LCDWIKI KBV lib Manual

1.Introduction

The LCDWIKI KBV lib is the hardware level lib of the lcd modules with parallel port,it need be paired with the GUI lib for each display modules.

The LCDWIKI KBV lib have the derived class from LCDWIKI GUI lib.if you want to call functions of LCDWIKI GUI lib,you only need to use the LCDWIKI KBV class and you have to do this.

The LCDWIKI KBV lib support 8bits and 16bits display.you can open the file of lcd_mode.h to modify.

2.FUNCTIONS DECLARATION

definiens	LCDWIKI_KBV(uint16_t model,uint8_t cs, uint8_t cd, uint8_t wr, uint8_t rd, uint8_t reset)
function	The main class constructor when using 8bit or 16bit display modules
parameters	model : the model of display modules cs : the chip selection pin in Development board cd : the command/data pin in Development board wr : the write control pin in Development board rd : the read control pin in Development board reset : the reset pin in Development board
returned value	None
notes	if modules is unreadable or you don't know the width and height of modules,you can use this constructor

definiens	LCDWIKI_KBV(int16_t wid,int16_t heg,uint8_t cs, uint8_t cd, uint8_t wr, uint8_t rd, uint8_t reset)
function	The main class constructor when using 8bit or 16bit display modules
parameters	wid : the width of display modules heg : the height of display modules cs : the chip selection pin in Development board cd : the command/data pin in Development board wr : the write control pin in Development board rd : the read control pin in Development board reset : the reset pin in Development board
returned value	None

notes	**if modules is readable or you know the width and height of modules,you can use this constructor**

definiens	void Init_LCD(void)
function	Initialize the LCD modules
parameters	None
returned value	None
notes	None

definiens	void reset(void)
function	Reset the LCD modules
parameters	None
returned value	None
notes	None

definiens	void start(uint16_t ID)
function	Set the register of LCD modules
parameters	ID : the identification of LCD modules control chip
returned value	None
notes	None

definiens	void Draw_Pixe(int16_t x, int16_t y, uint16_t color)
function	Draw a single pixel at a specified coordinate
parameters	x : the x coordinate of the pixel y : the y coordinate of the pixel color : the color value of the pixel
returned value	None
notes	This function overrides the parent class function

definiens	void Write_Cmd(uint16_t cmd)
function	Write a 16bit command to the lcd modules
parameters	cmd : the 16bit command value
returned value	None
notes	None

definiens	void Write_Data(uint16_t data)
function	Write a 16bit data to the lcd modules
parameters	data : the 16bit data
returned value	None
notes	None

definiens	void Write_Cmd_Data(uint16_t cmd, uint16_t data)
function	Write a 16bit command and a 16bit data to the lcd modules
parameters	cmd : the 16bit command value data : the 16bit data

returned value	None
notes	None

definiens	void init_table8(const void *table, int16_t size)
function	Write a series of 8bit command and data to the lcd modules
parameters	table : the array of command and data to point size : the size of the array of command and data
returned value	None
notes	None

definiens	void init_table16(const void *table, int16_t size)
function	Write a series of 16bit command and data to the lcd modules
parameters	table : the array of command and data to point size : the size of the array of command and data
returned value	None
notes	None

definiens	void Push_Command(uint16_t cmd, uint8_t *block, int8_t N)
function	Set a command and a series of 8bit data to the lcd modules at a time
parameters	cmd : the 16bits command value block : the array of 8bit data to point N : the size of the array of 8bit data
returned value	None
notes	None

definiens	uint16_t Color_To_565(uint8_t r, uint8_t g, uint8_t b)
function	Pass three 8bits colour value and get the 16bits colour value
parameters	r : the 8bits red value g : the 8bits green value b : the 8bits blue value
returned value	The 16bits colour value(rrrrrggggggbbbbb)
notes	This function overrides the parent class function

definiens	uint16_t Read_ID(void)
function	Read the identification of LCD modules control chip
parameters	None
returned value	the identification of LCD modules control chip
notes	None

definiens	void Fill_Rect(int16_t x, int16_t y, int16_t w, int16_t h, uint16_t color)
function	Using color value to draw a filled rectangle with w width and h height in x and y coordinate
parameters	x : the x coordinate of the start-corner y : the y coordinate of the start-corner w : the width of the rectangle h : the height of the rectangle color : the color value of the filled rectangle
returned value	This function overrides the parent class function

notes	None

definiens	void Set_Rotation(uint8_t r)
function	Set the rotation of the screen
parameters	r : the value of rotation. 0-0 degree 1-90 degree 2-180 degree 3-270 degree
returned value	None
notes	None

definiens	uint8_t Get_Rotation(void) const
function	get the rotation of the screen
parameters	None
returned value	0-0 degree 1-90 degree 2-180 degree 3-270 degree
notes	None

definiens	void Invert_Display(boolean i)
function	Select display the anti-color or not
parameters	i : 0-don't display the anti-color(normal) 1- display the anti

returned value	None
notes	None

definiens	uint16_t Read_Reg(uint16_t reg, int8_t index)
function	read value from lcd register
parameters	reg : the command of read index : the number of read
returned value	The value of reading from lcd register
notes	None

definiens	int16_t Read_GRAM(int16_t x, int16_t y, uint16_t *block, int16_t w, int16_t h)
function	Read colour value from GRAM
parameters	x : the x coordinate of the start-corner y : the y coordinate of the start-corner block : the array of saving colour value w : the width of the Read area h : the heigth of the Read area
returned value	0-successful
notes	This function overrides the parent class function

definiens	void Set_Addr_Window(int16_t x1, int16_t y1, int16_t x2, int16_t y2)

function	Set display area bewteen two point
parameters	x1 : the x coordinate of the start-corner y1 : the y coordinate of the start-corner x2 : the x coordinate of the end-corner y2 : the y coordinate of the end-corner
returned value	None
notes	This function overrides the parent class function

definiens	void Push_Any_Color(uint16_t * block, int16_t n, bool first, uint8_t flags)
function	Set a large number of 16bit color values at a time
parameters	block : the array of 16bit colour values n : the number of colour values first : 1- First set the command of write color value 0-have set the command of write color value flags : 0-read color value from RAM 1-read color value from flash
returned value	None
notes	This function overrides the parent class function

definiens	void Push_Any_Color(uint8_t * block, int16_t n, bool first, uint8_t flags)
function	Set a large number of 8bit color values at a time
parameters	block : the array of 8bit colour values n : the number of colour values

	first : 1- First set the command of write color value 0-have set the command of write color value flags : 0-read color value from RAM 1-read color value from flash
returned value	None
notes	None

definiens	void Vert_Scroll(int16_t top, int16_t scrollines, int16_t offset)
function	scroll display
parameters	top : vertical start position scrollines : the lines of scroll offset : the offset of scroll
returned value	None
notes	None

definiens	int16_t Get_Height(void) const
function	Get the display height
parameters	None
returned value	The diaplay height
notes	This function overrides the parent class function

definiens	int16_t Get_Width(void) const
function	Get the display width

parameters	None
returned value	The diaplay width
notes	This function overrides the parent class function

definiens	void Set_LR(void)
function	Set the coordinate of the lower-right corner
parameters	None
returned value	None
notes	This function is only for 0x7575 lcd modules