Document Title	Requirements & Specification of LCD Driver
Document Owner	NTI Team
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Contents

1. Scope of Document

This document specifies requirements on the module LCD Driver. The LCD driver is targeting Successive Approximation LCD Hardware.

2. API specification

2.1. Imported types

Module	Header File	Imported Type
lib	STD_TYPES.h	OK
	STD_TYPE.h	
	"MemMap.h"	
	STD_TYPES.h	
	UTILS.h	
	DIO_INTERFACE.h	
	LCD_Int.h	
	<util/delay.h>	
	LCD_CFG.h	

2.2 Functions definitions

2.1.1. LCD_Init

Service Name	LCD_Init	
Syntax	void LCD_Init(void);	
Reentrancy	Non-reentrant	
Parameters (in)	none	
Parameters (inout)	none	
Parameters (out)	none	
Return value	none	OK: service is done NOK: service is rejected
Description	This API initialize the LCD with the prebuild configuratons via LCD_Int.h file and returns error state	
Available via	LCD_Int.h	

2.1.2. LCD_WriteChar

Service Name	LCD_WriteChar	
Syntax	void LCD_WriteChar(uint8 ch);	
Reentrancy	reentrant	
Parameters (in)	uint8 ch	
Parameters (inout)	none	
Parameters (out)	none	
Return value	VOID	OK: service is done NOK: service is rejected
Description	This API USE LCD_Writechar to write any character on lcd by bassing character from unint8	
Available via	LCD_Int.h	

2.1.3. LCD_WriteString

Service Name	LCD_WriteString	
Syntax	void LCD_WriteString(uint8*str);	
Reentrancy	reentrant	
Parameters (in)	uint8*str (pointer to string array to recive)	
Parameters (inout)	none	
Parameters (out)	none	
Return value	U8	OK: service is done NOK: service is rejected
Description	This API using to write string on lcd	
Available via	Lcd interface.h	

2.1.4. LCD_WriteNumber

Service Name	LCD_WriteNumber	
Syntax	void LCD_WriteNumber(sint32 num);	
Reentrancy	reentrant	
Parameters (in)	sint32 num	
Parameters (inout)	none	
Parameters (out)	none	
Return value	void	OK: service is done NOK: service is rejected
Description	This API use this function to write number into lcd	
Available via	LCD_interface.h	

2.1.5. LCD_WriteNum_4D

Service Name	LCD_WriteNum_4D	
Syntax	void LCD_WriteNum_4D(uint16 num);	
Reentrancy	reentrant	
Parameters (in)	uint16 num	
Parameters (inout)	none	
Parameters (out)	none	
Return value	void	OK: service is done NOK: service is rejected
Description	This API use this function to write any number decimal in 4 digit	
Available via	lcd_interface.h	

2.1.6 LCD_WriteBinary

Service Name	LCD_WriteBinary	
Syntax	void LCD_WriteBinary(uint8 num);	
Reentrancy	void	
Parameters (in)	uint8 num	
Parameters (inout)	none	
Parameters (out)	none	
Return value	none	OK: service is done NOK: service is rejected
Description	This API servise use to change any number decimal to binary number (in 8 digit)	
Available via	lcd_interface.h	

2.1.7 LCD_Clear

Service Name	LCD_Clear	
Syntax	void LCD_Clear(void);	
Reentrancy	void	
Parameters (in)	void	
Parameters (inout)	none	
Parameters (out)	none	
Return value	void	OK: service is done NOK: service is rejected
Description	This API servise use to clear lcd and return cursor to home	
Available via	lcd_interface.h	

2.1.8 LCD_SetCursor

Service Name	LCD_SetCursor	
Syntax	void LCD_SetCursor(uint8 line ,uint8 cell);	
Reentrancy	void	
Parameters (in)	uint8 line , uint8 cell	
Parameters (inout)	none	
Parameters (out)	none	
Return value	void	OK: service is done NOK: service is rejected
Description	This API servise use to set cursor in any place in lcd (beginning of writing)	
Available via	lcd_interface.h	

2.1.9 LCD_CustomChar

Service Name	LCD_CustomChar	
Syntax	void LCD_CustomChar(uint8*pattern,uint8 ch);	
Reentrancy	void	
Parameters (in)	uint8*pattern,uint8 ch	
Parameters (inout)	none	
Parameters (out)	none	
Return value	void	OK: service is done NOK: service is rejected
Description	This API servise use to write any pattern or shape in lcd just enter pattern (array from 5* 8 byte and address you need to save)	
Available via	lcd_interface.h	

2.1.10 LCD_ClearCursor

Service Name	LCD_ClearCursor	
Syntax	void LCD_ClearCursor(uint8 line,uint8 cell,uint8 NoC);	
Reentrancy	void	
Parameters (in)	uint8 line,uint8 cell,uint8 NoC);	
Parameters (inout)	none	
Parameters (out)	none	
Return value	void	OK: service is done NOK: service is rejected
Description	This API servise use to clear position in lcd just enter line cell and how much digit you need	
Available via	lcd_interface.h	