

ADC Drivers
For
AVR Microcontrollers

LOW LEVEL DESIGN Document

1. API specification

1.1 Type definitions

Name:	STD_TYPE
Type:	#define
Element:	OK
Description:	This help to make sure that work done correctly

Name:	STD_TYPE
Type:	#define
Element:	NOK
Description:	This help to know the work doesn't done correctly

Name:	STD_TYPE
Type:	#define
Element:	IDLE
Description:	This help to make sure that ADC is not busy

Name:	STD_TYPE
Type:	#define
Element:	BUSY
Description:	This help to make sure that ADC is busy

Name:	STD_TYPE
Type:	#define
Element:	TIMEOUT_STATE
Description:	This help to know that the ADC have an error about the result

2. Function definitions

Service name:	ADC_INIT
Syntax:	void ADC_INIT (void);
Parameters (in):	NONE
Parameters (in/out):	NONE
Parameters (out):	NONE
Return value:	NONE
Description:	The function make the initialization for ADC (choose Vref, set the prescaler)
NUM:	

Service name:	ADC_SETPRESCALER
Syntax:	uint8 ADC_SETPRESCALER (uint8 Prescaler);
Parameters (in):	prescaler
Parameters (in/out):	NONE
Parameters (out):	NONE
Return value:	Error
Description:	This function used to set value of the prescaler and return the status of error
NUM:	

Service name:	ADC_Enable
Syntax:	void ADC_Enable (void);
Parameters (in):	NONE
Parameters (in/out):	NONE
Parameters (out):	NONE
Return value:	NONE
Description:	This function used to enable the ADC
NUM:	

Service name:	ADC_Disable
Syntax:	void ADC_Disable (void);
Parameters (in):	NONE
Parameters (in/out):	NONE
Parameters (out):	NONE
Return value:	NONE
Description:	This function used to disable the ADC
NUM:	

Service name:	ADC_InterruptEnable
Syntax:	void ADC_InterruptEnable (void);
Parameters (in):	NONE
Parameters (in/out):	NONE
Parameters (out):	NONE
Return value:	NONE
Description:	This function used to enable the interrupt of ADC
NUM:	

Service name:	ADC_InterruptDisable
Syntax:	void ADC_InterruptDisable (void);
Parameters (in):	NONE
Parameters (in/out):	NONE
Parameters (out):	NONE
Return value:	NONE
Description:	This function used to Disable the interrupt of ADC
NUM:	

Service name:	ADC_RESULT
Syntax:	uint8 ADC_RESULT (uint8 C_Channel , uint16 * C_Result);
Parameters (in):	C_Channel , C_result
Parameters (in/out):	NONE
Parameters (out):	NONE
Return value:	Error
Description:	This function used to get the result and make sure that conversion done correctly by send error status
NUM:	