 hardware.

Parameters

a_name	A character string which will be the name of this task
a_priority	The priority at which this task will initially run (default: 0)
a_stack_size	The size of this task's stack in bytes (default: `configMINIMAL_STACK_SIZE`)
p_ser_dev	Pointer to a serial device (port, radio, SD card, etc.) which can be used by this task to communicate (default: NULL)

Member Function Documentation

◆ run()

void CommunicationTask::run (void) virtual

The run method of the Communication task that is repeatedly called by the RTOS scheduler.

The `run()` function for the Communication task.

This method is called by the RTOS scheduler. The function sets the PWM duty cycle to the correct hardware pin, reads the ADC, reads the SPI serial bus (encoder) and prints the state variables to the external serial device over USART.

Implements **TaskBase**.

The documentation for this class was generated from the following file:

- DoxygenFiles/**main.cpp**