Low-level API Contents

Custom Type Definitions :

(from file custom_types.h)

```
typedef enum {
  FALSE = 0,
  TRUE = 1
}
boolean_t;
```

On-board LEDs and Slider Switch Control:

(from file LBF_LED+Switches_lowlevAPI.h)

```
void Red_Led_ON(void);
void Red_Led_OFF(void);
void Red_Led_TOGGLE(void);
void Green_Led_ON(void);
void Green_Led_OFF(void);
void Green_Led_TOGGLE(void);

boolean_t Get_Slider_Select1(void);
boolean_t Get_Slider_Select2(void);
```

Data Flash Control :

(from file LBF_FLASH_lowlevAPI.h)

```
void FLASH_EraseBulk(void);
void FLASH_WritePage(uint8_t* pBuffer, uint32_t WriteAddr, uint16_t NumByteToWrite);
void FLASH_WriteBuffer(uint8_t* pBuffer, uint32_t WriteAddr, uint32_t NumByteToWrite);
void FLASH_ReadBuffer(uint8_t* pBuffer, uint32_t ReadAddr, uint32_t NumByteToRead);
uint32_t FLASH_ReadID(void);
```

Direct STM32 GPIO Control :

(from file LBF_GPIO_lowlevAPI.h)

```
#define GPIO_HIGH(PORT,PIN)        ….......
#define GPIO_LOW(PORT,PIN)         ….......
#define GPIO_TOGGLE(PORT,PIN)      ….......
```

OLED Control :

(from file LFB_OLED_lowlevAPI.h)

```
#define OLED_CS_LOW()        …....
#define OLED_CS_HIGH()       …....
#define OLED_RS_LOW()        …....
#define OLED_RS_HIGH()       …....
#define OLED_RESET_LOW()     …....
```

#define **OLED_RESET_HIGH**() ....

/* Colors for OLED in rgb565 format */
#define BLACK   0x0000
#define WHITE   0xFFFF
#define RED   0xF800
#define GREEN   0x07E0
#define BLUE   0x001F
#define YELLOW   0xFFE0
#define CYAN   0x07FF
#define LIGHT_BLUE   0x1C9F
#define ORANGE   0xFD20

/* OLED SPI */
uint8_t **OLED_SPI_TransferByte** (uint8_t octet);
void **OLED_SendCmd** (uint8_t Value);
void **OLED_SendData** (uint16_t Value);
void **OLED_WriteReg** (uint8_t RegName, uint8_t RegValue);
void **OLED_DataStart** (void);
void **OLED_DataEnd** (void);

/* OLED Gfx Generation */
void **OLED_SetRegion**(uint8_t x, uint8_t y, uint8_t width, uint8_t height);
void **OLED_Fill**(uint8_t x, uint8_t y, uint8_t width, uint8_t height, uint16_t color565);
void **OLED_DisplayBuffer**(uint8_t x, uint8_t y, uint8_t width, uint8_t height, uint16_t *buffer);
void **OLED_Clear** (void);

Power Management

(from file LBF_PWR_lowlevAPI.h)

void **Turn_VDDH_On**(void);
void **Turn_VDDH_Off**(void);
boolean_t **Check_VDDH_On**(void);

UART#1 Control

(from file LBF_UART1_lowlevAPI.h)

void **UART_SendData** (uint8_t data);
uint8_t **UART_ReceiveData** (void);
void **UART_SendString**(char* pString);

Services

(from file Services.h)
void **Delay_ms** (volatile uint32_t nTime);