wlan_stationdocumentation

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Chapter 1

Module Index

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Horoi	is a list of all modules.		

2 **Module Index**

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

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Chapter 3

Module Documentation

3.1 Getting_started_sta

Macros

- #define APPLICATION_NAME "WLAN STATION"
- #define APPLICATION VERSION "1.1.0"
- #define HOST_NAME "www.google.be"
- #define PING_INTERVAL 1000 /* In msecs */
- #define PING TIMEOUT 3000 /* In msecs */
- #define PING_PKT_SIZE 20 /* In bytes */
- #define NO_OF_ATTEMPTS 3
- #define OSI STACK SIZE 2048

Enumerations

enum e_AppStatusCodes { LAN_CONNECTION_FAILED = -0x7D0, INTERNET_CONNECTION_FAILED = LAN_CONNECTION_FAILED - 1, DEVICE_NOT_IN_STATION_MODE = INTERNET_CONNECTION_FA
 ILED - 1, STATUS_CODE_MAX = -0xBB8 }

Functions

- void WlanStationMode (void *pvParameters)
 - Start simplelink, connect to the ap and run the ping test.
- void SimpleLinkWlanEventHandler (SIWlanEvent_t *pWlanEvent)
 - The Function Handles WLAN Events.
- void SimpleLinkNetAppEventHandler (SINetAppEvent_t *pNetAppEvent)
 - This function handles network events such as IP acquisition, IP leased, IP released etc.
- void SimpleLinkHttpServerCallback (SIHttpServerEvent_t *pHttpEvent, SIHttpServerResponse_t *pHttp↔ Response)
 - This function handles HTTP server events.
- void SimpleLinkGeneralEventHandler (SIDeviceEvent_t *pDevEvent)
 - This function handles General Events.
- void SimpleLinkSockEventHandler (SISockEvent_t *pSock)
- void main ()

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Variables

```
• unsigned long g_ulStatus = 0
    • unsigned long g_ulPingPacketsRecv = 0
    • unsigned long g_ulGatewayIP = 0
    • unsigned char g_ucConnectionSSID [SSID_LEN_MAX+1]
    • unsigned char g_ucConnectionBSSID [BSSID_LEN_MAX]
3.1.1 Detailed Description
3.1.2 Macro Definition Documentation
3.1.2.1 #define APPLICATION NAME "WLAN STATION"
Definition at line 88 of file main.c.
Referenced by main().
3.1.2.2 #define APPLICATION_VERSION "1.1.0"
Definition at line 89 of file main.c.
3.1.2.3 #define HOST_NAME "www.google.be"
Definition at line 91 of file main.c.
3.1.2.4 #define NO_OF_ATTEMPTS 3
Definition at line 99 of file main.c.
3.1.2.5 #define OSI_STACK_SIZE 2048
Definition at line 101 of file main.c.
Referenced by main().
3.1.2.6 #define PING_INTERVAL 1000 /* In msecs */
Definition at line 96 of file main.c.
3.1.2.7 #define PING_PKT_SIZE 20 /* In bytes */
```

Definition at line 98 of file main.c.

Definition at line 97 of file main.c.

3.1.2.8 #define PING_TIMEOUT 3000 /* In msecs */

3.1.3 Enumeration Type Documentation

3.1.3.1 enum e_AppStatusCodes

Enumerator

LAN_CONNECTION_FAILED
INTERNET_CONNECTION_FAILED
DEVICE_NOT_IN_STATION_MODE
STATUS_CODE_MAX

Definition at line 104 of file main.c.

3.1.4 Function Documentation

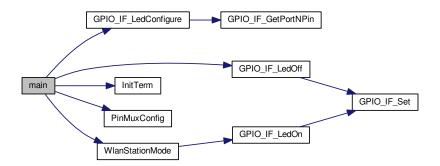
3.1.4.1 void main (void)

Definition at line 941 of file main.c.

References APPLICATION_NAME, ERR_PRINT, GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), InitTerm(), LED1, LED2, LED3, LOOP_FOREVER, MCU_ALL_LED_IND, OSI_STACK_SIZE, PinMuxConfig(), SPAWN_TASK_PR IORITY, and WlanStationMode().

Referenced by ResetISR().

Here is the call graph for this function:



Here is the caller graph for this function:



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3.1.4.2 void SimpleLinkGeneralEventHandler (SIDeviceEvent_t * pDevEvent)

This function handles General Events.

Parameters

in	pDevEvent	- Pointer to General Event Info
----	-----------	---------------------------------

Returns

None

Definition at line 388 of file main.c.

References UART_PRINT.

3.1.4.3 void SimpleLinkHttpServerCallback (SIHttpServerEvent_t * pHttpEvent, SIHttpServerResponse_t * pHttpResponse_)

This function handles HTTP server events.

Parameters

in	pServerEvent	- Contains the relevant event information
in	pServer⇔	- Should be filled by the user with the relevant response information
	Response	

Returns

None

Definition at line 373 of file main.c.

3.1.4.4 void SimpleLinkNetAppEventHandler (SINetAppEvent_t * pNetAppEvent)

This function handles network events such as IP acquisition, IP leased, IP released etc.

Parameters

in	pNetAppEvent	- Pointer to NetApp Event Info

Returns

None

Definition at line 323 of file main.c.

References g_ulGatewayIP, g_ulStatus, SET_STATUS_BIT, STATUS_BIT_IP_AQUIRED, and UART_PRINT.

3.1.4.5 void SimpleLinkSockEventHandler (SISockEvent_t * pSock)

This function handles socket events indication

Parameters

in	pSock	- Pointer to Socket Event Info
----	-------	--------------------------------

Returns

None

Definition at line 409 of file main.c.

References UART_PRINT.

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3.1.4.6 void SimpleLinkWlanEventHandler (SIWlanEvent_t * pWlanEvent)

The Function Handles WLAN Events.

Parameters

in	pWlanEvent	- Pointer to WLAN Event Info

Returns

None

Definition at line 236 of file main.c.

References CLR_STATUS_BIT, $g_ucConnectionBSSID$, $g_ucConnectionSSID$, $g_ulStatus$, SET_STATUS_BIT , $S \leftarrow TATUS_BIT_CONNECTION$, $STATUS_BIT_IP_AQUIRED$, and $UART_PRINT$.

3.1.4.7 void WlanStationMode (void * pvParameters)

Start simplelink, connect to the ap and run the ping test.

This function starts the simplelink, connect to the ap and start the ping test on the default gateway for the ap

Parameters

in	pvParameters	- Pointer to the list of parameters that can be passed to the task while creating
		it

Returns

None

Definition at line 790 of file main.c.

References DEVICE_NOT_IN_STATION_MODE, GPIO_IF_LedOn(), LOOP_FOREVER, MCU_EXECUTE_SU \leftarrow CCESS_IND, MCU_ORANGE_LED_GPIO, SL_STOP_TIMEOUT, and UART_PRINT.

Referenced by main().

Here is the call graph for this function:



Here is the caller graph for this function:



3.1.5 Variable Documentation

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3.1.5.1 unsigned char g_ucConnectionBSSID[BSSID_LEN_MAX]

Definition at line 121 of file main.c.

Referenced by SimpleLinkWlanEventHandler().

3.1.5.2 unsigned char g_ucConnectionSSID[SSID_LEN_MAX+1]

Definition at line 120 of file main.c.

Referenced by SimpleLinkWlanEventHandler().

3.1.5.3 unsigned long g_ulGatewayIP = 0

Definition at line 119 of file main.c.

Referenced by SimpleLinkNetAppEventHandler().

3.1.5.4 unsigned long g_ulPingPacketsRecv = 0

Definition at line 118 of file main.c.

3.1.5.5 unsigned long g_ulStatus = 0

Definition at line 117 of file main.c.

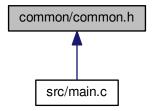
Referenced by SimpleLinkNetAppEventHandler(), and SimpleLinkWlanEventHandler().

Chapter 4

File Documentation

4.1 common/common.h File Reference

This graph shows which files directly or indirectly include this file:



Macros

- #define SSID NAME "YOUR WIFI SSID" /* AP SSID */
- #define SECURITY_TYPE SL_SEC_TYPE_WPA_WPA2/* Security type (OPEN or WEP or WPA*/
- #define SECURITY_KEY "password" /* Password of the secured AP */
- #define SSID_LEN_MAX 32
- #define BSSID LEN MAX 6
- #define UART_PRINT Report
- #define DBG PRINT Report
- #define ERR_PRINT(x) Report("Error [%d] at line [%d] in function [%s] \n\r",x,__LINE___,__FUNCTION__)
- #define LOOP_FOREVER()
- #define ASSERT ON ERROR(error code)
- #define SPAWN TASK PRIORITY 9
- #define SL_STOP_TIMEOUT 200
- #define UNUSED(x) ((x) = (x))
- #define SUCCESS 0
- #define FAILURE -1
- #define CLR_STATUS_BIT_ALL(status_variable) (status_variable = 0)
- #define SET_STATUS_BIT(status_variable, bit) status_variable |= (1<<(bit))
- #define CLR_STATUS_BIT(status_variable, bit) status_variable &= \sim (1<<(bit))

```
• #define CLR_STATUS_BIT_ALL(status_variable) (status_variable = 0)
```

- #define GET_STATUS_BIT(status_variable, bit) (0 != (status_variable & (1<<(bit))))
- #define IS NW PROCSR ON(status variable)
- #define IS CONNECTED(status variable)
- #define IS_IP_LEASED(status_variable)
- #define IS_IP_ACQUIRED(status_variable)
- #define IS_SMART_CFG_START(status_variable)
- #define IS P2P DEV FOUND(status variable)
- #define IS_P2P_REQ_RCVD(status_variable)
- #define IS_CONNECT_FAILED(status_variable)
- #define IS_PING_DONE(status_variable)

Enumerations

enum e_StatusBits {
 STATUS_BIT_NWP_INIT = 0, STATUS_BIT_CONNECTION, STATUS_BIT_IP_LEASED, STATUS_BIT_
 IP_AQUIRED,
 STATUS_BIT_SMARTCONFIG_START, STATUS_BIT_P2P_DEV_FOUND, STATUS_BIT_P2P_REQ_R
 ECEIVED, STATUS_BIT_CONNECTION_FAILED,
 STATUS_BIT_PING_DONE }

4.1.1 Macro Definition Documentation

4.1.1.1 #define ASSERT_ON_ERROR(error_code)

Value:

Definition at line 84 of file common.h.

4.1.1.2 #define BSSID_LEN_MAX 6

Definition at line 64 of file common.h.

4.1.1.3 #define CLR_STATUS_BIT(status_variable, bit) status_variable &= \sim (1<<(bit))

Definition at line 134 of file common.h.

Referenced by SimpleLinkWlanEventHandler().

4.1.1.4 #define CLR_STATUS_BIT_ALL(status_variable) (status_variable = 0)

Definition at line 135 of file common.h.

4.1.1.5 #define CLR_STATUS_BIT_ALL(status_variable) (status_variable = 0)

Definition at line 135 of file common.h.

```
4.1.1.6 #define DBG_PRINT Report
Definition at line 73 of file common.h.
4.1.1.7 #define ERR_PRINT( x ) Report("Error [%d] at line [%d] in function [%s] \n\r",x,__LINE__,_FUNCTION__)
Definition at line 74 of file common.h.
Referenced by main().
4.1.1.8 #define FAILURE -1
Definition at line 97 of file common.h.
4.1.1.9 #define GET_STATUS_BIT( status_variable, bit ) (0 != (status_variable & (1 << (bit))))
Definition at line 136 of file common.h.
4.1.1.10 #define IS_CONNECT_FAILED( status_variable )
Value:
GET_STATUS_BIT(status_variable, \
                                                      STATUS_BIT_CONNECTION_FAILED
Definition at line 152 of file common.h.
4.1.1.11 #define IS_CONNECTED( status_variable )
Value:
GET_STATUS_BIT(status_variable,\
                                                             STATUS_BIT_CONNECTION)
Definition at line 140 of file common.h.
4.1.1.12 #define IS_IP_ACQUIRED( status_variable )
Value:
GET_STATUS_BIT(status_variable,\
                                                              STATUS_BIT_IP_AQUIRED)
Definition at line 144 of file common.h.
4.1.1.13 #define IS_IP_LEASED( status_variable )
Value:
GET_STATUS_BIT(status_variable,\
                                                               STATUS_BIT_IP_LEASED)
Definition at line 142 of file common.h.
```

```
4.1.1.14 #define IS_NW_PROCSR_ON( status_variable )
Value:
GET_STATUS_BIT(status_variable,\
                                                                STATUS_BIT_NWP_INIT)
Definition at line 138 of file common.h.
4.1.1.15 #define IS_P2P_DEV_FOUND( status_variable )
Value:
GET_STATUS_BIT(status_variable,\
                                                           STATUS_BIT_P2P_DEV_FOUND)
Definition at line 148 of file common.h.
4.1.1.16 #define IS_P2P_REQ_RCVD( status_variable )
Value:
{\tt GET\_STATUS\_BIT(status\_variable, \backslash}
                                                        STATUS_BIT_P2P_REQ_RECEIVED)
Definition at line 150 of file common.h.
4.1.1.17 #define IS_PING_DONE( status_variable )
Value:
GET_STATUS_BIT(status_variable,\
                                                               STATUS_BIT_PING_DONE)
Definition at line 154 of file common.h.
4.1.1.18 #define IS_SMART_CFG_START( status_variable )
Value:
GET_STATUS_BIT(status_variable,\
                                                      STATUS_BIT_SMARTCONFIG_START
Definition at line 146 of file common.h.
4.1.1.19 #define LOOP_FOREVER( )
Value:
{ \
                 while(1); \setminus
Definition at line 78 of file common.h.
```

Referenced by main(), and WlanStationMode().

4.1.1.20 #define SECURITY_KEY "password" /* Password of the secured AP */

Definition at line 62 of file common.h.

4.1.1.21 #define SECURITY_TYPE SL_SEC_TYPE_WPA_WPA2/* Security type (OPEN or WEP or WPA*/

Definition at line 61 of file common.h.

4.1.1.22 #define SET_STATUS_BIT(status_variable, bit) status_variable |= (1<<(bit))

Definition at line 133 of file common.h.

Referenced by SimpleLinkNetAppEventHandler(), and SimpleLinkWlanEventHandler().

4.1.1.23 #define SL_STOP_TIMEOUT 200

Definition at line 94 of file common.h.

Referenced by WlanStationMode().

4.1.1.24 #define SPAWN_TASK_PRIORITY 9

Definition at line 93 of file common.h.

Referenced by main().

4.1.1.25 #define SSID_LEN_MAX 32

Definition at line 63 of file common.h.

4.1.1.26 #define SSID_NAME "YOUR_WIFI_SSID" /* AP SSID */

Definition at line 60 of file common.h.

4.1.1.27 #define SUCCESS 0

Definition at line 96 of file common.h.

4.1.1.28 #define UART_PRINT Report

Definition at line 72 of file common.h.

Referenced by SimpleLinkGeneralEventHandler(), SimpleLinkNetAppEventHandler(), SimpleLinkSockEvent Handler(), SimpleLinkWlanEventHandler(), and WlanStationMode().

4.1.1.29 #define UNUSED(x) ((x) = (x))

Definition at line 95 of file common.h.

4.1.2 Enumeration Type Documentation

4.1.2.1 enum e_StatusBits

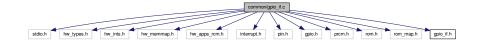
Enumerator

```
STATUS_BIT_NWP_INIT
STATUS_BIT_CONNECTION
STATUS_BIT_IP_LEASED
STATUS_BIT_IP_AQUIRED
STATUS_BIT_SMARTCONFIG_START
STATUS_BIT_P2P_DEV_FOUND
STATUS_BIT_P2P_REQ_RECEIVED
STATUS_BIT_CONNECTION_FAILED
STATUS_BIT_PING_DONE
```

Definition at line 102 of file common.h.

4.2 common/gpio_if.c File Reference

```
#include <stdio.h>
#include "hw_types.h"
#include "hw_ints.h"
#include "hw_memmap.h"
#include "hw_apps_rcm.h"
#include "interrupt.h"
#include "gpio.h"
#include "prcm.h"
#include "rom.h"
#include "rom_map.h"
#include "gpio_if.h"
Include dependency graph for gpio_if.c:
```



Macros

- #define PIN_LED1 9
- #define PIN_LED2 10
- #define PIN_LED3 11

Functions

- void GPIO_IF_LedConfigure (unsigned char ucPins)
- void GPIO IF LedOn (char ledNum)

Turns a specific LED Off.

• void GPIO_IF_LedOff (char ledNum)

Turns a specific LED Off.

• unsigned char GPIO_IF_LedStatus (unsigned char ucGPIONum)

This function returns LED current Status.

void GPIO_IF_LedToggle (unsigned char ucLedNum)

Toggles a board LED.

- void GPIO_IF_GetPortNPin (unsigned char ucPin, unsigned int *puiGPIOPort, unsigned char *pucGPIOPin)
- void GPIO_IF_ConfigureNIntEnable (unsigned int uiGPIOPort, unsigned char ucGPIOPin, unsigned int ui
 —
 IntType, void(*pfnIntHandler)(void))
- void GPIO_IF_Set (unsigned char ucPin, unsigned int uiGPIOPort, unsigned char ucGPIOPin, unsigned char ucGPIOValue)
- unsigned char GPIO_IF_Get (unsigned char ucPin, unsigned int uiGPIOPort, unsigned char ucGPIOPin)

Variables

- unsigned int g_uiLED1Port = 0
- unsigned int g_uiLED2Port = 0
- unsigned int g_uiLED3Port = 0
- unsigned char g ucLED1Pin
- unsigned char g_ucLED2Pin
- unsigned char g_ucLED3Pin

4.2.1 Macro Definition Documentation

4.2.1.1 #define PIN_LED1 9

Definition at line 82 of file gpio_if.c.

Referenced by GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), and GPIO_IF_LedOn().

4.2.1.2 #define PIN_LED2 10

Definition at line 83 of file gpio if.c.

Referenced by GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), and GPIO_IF_LedOn().

4.2.1.3 #define PIN_LED3 11

Definition at line 84 of file gpio if.c.

Referenced by GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), and GPIO_IF_LedOn().

4.2.2 Function Documentation

4.2.2.1 void GPIO_IF_ConfigureNIntEnable (unsigned int *uiGPIOPort*, unsigned char *ucGPIOPin*, unsigned int *uiIntType*, void(*)(void) *pfnIntHandler*)

Configures the GPIO selected as input to generate interrupt on activity

Parameters

uiGPIOPort	is the GPIO port address

ucGPIOPin	is the GPIO pin of the specified port
uiIntType	is the type of the interrupt (refer gpio.h)
pfnIntHandler	is the interrupt handler to register

This function

- 1. Sets GPIO interrupt type
- 2. Registers Interrupt handler
- 3. Enables Interrupt

Returns

None

Definition at line 372 of file gpio_if.c.

4.2.2.2 unsigned char GPIO_IF_Get (unsigned char ucPin, unsigned int uiGPIOPort, unsigned char ucGPIOPin)

Set a value to the specified GPIO pin

Parameters

ucPin	is the GPIO pin to be set (0:39)
uiGPIOPort	is the GPIO port address
ucGPIOPin	is the GPIO pin of the specified port

This function

1. Gets a value of the specified GPIO pin

Returns

value of the GPIO pin

Definition at line 447 of file gpio_if.c.

Referenced by GPIO_IF_LedStatus().

Here is the caller graph for this function:



4.2.2.3 void GPIO_IF_GetPortNPin (unsigned char ucPin, unsigned int * puiGPIOPort, unsigned char * pucGPIOPin)

Get the port and pin of a given GPIO

Parameters

ucPin	is the pin to be set-up as a GPIO (0:39)
puiGPIOPort	is the pointer to store GPIO port address return value
pucGPIOPin	is the pointer to store GPIO pin return value

This function

1. Return the GPIO port address and pin for a given external pin number

Returns

None.

Definition at line 338 of file gpio_if.c.

Referenced by GPIO_IF_LedConfigure().

Here is the caller graph for this function:



4.2.2.4 void GPIO_IF_LedConfigure (unsigned char ucPins)

GPIO Enable & Configuration

Parameters

_		
	ucPins	is the bit-pack representation of 3 LEDs LSB:GP09-GP10-GP11:MSB

Returns

None

Definition at line 123 of file gpio_if.c.

References g_ucLED1Pin, g_ucLED2Pin, g_ucLED3Pin, g_uiLED1Port, g_uiLED2Port, g_uiLED3Port, GPIO_IF \leftarrow _GetPortNPin(), LED1, LED2, LED3, PIN_LED1, PIN_LED2, and PIN_LED3.

Referenced by main().

Here is the call graph for this function:



Here is the caller graph for this function:



4.2.2.5 void GPIO_IF_LedOff (char ledNum)

Turns a specific LED Off.

Turn LED Off

Parameters

ledNum	is the LED Number

Returns

none

Definition at line 217 of file gpio_if.c.

References g_ucled1Pin, g_ucled2Pin, g_ucled3Pin, g_uiled1Port, g_uiled2Port, g_uiled3Port, GPIO_I ← F_Set(), MCU_ALL_LED_IND, MCU_ASSOCIATED_IND, MCU_CLIENT_CONNECTED_IND, MCU_EXECUTE ← FAIL_IND, MCU_EXECUTE_SUCCESS_IND, MCU_GREEN_LED_GPIO, MCU_IP_ALLOC_IND, MCU_ON_IN ← D, MCU_ORANGE_LED_GPIO, MCU_RED_LED_GPIO, MCU_SENDING_DATA_IND, MCU_SERVER_INIT_IND, PIN_LED1, PIN_LED2, and PIN_LED3.

Referenced by GPIO_IF_LedToggle(), and main().

Here is the call graph for this function:



Here is the caller graph for this function:



4.2.2.6 void GPIO_IF_LedOn (char ledNum)

Turns a specific LED Off.

Turn LED On

Parameters

ledNum	is the LED Number

Returns

none

Definition at line 162 of file gpio_if.c.

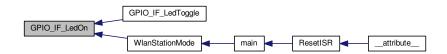
References g_ucled1Pin, g_ucled2Pin, g_ucled3Pin, g_uiled1Port, g_uiled2Port, g_uiled3Port, GPIO_I ← F_Set(), MCU_ALL_LED_IND, MCU_ASSOCIATED_IND, MCU_CLIENT_CONNECTED_IND, MCU_EXECUTE ← FAIL_IND, MCU_EXECUTE_SUCCESS_IND, MCU_GREEN_LED_GPIO, MCU_IP_ALLOC_IND, MCU_ON_IN ← D, MCU_ORANGE_LED_GPIO, MCU_RED_LED_GPIO, MCU_SENDING_DATA_IND, MCU_SERVER_INIT_IND, PIN_LED1, PIN_LED2, and PIN_LED3.

Referenced by GPIO_IF_LedToggle(), and WlanStationMode().

Here is the call graph for this function:



Here is the caller graph for this function:



4.2.2.7 unsigned char GPIO_IF_LedStatus (unsigned char ucGPIONum)

This function returns LED current Status.

Parameters

in	ucGPIONum	is the GPIO to which the LED is connected MCU_GREEN_LED_GPIO
----	-----------	--

Returns

1: LED ON, 0: LED OFF

Definition at line 272 of file gpio_if.c.

References g_ucLED1Pin, g_ucLED2Pin, g_uiLED3Pin, g_uiLED1Port, g_uiLED2Port, g_uiLED3Port, GPIO_IF \leftarrow _Get(), MCU_GREEN_LED_GPIO, MCU_ORANGE_LED_GPIO, and MCU_RED_LED_GPIO.

Referenced by GPIO_IF_LedToggle().

Here is the call graph for this function:



Here is the caller graph for this function:



4.2.2.8 void GPIO_IF_LedToggle (unsigned char ucLedNum)

Toggles a board LED.

Toggle the Led state

Parameters

ledNum is the LED Number

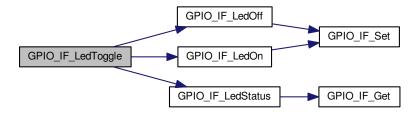
Returns

none

Definition at line 309 of file gpio_if.c.

References GPIO_IF_LedOff(), GPIO_IF_LedOn(), and GPIO_IF_LedStatus().

Here is the call graph for this function:



4.2.2.9 void GPIO_IF_Set (unsigned char *ucPin*, unsigned int *uiGPIOPort*, unsigned char *ucGPIOPin*, unsigned char *ucGPIOValue*)

Set a value to the specified GPIO pin

Parameters

ucPin	is the GPIO pin to be set (0:39)
uiGPIOPort	is the GPIO port address
ucGPIOPin	is the GPIO pin of the specified port
ucGPIOValue	is the value to be set

This function

1. Sets a value to the specified GPIO pin

Returns

None.

Definition at line 416 of file gpio_if.c.

Referenced by GPIO_IF_LedOff(), and GPIO_IF_LedOn().

Here is the caller graph for this function:



4.2.3 Variable Documentation

4.2.3.1 unsigned char g_ucLED1Pin

Definition at line 80 of file gpio_if.c.

Referenced by GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), GPIO_IF_LedOn(), and GPIO_IF_LedStatus().

4.2.3.2 unsigned char g_ucLED2Pin

Definition at line 80 of file gpio if.c.

Referenced by GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), GPIO_IF_LedOn(), and GPIO_IF_LedStatus().

4.2.3.3 unsigned char g_ucLED3Pin

Definition at line 80 of file gpio if.c.

Referenced by GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), GPIO_IF_LedOn(), and GPIO_IF_LedStatus().

4.2.3.4 unsigned int g_uiLED1Port = 0

Definition at line 79 of file gpio if.c.

Referenced by GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), GPIO_IF_LedOn(), and GPIO_IF_LedStatus().

4.2.3.5 unsigned int g_uiLED2Port = 0

Definition at line 79 of file gpio if.c.

Referenced by GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), GPIO_IF_LedOn(), and GPIO_IF_LedStatus().

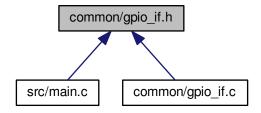
4.2.3.6 unsigned int g_uiLED3Port = 0

Definition at line 79 of file gpio_if.c.

Referenced by GPIO_IF_LedConfigure(), GPIO_IF_LedOff(), GPIO_IF_LedOn(), and GPIO_IF_LedStatus().

4.3 common/gpio_if.h File Reference

This graph shows which files directly or indirectly include this file:



Enumerations

```
    enum ledEnum { NO_LED, LED1 = 0x1, LED2 = 0x2, LED3 = 0x4 }
    enum ledNames {
        NO_LED_IND = NO_LED, MCU_SENDING_DATA_IND = LED1, MCU_ASSOCIATED_IND, MCU_IP_AL
        LOC_IND,
        MCU_SERVER_INIT_IND, MCU_CLIENT_CONNECTED_IND, MCU_ON_IND, MCU_EXECUTE_SUCCE
        SS_IND,
        MCU_EXECUTE_FAIL_IND, MCU_RED_LED_GPIO, MCU_ORANGE_LED_GPIO, MCU_GREEN_LED_
        GPIO,
        MCU_ALL_LED_IND }
```

Functions

- void GPIO_IF_GetPortNPin (unsigned char ucPin, unsigned int *puiGPIOPort, unsigned char *pucGPIOPin)
- void GPIO_IF_ConfigureNIntEnable (unsigned int uiGPIOPort, unsigned char ucGPIOPin, unsigned int ui
 —
 IntType, void(*pfnIntHandler)(void))
- void GPIO_IF_Set (unsigned char ucPin, unsigned int uiGPIOPort, unsigned char ucGPIOPin, unsigned char ucGPIOValue)
- unsigned char GPIO_IF_Get (unsigned char ucPin, unsigned int uiGPIOPort, unsigned char ucGPIOPin)
- void GPIO_IF_LedConfigure (unsigned char ucPins)
- void GPIO_IF_LedOn (char ledNum)

Turns a specific LED Off.

void GPIO_IF_LedOff (char ledNum)

Turns a specific LED Off.

• unsigned char GPIO_IF_LedStatus (unsigned char ucGPIONum)

This function returns LED current Status.

void GPIO_IF_LedToggle (unsigned char ucLedNum)

Toggles a board LED.

4.3.1 Enumeration Type Documentation

4.3.1.1 enum ledEnum

Enumerator

NO_LED

LED1

LED2

LED3

Definition at line 53 of file gpio_if.h.

4.3.1.2 enum ledNames

Enumerator

NO_LED_IND

MCU_SENDING_DATA_IND

MCU_ASSOCIATED_IND

MCU_IP_ALLOC_IND

MCU_SERVER_INIT_IND

MCU_CLIENT_CONNECTED_IND

MCU_ON_IND

MCU_EXECUTE_SUCCESS_IND

MCU_EXECUTE_FAIL_IND

MCU_RED_LED_GPIO

MCU_ORANGE_LED_GPIO

MCU_GREEN_LED_GPIO

MCU_ALL_LED_IND

Definition at line 62 of file gpio_if.h.

4.3.2 Function Documentation

4.3.2.1 void GPIO_IF_ConfigureNIntEnable (unsigned int *uiGPIOPort*, unsigned char *ucGPIOPin*, unsigned int *uiIntType*, void(*)(void) *pfnIntHandler*)

Configures the GPIO selected as input to generate interrupt on activity

Parameters

uiGPIOPort	is the GPIO port address
ucGPIOPin	is the GPIO pin of the specified port
uiIntType	is the type of the interrupt (refer gpio.h)
pfnIntHandler	is the interrupt handler to register

This function

- 1. Sets GPIO interrupt type
- 2. Registers Interrupt handler
- 3. Enables Interrupt

Returns

None

Definition at line 372 of file gpio_if.c.

4.3.2.2 unsigned char GPIO_IF_Get (unsigned char ucPin, unsigned int uiGPIOPort, unsigned char ucGPIOPin)

Set a value to the specified GPIO pin

Parameters

ucPin	is the GPIO pin to be set (0:39)
uiGPIOPort	is the GPIO port address
ucGPIOPin	is the GPIO pin of the specified port

This function

1. Gets a value of the specified GPIO pin

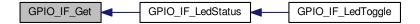
Returns

value of the GPIO pin

Definition at line 447 of file gpio_if.c.

Referenced by GPIO IF LedStatus().

Here is the caller graph for this function:



4.3.2.3 void GPIO_IF_GetPortNPin (unsigned char ucPin, unsigned int * puiGPIOPort, unsigned char * pucGPIOPin)

Get the port and pin of a given GPIO

Parameters

ucPin	is the pin to be set-up as a GPIO (0:39)
puiGPIOPort	is the pointer to store GPIO port address return value
pucGPIOPin	is the pointer to store GPIO pin return value

This function

1. Return the GPIO port address and pin for a given external pin number

Returns

None.

Definition at line 338 of file gpio_if.c.

Referenced by GPIO_IF_LedConfigure().

Here is the caller graph for this function:



4.3.2.4 void GPIO_IF_LedConfigure (unsigned char ucPins)

GPIO Enable & Configuration

Parameters

ucPins is the bit-pack representation of 3 LEDs LSB:GP09-GP10-GP11:MSB

Returns

None

Definition at line 123 of file gpio_if.c.

References g_ucLED1Pin, g_ucLED2Pin, g_uiLED3Pin, g_uiLED1Port, g_uiLED2Port, g_uiLED3Port, GPIO_IF

_GetPortNPin(), LED1, LED2, LED3, PIN_LED1, PIN_LED2, and PIN_LED3.

Referenced by main().

Here is the call graph for this function:



Here is the caller graph for this function:



4.3.2.5 void GPIO_IF_LedOff (char ledNum)

Turns a specific LED Off.

Turn LED Off

Parameters

ledNum	is the LED Number

Returns

none

Definition at line 217 of file gpio if.c.

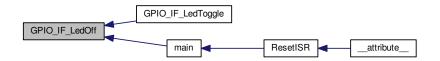
References g_ucled1Pin, g_ucled2Pin, g_ucled3Pin, g_uiled1Port, g_uiled2Port, g_uiled3Port, GPIO_I ← F_Set(), MCU_ALL_LED_IND, MCU_ASSOCIATED_IND, MCU_CLIENT_CONNECTED_IND, MCU_EXECUTE ← FAIL_IND, MCU_EXECUTE_SUCCESS_IND, MCU_GREEN_LED_GPIO, MCU_IP_ALLOC_IND, MCU_ON_IN ← D, MCU_ORANGE_LED_GPIO, MCU_RED_LED_GPIO, MCU_SENDING_DATA_IND, MCU_SERVER_INIT_IND, PIN_LED1, PIN_LED2, and PIN_LED3.

Referenced by GPIO_IF_LedToggle(), and main().

Here is the call graph for this function:



Here is the caller graph for this function:



4.3.2.6 void GPIO_IF_LedOn (char ledNum)

Turns a specific LED Off.

Turn LED On

Parameters

ledNum	is the LED Number
--------	-------------------

Returns

none

Definition at line 162 of file gpio_if.c.

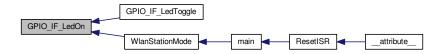
References g_ucled1Pin, g_ucled2Pin, g_ucled3Pin, g_uiled1Port, g_uiled2Port, g_uiled3Port, GPIO_I ← F_Set(), MCU_ALL_LED_IND, MCU_ASSOCIATED_IND, MCU_CLIENT_CONNECTED_IND, MCU_EXECUTE ← FAIL_IND, MCU_EXECUTE_SUCCESS_IND, MCU_GREEN_LED_GPIO, MCU_IP_ALLOC_IND, MCU_ON_IN ← D, MCU_ORANGE_LED_GPIO, MCU_RED_LED_GPIO, MCU_SENDING_DATA_IND, MCU_SERVER_INIT_IND, PIN_LED1, PIN_LED2, and PIN_LED3.

 $Referenced\ by\ GPIO_IF_LedToggle(),\ and\ WlanStationMode().$

Here is the call graph for this function:



Here is the caller graph for this function:



4.3.2.7 unsigned char GPIO_IF_LedStatus (unsigned char ucGPIONum)

This function returns LED current Status.

Parameters

in	ucGPIONum	is the GPIO to which the LED is connected MCU_GREEN_LED_GPIO
----	-----------	--

Returns

1: LED ON, 0: LED OFF

Definition at line 272 of file gpio_if.c.

References g_ucLED1Pin, g_ucLED2Pin, g_uiLED3Pin, g_uiLED1Port, g_uiLED2Port, g_uiLED3Port, GPIO_IF

_Get(), MCU_GREEN_LED_GPIO, MCU_ORANGE_LED_GPIO, and MCU_RED_LED_GPIO.

Referenced by GPIO_IF_LedToggle().

Here is the call graph for this function:



Here is the caller graph for this function:



4.3.2.8 void GPIO_IF_LedToggle (unsigned char ucLedNum)

Toggles a board LED.

Toggle the Led state

Parameters

ledNum	is the LED Number
--------	-------------------

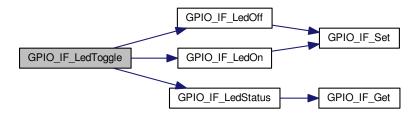
Returns

none

Definition at line 309 of file gpio_if.c.

References GPIO_IF_LedOff(), GPIO_IF_LedOn(), and GPIO_IF_LedStatus().

Here is the call graph for this function:



4.3.2.9 void GPIO_IF_Set (unsigned char *ucPin*, unsigned int *uiGPIOPort*, unsigned char *ucGPIOPin*, unsigned char *ucGPIOValue*)

Set a value to the specified GPIO pin

Parameters

ucPin	is the GPIO pin to be set (0:39)
uiGPIOPort	is the GPIO port address
ucGPIOPin	is the GPIO pin of the specified port
ucGPIOValue	is the value to be set

This function

1. Sets a value to the specified GPIO pin

Returns

None.

Definition at line 416 of file gpio_if.c.

Referenced by GPIO_IF_LedOff(), and GPIO_IF_LedOn().

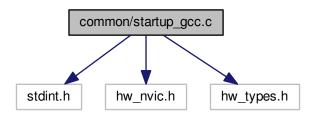
Here is the caller graph for this function:



4.4 common/startup_gcc.c File Reference

```
#include <stdint.h>
#include "hw_nvic.h"
#include "hw_types.h"
```

Include dependency graph for startup_gcc.c:



Functions

- void ResetISR (void)
- void c int00 (void)
- void vPortSVCHandler (void)
- void xPortPendSVHandler (void)
- void xPortSysTickHandler (void)
- int main (void)
- __attribute__ ((section(".intvecs")))
- void * _sbrk (unsigned int incr)

Variables

- unsigned long _heap
- unsigned long eheap
- uint32_t _etext
- uint32_t _data
- uint32_t _edata
- uint32_t _bss
- uint32_t _ebss
- uint32_t __init_data

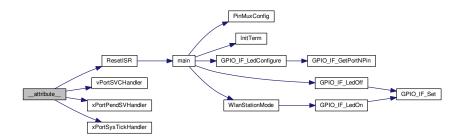
4.4.1 Function Documentation

```
4.4.1.1 __attribute__ ( (section(".intvecs")) )
```

Definition at line 94 of file startup_gcc.c.

References __init_data, _bss, _data, _ebss, _edata, _etext, ResetISR(), vPortSVCHandler(), xPortPendSV Handler(), and xPortSysTickHandler().

Here is the call graph for this function:



4.4.1.2 void _c_int00 (void)

4.4.1.3 void* _sbrk (unsigned int incr)

Definition at line 325 of file startup_gcc.c.

References _eheap, and _heap.

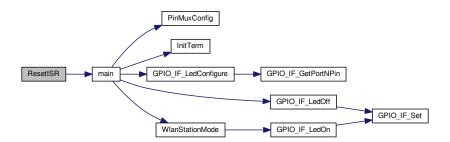
4.4.1.4 void ResetISR (void)

Definition at line 214 of file startup_gcc.c.

References __init_data, _edata, and main().

Referenced by __attribute__().

Here is the call graph for this function:



Here is the caller graph for this function:



4.4.1.5 void vPortSVCHandler (void)

Referenced by __attribute__().

Here is the caller graph for this function:



4.4.1.6 void xPortPendSVHandler (void)

Referenced by __attribute__().

Here is the caller graph for this function:



4.4.1.7 void xPortSysTickHandler (void)

Referenced by __attribute__().

Here is the caller graph for this function:



4.4.2 Variable Documentation

4.4.2.1 uint32_t __init_data

Referenced by __attribute__(), and ResetISR().

```
4.4.2.2 uint32_t _bss

Referenced by __attribute__().

4.4.2.3 uint32_t _data

Referenced by __attribute__().

4.4.2.4 uint32_t _ebss

Referenced by __attribute__().

4.4.2.5 uint32_t _edata

Referenced by __attribute__(), and ResetISR().

4.4.2.6 unsigned long _eheap

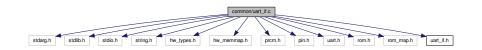
Referenced by __sbrk().

4.4.2.7 uint32_t _etext

Referenced by __attribute__().
```

4.5 common/uart if.c File Reference

```
#include <stdarg.h>
#include <stdlib.h>
#include <stdio.h>
#include <string.h>
#include "hw_types.h"
#include "hw_memmap.h"
#include "prcm.h"
#include "pin.h"
#include "uart.h"
#include "rom_map.h"
#include "rom_map.h"
#include "uart_if.h"
Include dependency graph for uart_if.c:
```



Macros

• #define IS_SPACE(x) (x == 32 ? 1 : 0)

Functions

- void InitTerm ()
- void Message (const char *str)
- void ClearTerm ()
- void Error (char *pcFormat,...)
- int GetCmd (char *pcBuffer, unsigned int uiBufLen)
- int TrimSpace (char *pcInput)
- int Report (const char *pcFormat,...)

Variables

• unsigned int ilen =1

4.5.1 Macro Definition Documentation

```
4.5.1.1 #define IS_SPACE( x ) (x == 32 ? 1 : 0)
```

Definition at line 56 of file uart_if.c.

Referenced by TrimSpace().

4.5.2 Function Documentation

4.5.2.1 void ClearTerm (void)

Clear the console window

This function

1. clears the console window.

Returns

none

Definition at line 127 of file uart_if.c.

References Message().

Here is the call graph for this function:



4.5.2.2 void Error (char * pcFormat, ...)

Error Function

Parameters

Definition at line 142 of file uart_if.c.

References Message().

Here is the call graph for this function:



4.5.2.3 int GetCmd (char * pcBuffer, unsigned int uiBufLen)

Get the Command string from UART

Parameters

pucBuffer	is the command store to which command will be populated
ucBufLen	is the length of buffer store available

Returns

Length of the bytes received. -1 if buffer length exceeded.

Definition at line 165 of file uart_if.c.

References CONSOLE, and Report().

Here is the call graph for this function:



4.5.2.4 void InitTerm (void)

Initialization

This function

1. Configures the UART to be used.

Returns

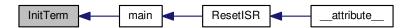
none

Definition at line 80 of file uart_if.c.

References CONSOLE, CONSOLE_PERIPH, and UART_BAUD_RATE.

Referenced by main().

Here is the caller graph for this function:



4.5.2.5 void Message (const char * str)

Outputs a character string to the console

Parameters

_4	to the constitution as the continuous become discounted by
Sīr	is the pointer to the string to be printed
0	is the pointer to the ouring to be printed

This function

1. prints the input string character by character on to the console.

Returns

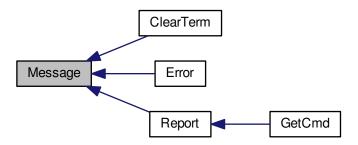
none

Definition at line 103 of file uart_if.c.

References CONSOLE.

Referenced by ClearTerm(), Error(), and Report().

Here is the caller graph for this function:



4.5.2.6 int Report (const char * pcFormat, ...)

prints the formatted string on to the console

Parameters

format	is a pointer to the character string specifying the format in the following arguments need to
	be interpreted.
[variable	number of] arguments according to the format in the first parameters This function
	prints the formatted error statement.

Returns

count of characters printed

Definition at line 278 of file uart_if.c.

References Message().

Referenced by GetCmd().

Here is the call graph for this function:



Here is the caller graph for this function:



4.5.2.7 int TrimSpace (char * pcInput)

Trim the spaces from left and right end of given string

Parameters

Input string on which trimming happens
--

Returns

length of trimmed string

Definition at line 239 of file uart_if.c.

References IS_SPACE.

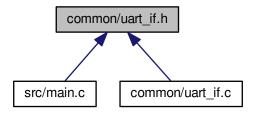
4.5.3 Variable Documentation

4.5.3.1 unsigned int ilen =1

Definition at line 66 of file uart if.c.

4.6 common/uart_if.h File Reference

This graph shows which files directly or indirectly include this file:



Macros

- #define UART_BAUD_RATE 115200
- #define SYSCLK 80000000
- #define CONSOLE UARTA0_BASE
- #define CONSOLE_PERIPH PRCM_UARTA0
- #define UART_IF_BUFFER 64

Functions

- void DispatcherUARTConfigure (void)
- void DispatcherUartSendPacket (unsigned char *inBuff, unsigned short usLength)
- int GetCmd (char *pcBuffer, unsigned int uiBufLen)
- void InitTerm (void)
- void ClearTerm (void)
- void Message (const char *format)
- void Error (char *format,...)
- int TrimSpace (char *pcInput)
- int Report (const char *format,...)

Variables

• unsigned char g_ucUARTBuffer []

4.6.1 Macro Definition Documentation

4.6.1.1 #define CONSOLE UARTA0_BASE

Definition at line 58 of file uart_if.h.

Referenced by GetCmd(), InitTerm(), and Message().

4.6.1.2 #define CONSOLE_PERIPH PRCM_UARTA0

Definition at line 59 of file uart_if.h.

Referenced by InitTerm().

4.6.1.3 #define SYSCLK 80000000

Definition at line 57 of file uart_if.h.

4.6.1.4 #define UART_BAUD_RATE 115200

Definition at line 56 of file uart_if.h.

Referenced by InitTerm().

4.6.1.5 #define UART_IF_BUFFER 64

Definition at line 63 of file uart_if.h.

4.6.2 Function Documentation

4.6.2.1 void ClearTerm (void)

Clear the console window

This function

1. clears the console window.

Returns

none

Definition at line 127 of file uart_if.c.

References Message().

Here is the call graph for this function:



- 4.6.2.2 void DispatcherUARTConfigure (void)
- 4.6.2.3 void DispatcherUartSendPacket (unsigned char * inBuff, unsigned short usLength)
- 4.6.2.4 void Error (char * pcFormat, ...)

Error Function

Parameters

Definition at line 142 of file uart_if.c.

References Message().

Here is the call graph for this function:



4.6.2.5 int GetCmd (char * pcBuffer, unsigned int uiBufLen)

Get the Command string from UART

Parameters

pucBuffer	is the command store to which command will be populated
ucBufLen	is the length of buffer store available

Returns

Length of the bytes received. -1 if buffer length exceeded.

Definition at line 165 of file uart_if.c.

References CONSOLE, and Report().

Here is the call graph for this function:



4.6.2.6 void InitTerm (void)

Initialization

This function

1. Configures the UART to be used.

Returns

none

Definition at line 80 of file uart_if.c.

References CONSOLE, CONSOLE_PERIPH, and UART_BAUD_RATE.

Referenced by main().

Here is the caller graph for this function:



4.6.2.7 void Message (const char * str)

Outputs a character string to the console

Parameters

str is the pointer to the string to be printed

This function

1. prints the input string character by character on to the console.

Returns

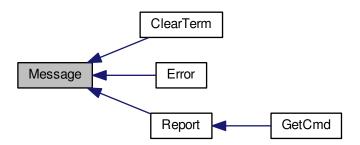
none

Definition at line 103 of file uart_if.c.

References CONSOLE.

Referenced by ClearTerm(), Error(), and Report().

Here is the caller graph for this function:



4.6.2.8 int Report (const char * pcFormat, ...)

prints the formatted string on to the console

Parameters

format	is a pointer to the character string specifying the format in the following arguments need to
	be interpreted.
[variable	number of] arguments according to the format in the first parameters This function
	prints the formatted error statement.

Returns

count of characters printed

Definition at line 278 of file uart_if.c.

References Message().

Referenced by GetCmd().

Here is the call graph for this function:



Here is the caller graph for this function:



4.6.2.9 int TrimSpace (char * pcInput)

Trim the spaces from left and right end of given string

Parameters

Input	string on which trimming happens

Returns

length of trimmed string

Definition at line 239 of file uart_if.c.

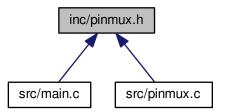
References IS_SPACE.

4.6.3 Variable Documentation

4.6.3.1 unsigned char g_ucUARTBuffer[]

4.7 inc/pinmux.h File Reference

This graph shows which files directly or indirectly include this file:



Functions

void PinMuxConfig (void)

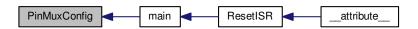
4.7.1 Function Documentation

4.7.1.1 void PinMuxConfig (void)

Definition at line 56 of file pinmux.c.

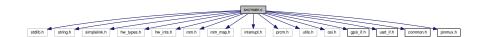
Referenced by main().

Here is the caller graph for this function:



4.8 src/main.c File Reference

```
#include <stdlib.h>
#include <string.h>
#include "simplelink.h"
#include "hw_types.h"
#include "hw_ints.h"
#include "rom.h"
#include "rom_map.h"
#include "interrupt.h"
#include "prcm.h"
#include "utils.h"
#include <osi.h>
#include "gpio_if.h"
#include "uart if.h"
#include "common.h"
#include "pinmux.h"
Include dependency graph for main.c:
```



Macros

- #define APPLICATION NAME "WLAN STATION"
- #define APPLICATION_VERSION "1.1.0"
- #define HOST_NAME "www.google.be"
- #define PING_INTERVAL 1000 /* In msecs */
- #define PING_TIMEOUT 3000 /* In msecs */
- #define PING_PKT_SIZE 20 /* In bytes */
- #define NO_OF_ATTEMPTS 3
- #define OSI_STACK_SIZE 2048

Enumerations

enum e_AppStatusCodes { LAN_CONNECTION_FAILED = -0x7D0, INTERNET_CONNECTION_FAILED = LAN_CONNECTION_FAILED - 1, DEVICE_NOT_IN_STATION_MODE = INTERNET_CONNECTION_FA
 ILED - 1, STATUS_CODE_MAX = -0xBB8 }

Functions

void WlanStationMode (void *pvParameters)

Start simplelink, connect to the ap and run the ping test.

void SimpleLinkWlanEventHandler (SIWlanEvent_t *pWlanEvent)

The Function Handles WLAN Events.

void SimpleLinkNetAppEventHandler (SINetAppEvent t *pNetAppEvent)

This function handles network events such as IP acquisition, IP leased, IP released etc.

 void SimpleLinkHttpServerCallback (SIHttpServerEvent_t *pHttpEvent, SIHttpServerResponse_t *pHttp↔ Response)

This function handles HTTP server events.

void SimpleLinkGeneralEventHandler (SIDeviceEvent_t *pDevEvent)

This function handles General Events.

- void SimpleLinkSockEventHandler (SISockEvent t*pSock)
- void main ()

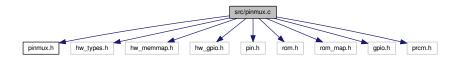
Variables

- unsigned long g_ulStatus = 0
- unsigned long g_ulPingPacketsRecv = 0
- unsigned long g_ulGatewayIP = 0
- unsigned char g_ucConnectionSSID [SSID_LEN_MAX+1]
- unsigned char g_ucConnectionBSSID [BSSID_LEN_MAX]

4.9 src/pinmux.c File Reference

```
#include "pinmux.h"
#include "hw_types.h"
#include "hw_memmap.h"
#include "hw_gpio.h"
#include "pin.h"
#include "rom.h"
#include "rom_map.h"
#include "gpio.h"
#include "prcm.h"
```

Include dependency graph for pinmux.c:



Functions

void PinMuxConfig (void)

4.9.1 Function Documentation

4.9.1.1 void PinMuxConfig (void)

Definition at line 56 of file pinmux.c.

Referenced by main().

Here is the caller graph for this function:



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