

Detailed Design of DC MOTOR Driver

Team X

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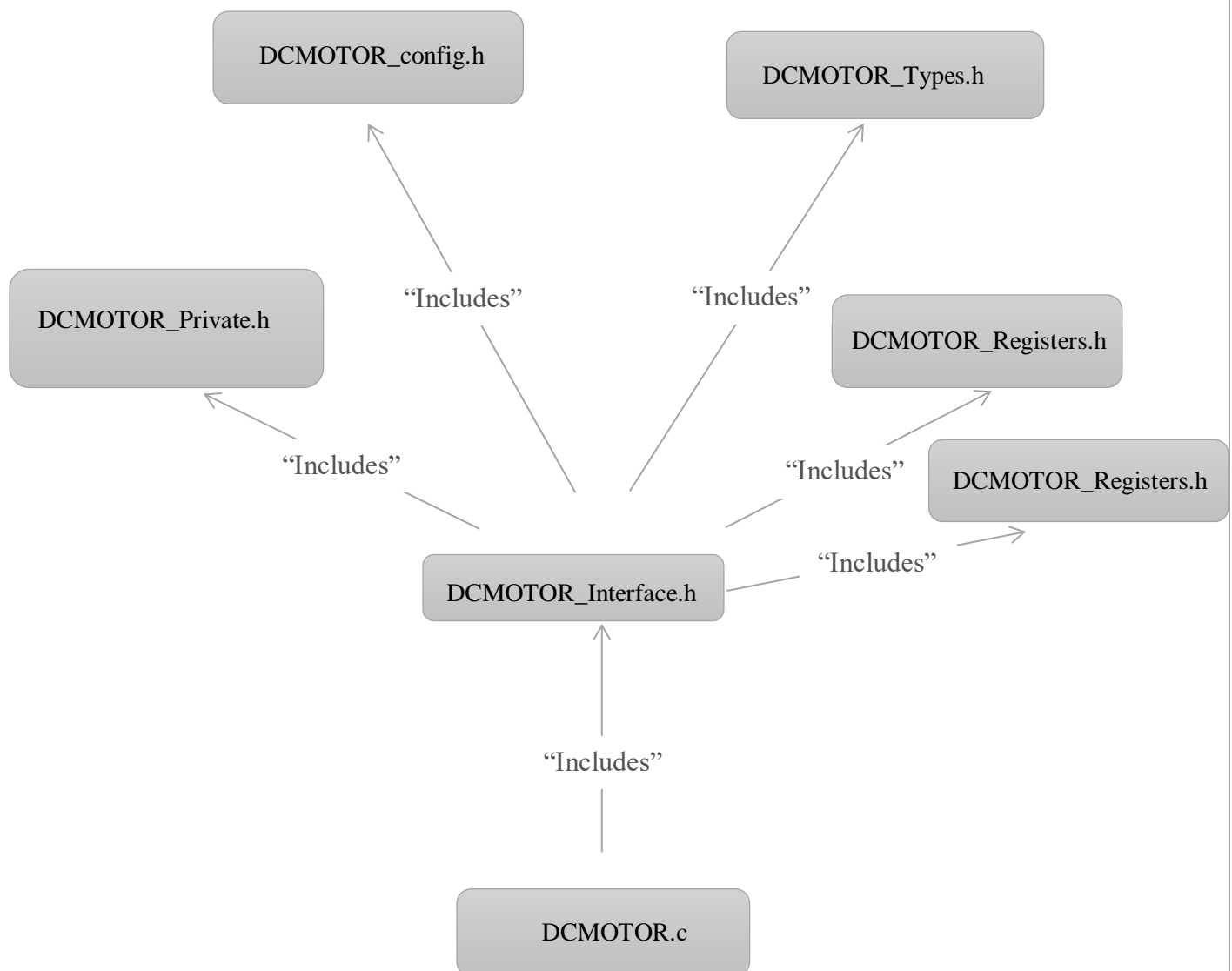
Introduction and functional overview:

This document specifies detailed design of the DCMOTOR Driver.

Dependencies to other modules:

File structure:

The DCMOTOR module shall comply with the following file structure:



API specification:

Type definitions:

1- [DD_DCMOTOR-12330]

Name:	S_DCMOTOR
Type	Structured data
Range:	--
Description:	Ports and pins used as well as motor direction
Covered requirements:	

Function definitions:**1- [DD_DCMOTOR_112]**

Service name:	HAL_DCMOTOR_Einit
Syntax:	DC_ERRORCHECK HAL_DCMOTOR_Einit(S_DCMOTOR* S_DC)
Sync/Async:	Synchronous
Re-entrancy:	Re-entrant
Parameters (in):	&S_DC
Parameters (out):	None
Parameters (inout):	None
Return type:	Std_type (error)
Description:	The DCMOTOR driver shall support configuration of dc driver
Covered requirements:	

2- [DD_DCMOTOR_113]

Service name:	HAL_DCMOTOR_Efullspeed
Syntax:	DC_ERRORCHECK HAL_DCMOTOR_Efullspeed(S_DCMOTOR* S_DC);
Sync/Async:	Synchronous
Re-entrancy:	Re-entrant
Parameters (in):	&S_DC
Parameters (out):	None
Parameters (inout):	None
Return type:	Std_type (error)
Description:	The DCMOTOR driver shall support a full speed rotation
Covered requirements:	

3- [DD_DCMOTOR_114]

Service name:	HAL_DCMOTOR_Edirection
Syntax:	DC_ERRORCHECK HAL_DCMOTOR_Edirection(S_DCMOTOR* S_DC)
Sync/Async:	Synchronous
Re-entrancy:	Re-entrant
Parameters (in):	&S_DC
Parameters (out):	None
Parameters (inout):	None
Return type:	Std_type (error)
Description:	It's used to change the motor rotation direction between clockwise and anti-clockwise.
Covered requirements:	

4- [DD_DCMOTOR_115]

Service name:	HAL_DCMOTOR_Ehalfspeed
Syntax:	DC_ERRORCHECK HAL_DCMOTOR_Ehalfspeed(S_DCMOTOR* S_DC);
Sync/Async:	Synchronous
Re-entrancy:	Re-entrant
Parameters (in)	&S_DC
Parameters (out):	None
Parameters (inout):	None
Return type:	Std_type (error)
Description:	The DCMOTOR driver shall support a full speed rotation
Covered requirements:	

5- [DD_DCMOTOR_115]

Service name:	HAL_DCMOTOR_vStopMotor
Syntax:	DC_ERRORCHECK HAL_DCMOTOR_vStopMotor(S_DCMOTOR* S_DC);

Sync/Async:	Synchronous
Re-entrancy:	Re-entrant
Parameters (in)	&S_DC
Parameters (out):	None
Parameters (inout):	None
Return type:	Std_type (error)
Description:	The DCMOTOR driver shall support the motor stop
Covered requirements:	