display-dma2d

User Manual

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1.1. DRAWING_DMA2D_blending_t struct Reference

1.1.1. Data Fields

- uint8_t * src_address

- uint8_t * dest_address

- uint32_t src_stride

- uint32_t dest_stride

- jchar dest_width

- jchar dest_height

- jint x_src

- jint y_src

- jint width

- jint height

- jint x_dest

- jint y_dest

- jint alpha

- uint32_t src_dma2d_format

- uint32_t src_bpp

1.1.2. Field Documentation

1.2. DRAWING_DMA2D_memcpy struct Reference

1.2.1. Data Fields

- uint8_t * src_address

- uint8_t * dest_address

- uint16_t width

- uint16_t height

1.2.2. Field Documentation

Chapter 2. File Documentation

2.1. ui_drawing_dma2d.h File Reference

```
#include <LLUI_DISPLAY_impl.h>
```

```
#include "ui_drawing.h"
```

2.1.1. Data Structures

- struct DRAWING_DMA2D_memcpy

2.1.2. Macros

- #define UI_DRAWING_DMA2D_fillRectangle UI_DRAWING_fillRectangle

- #define UI_DRAWING_DMA2D_drawImage UI_DRAWING_drawImage

- #define UI_DRAWING_DMA2D_copyImage UI_DRAWING_copyImage

- #define UI_DRAWING_DMA2D_drawRegion UI_DRAWING_drawRegion

2.1.3. Functions

- void UI_DRAWING_DMA2D_initialize (void * binary_semaphore_handle)

- void UI_DRAWING_DMA2D_IRQHandler (void)

- void UI_DRAWING_DMA2D_configure_memcpy (uint8_t * srcAddr, uint8_t * destAddr, uint32_t xmin, uint32_t ymin, uint32_t xmax, uint32_t ymax, uint32_t stride, DRAWING_DMA2D_memcpy * memcpy_data)

- void UI_DRAWING_DMA2D_start_memcpy (DRAWING_DMA2D_memcpy * memcyp_data)

- DRAWING_Status UI_DRAWING_DMA2D_fillRectangle (MICROUI_GraphicsContext * gc, jint x1, jint y1, jint x2, jint y2)

- DRAWING_Status UI_DRAWING_DMA2D_drawImage (MICROUI_GraphicsContext * gc, MICROUI_Image * img, jint regionX, jint regionY, jint width, jint height, jint x, jint y, jint alpha)

- DRAWING_Status UI_DRAWING_DMA2D_copyImage (MICROUI_GraphicsContext * gc, MICROUI_Image * img, jint regionX, jint regionY, jint width, jint height, jint x, jint y)

- DRAWING_Status UI_DRAWING_DMA2D_drawRegion (MICROUI_GraphicsContext * gc, jint regionX, jint regionY, jint width, jint height, jint x, jint y, jint alpha)

Detailed Description

Definition in file C:/Jenkins/workspace/master77851a12/bsp-lldisplay_dma2d/target~/ccomponent-Working/bsp/ui/inc/ui_drawing_dma2d.h

2.2. ui_drawing_dma2d_configuration.h File Reference

```
#include <stdint.h>
```

2.2.1. Macros

- #define DRAWING_DMA2D_CACHE_MANAGEMENT_DISABLED (0U)

- #define DRAWING_DMA2D_CACHE_MANAGEMENT_ENABLED (1U)

- #define   DRAWING_DMA2D_CACHE_MANAGEMENT
  (DRAWING_DMA2D_CACHE_MANAGEMENT_DISABLED)

Detailed Description

This file provides the configuration of ui_drawing_dma2d.c.

How to use this library:

- Set   the   define   DRAWING_DMA2D_CACHE_MANAGEMENT   to
  DRAWING_DMA2D_CACHE_MANAGEMENT_DISABLED   or
  DRAWING_DMA2D_CACHE_MANAGEMENT_ENABLED depending on the MPU configuration

Author: .   MicroEJ Developer Team

Version: .   4.0.0

Definition in file C:/Jenkins/workspace/master77851a12/bsp-lldisplay_dma2d/target~/ccomponent-Working/bsp/ui/inc/ui_drawing_dma2d_configuration.h

2.3. ui_drawing_dma2d.c File Reference

```
#include "ui_drawing_dma2d.h"
```

```
#include "ui_drawing_dma2d_configuration.h"
```

```
#include "ui_drawing_soft.h"
```

```
#include "ui_image_drawing.h"
```

2.3.1. Data Structures

- struct DRAWING_DMA2D_blending_t

2.3.2. Typedefs

- typedef void(* t_drawing_notification

2.3.3. Variables

- static DMA2D_HandleTypeDef g_hdma2d

- static t_drawing_notification g_callback_notification

- static bool g_dma2d_running

- static void * g_dma2d_semaphore

2.3.4. Functions

- static void _drawing_dma2d_wait (void)

- static void _invalidateDCache (void)

- static void _cleanDCache (void)

- static void _drawing_dma2d_done (void)

- static uint8_t * _drawing_dma2d_adjust_address (uint8_t * address, uint32_t x, uint32_t y, uint32_t stride, uint32_t bpp)

- static void _drawing_dma2d_configure_alpha_image_data (MICROUI_GraphicsContext * gc, jint * alphaAndColor)

- static bool _drawing_dma2d_is_image_compatible_with_dma2d (MICROUI_GraphicsContext * gc, MICROUI_Image * image, jint x_src, jint y_src, jint width, jint height, jint x_dest, jint y_dest, jint alpha, DRAWING_DMA2D_blending_t * dma2d_blending_data)

- static void _drawing_dma2d_blending_configure (DRAWING_DMA2D_blending_t * dma2d_blending_data)

- static void _drawing_dma2d_blending_start (DRAWING_DMA2D_blending_t * dma2d_blending_data)

- static void _drawing_dma2d_overlap_horizontal (DRAWING_DMA2D_blending_t * dma2d_blending_data)

- static void _drawing_dma2d_overlap_vertical (DRAWING_DMA2D_blending_t * dma2d_blending_data)

- void UI_DRAWING_DMA2D_IRQHandler (void)

- void UI_DRAWING_DMA2D_initialize (void * binary_semaphore_handle)

- void UI_DRAWING_DMA2D_configure_memcpy (uint8_t * srcAddr, uint8_t * destAddr, uint32_t xmin, uint32_t ymin, uint32_t xmax, uint32_t ymax, uint32_t stride, DRAWING_DMA2D_memcpy * memcpy_data)

- void UI_DRAWING_DMA2D_start_memcpy (DRAWING_DMA2D_memcpy * memcpy_data)

- DRAWING_Status UI_DRAWING_DMA2D_fillRectangle (MICROUI_GraphicsContext * gc, jint x1, jint y1, jint x2, jint y2)

- DRAWING_Status UI_DRAWING_DMA2D_drawImage (MICROUI_GraphicsContext * gc, MICROUI_Image * image, jint x_src, jint y_src, jint width, jint height, jint x_dest, jint y_dest, jint alpha)

- DRAWING_Status UI_DRAWING_DMA2D_copyImage (MICROUI_GraphicsContext * gc, MICROUI_Image * img, jint regionX, jint regionY, jint width, jint height, jint x, jint y)

- DRAWING_Status UI_DRAWING_DMA2D_drawRegion (MICROUI_GraphicsContext * gc, jint x_src, jint y_src, jint width, jint height, jint x_dest, jint y_dest, jint alpha)

Detailed Description

Definition in file C:/Jenkins/workspace/master77851a12/bsp-lldisplay_dma2d/target~/ccomponent-Working/bsp/ui/src/ui_drawing_dma2d.c