

DIO_MODULE

API DESIGN TABLE

FUNCTION NAME	DIO_deInit				
ARGUMENTS	INPUT	Name	DIO_gpiox		
		Type	DIO_portTypeDef		
		Description	To select GPIO(x) peripheral		
	OUTPUT	NONE			
	INPUT/OUTPUT	NONE			
RETURN	E_OK	0			
	E_NOK	1			
DESCRIPTION	<u>Deinitializes and disables</u> the selected GPIOx peripheral registers to their default reset values.				

FUNCTION NAME	DIO_init				
ARGUMENTS	INPUT		Name	DIO_initStruct	
			Type	Pointer to DIO_initTypeDef(structure)	
			description	Contains the configuration information for the specified GPIO peripheral	
	OUTPUT	NONE			
	INPUT/OUTPUT	NONE			
RETURN	E_OK	0			
	E_NOK	1			
DESCRIPTION	Initializes the GPIOx peripheral according to the specified parameters in the GPIO_InitStruct.				

FUNCTION NAME	DIO_writePin												
ARGUMENTS	INPUT		Name	DIO_gpiox									
			Type	DIO_portTypeDef									
			Description	The selected port									
			Name	DIO_pinNumber									
			Type	DIO_pinTypeDef									
			description	The number of the pin									
			Name	DIO_pinValue									
			Type	U8									
			Description	Low or high									
		OUTPUT	NONE										
		INPUT/OUTPUT	NONE										
	RETURN	E_OK	0										
E_NOK		1											
DESCRIPTION	Sets or resets the specified pin												

FUNCTION NAME	DIO_writePort										
ARGUMENTS	INPUT		Name		DIO_gpiox						
			Type		DIO_PORTTypeDef						
			Description		To select GPIO(x) peripheral						
			Name		DIO_portValue						
			Type		U16						
			Description		The total value of the port						
		OUTPUT		NONE							
		INPUT/OUTPUT		NONE							
RETURN	E_OK	0									
	E_NOK	1									
DESCRIPTION	Gives a value to the overall port										

FUNCTION NAME	DIO_readPin										
ARGUMENTS	INPUT		Name	DIO_gpiox							
			Type	DIO_portTypeDef							
			Description	To select GPIO(x) peripheral							
			Name	DIO_pin							
			Type	DIO_pinTypeDef							
			description	the selected pin							
		OUTPUT		Name	DIO_pinValue						
				Type	Pointer to U8						
				Description	High or low depending on the pin state						
	INPUT/OUTPUT		NONE								
	RETURN	E_OK	0								
E_NOK		1									
DESCRIPTION	Read the specified bit										

FUNCTION NAME	DIO_readPort											
ARGUMENTS	INPUT		Name	DIO_gpiox								
			Type	DIO_typeDef (structure)								
			Description	To select GPIO(x) peripheral								
		OUTPUT			Name	COPY_portValue						
					Type	Pointer to U16						
					Description	The output of the port						
	INPUT/OUTPUT	NONE										
	RETURN	E_OK	0									
		E_NOK	1									
DESCRIPTION	Read the specified port											

Data type table

Name	DIO_initTypeDef			
Type	Structure			
Elements		Name	DIO_PORT	
		Type	DIO_portTypeDef	
		description	Specifies the GPIO PORT to be configured	
		Name	DIO_PIN	
		Type	U16	
		Description	SPECIFIES THE GPIO PIN TO BE CONFIGURED	
		Name	DIO_MODE	
		Type	Enumeration	
		Description	Select if the pin is output or input	
Description	Configuration structure			

Name	DIO_modeTypeDef		
Type	Enumeration		
Elements	INPUT	0	
	OUTPUT	1	
description	Configuration modes		

Name	DIO_portTypeDef		
Type	Enumeration		
Elements	GPIOA	1	
	GPIOB	2	
	GPIOC	3	
	GPIOD	4	
description	Ports of the controller		

Name	DIO_pinTypeDef		
Type	Enumeration		
Elements	PIN1	1	
	PIN2	2	
	PIN3	3	
	PIN4	4	
	PIN5	5	
	PIN6	6	
	PIN7	7	
	PIN8	8	
description	Pin numbers of each port		