

# File List

Here is a list of all documented files with brief descriptions:

[detail level 1 2]

## ▼ DoxygenFiles

<b>BallPositionTask.h</b>	Determines the ball position and velocity
<b>baseshare.h</b>	Source code of a base class for type-safe, thread-safe task data exchange classes
<b>ControllerTask.h</b>	Implements a state space control algorithm
<b>emstream.cpp</b>	Source code for a base class that imitates C++ I/O streams on serial devices
<b>emstream.h</b>	Headers for a base class that imitates C++ I/O streams on serial devices
<b>emstream_bool.cpp</b>	
<b>emstream_float.cpp</b>	
<b>emstream_int16_t.cpp</b>	
<b>emstream_int32_t.cpp</b>	
<b>emstream_int64_t.cpp</b>	
<b>emstream_int8_t.cpp</b>	
<b>emstream_pointer.cpp</b>	
<b>emstream_roman.cpp</b>	
<b>emstream_uint16_t.cpp</b>	
<b>emstream_uint32_t.cpp</b>	
<b>emstream_uint64_t.cpp</b>	
<b>emstream_uint8_t.cpp</b>	
<b>EncoderTask.h</b>	Determines the beam angular position and velocity
<b>FreeRTOSConfig.h</b>	
<b>hacks.cpp</b>	Source code for extras to make the GCC compiler work on our microcontrollers
<b>hacks.h</b>	Header for extras to make the GCC compiler work on our microcontrollers
<b>I6206.c</b>	L6206 driver (dual full bridge driver)
<b>I6206.h</b>	Header for L6206 driver (dual full bridge driver)
<b>I6206_target_config.h</b>	Predefines values for the L6206 parameters and for the devices parameters
<b>LimitSwitchTask.h</b>	Determines the safety condition of the system
<b>main.cpp</b>	: Main program body
<b>main.h</b>	: Header for main.c file. This file contains the common defines of the application
<b>motor.h</b>	This file contains all the functions prototypes for motor drivers

<b>MotorDriveTask.h</b>	Sends the correct signal to the motor driver to control the Brushed DC motor
<b>share.h</b>	
<b>stm32l4xx_hal_conf.h</b>	HAL configuration file
<b>stm32l4xx_it.c</b>	Interrupt Service Routines
<b>stm32l4xx_it.h</b>	This file contains the headers of the interrupt handlers
<b>system_stm32l4xx.c</b>	CMSIS Cortex-M4 Device Peripheral Access Layer System Source File
<b>taskbase.cpp</b>	Source code for a class which implements tasks for task and state based programs
<b>taskbase.h</b>	Headers for a class which implements tasks for task and state based programs
<b>taskbase_stackprt.cpp</b>	
<b>taskbase_status.cpp</b>	
<b>taskqueue.h</b>	
<b>taskshare.h</b>	Type-safe data which can be shared between tasks in a thread-safe manner
<b>textqueue.cpp</b>	
<b>textqueue.h</b>	
<b>UserInputTask.h</b>	Determines the set-point for the ball on the beam