Detailed Design of ADC Driver
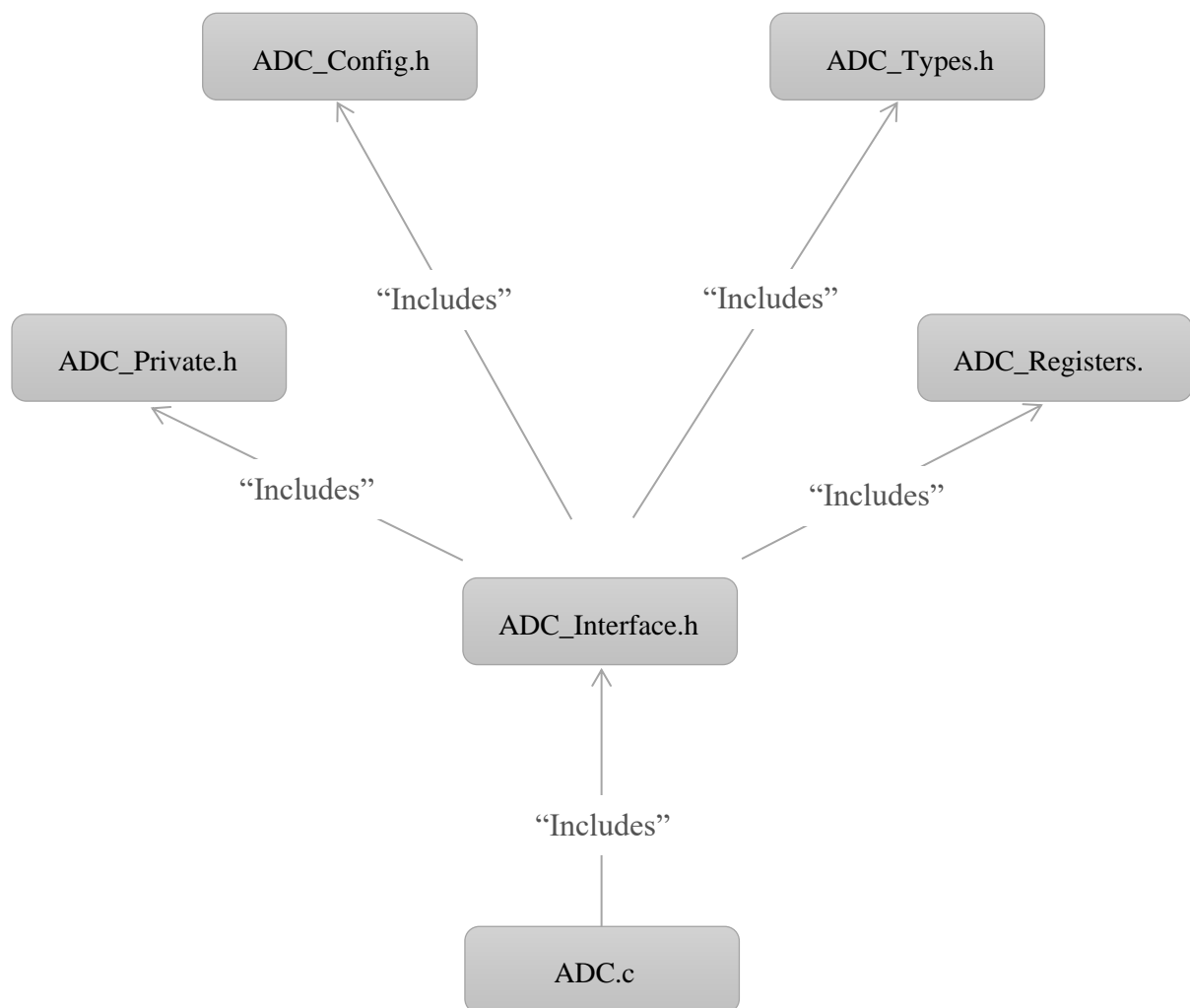
Team X

Contents

Introduction and functional overview:
This document specifies detailed design of the ADC Driver.

Dependencies to other modules:

File structure:
The ADC module shall comply with the following file structure:

API specification:

Type definitions:
1- [DD_ADC-19330]

Name:	ADC_Vref_Type
Type	Enum
Range:	0 : 2
Description:	Selects Voltage reference type
Covered requirements:	

2- [DD_ADC_12331]

Name:	ADC_Scaler_Type
Type	Enum
Range:	1 : 7
Description:	Selects Prescaler type
Covered requirements:	

3- [DD_ADC_12332]

Name:	ADC_Channel_Type
Type	Enum
Range:	0 : 7
Description:	Selects the number of the channel
Covered requirements:	=

Function definitions:

1- [DD_ADC_19333]

Service name:	ADC Initialization
Syntax:	E_ERROR_TYPE MCAL_ADC_INIT();
Sync/Async:	Synchronous
Re-entrancy:	Re-entrant
Parameters (in):	none
Parameters (out):	none
Parameters (inout):	none
Return type:	Std_type (error)
Description:	Function that initializes the Desired Structure
Covered requirements:	

2- [DD_ADC_19334]

Service name:	Set Port Direction
Syntax:	u16 MCAL_ADC_READ(ADC_Channel_Type channel);
Sync/Async:	Synchronous
Re-entrancy:	Re-entrant
Parameters (in):	ADC Channel Number
Parameters (out):	The value of the adc channel
Parameters (inout):	none
Return type:	U16
Description:	Function that reads the adc channel
Covered requirements:	