

## Display API

*void display\_send(void):* Sends all of the data from the internal buffer out to the oled display.  
*void display\_fill(unsigned char byte):* Fills the display buffer with the specified value, it is useful when trying to fill the screen, or to clear it.  
*void display\_writebuffer(int row, int col, char \*string):* Writes to the display buffer at the specified coordinates. Its' x coordinate is row, and Its' y coordinate is col. Both coordinates are measured in characters ( 8 pixels ).

## GPIO API

*bool gpio\_init(void):* Initializes the gpio functions, and prepares for future use. Returns false if it was unable to initialize; True if it was able to initialize.  
*bool gpio\_config(unsigned int pin, unsigned int state):* Configures the direction of a pin. The direction is whether it is input (state == 0) or output (state == 1). Unconfigured pins can't be written to, or read from. Returns false if it was unable to configure the pin; true if it was able to.  
*bool gpio\_write(unsigned int pin, unsigned int state):* Writes to the pin, configuring it to be high, (state == 1) or low (state == 0). Can only be used on pins whose directions are set for output. Returns true  
*int gpio\_read(unsigned int pin):* Reads the state of a pin. It will return 0 if the pin is low, 1 if the pin is high, and -1 if there was an error.  
*void gpio\_close(void):* Closes down the library.

## I2C API

*\_\_s32 i2c\_smbus\_write\_quick(int file, \_\_u8 value):* Transmits the byte *value*.  
*\_\_s32 i2c\_smbus\_read\_byte(int file):* Reads a byte.  
*\_\_s32 i2c\_smbus\_write\_byte(int file, \_\_u8 value):* Transmits the byte *value*.  
*\_\_s32 i2c\_smbus\_read\_byte\_data(int file, \_\_u8 command):* Reads the byte returned from the *command*.  
*\_\_s32 i2c\_smbus\_write\_byte\_data(int file, \_\_u8 command, \_\_u8 value):* Transmits *value* as a parameter to *command*.  
*\_\_s32 i2c\_smbus\_read\_word\_data(int file, \_\_u8 command):* Reads the word returned from *command*.  
*\_\_s32 i2c\_smbus\_write\_word\_data(int file, \_\_u8 command, \_\_u16 value):* Transmits *value* as a parameter to *command*.  
*\_\_s32 i2c\_smbus\_read\_block\_data(int file, \_\_u8 command, \_\_u8 \*values):* Reads the array of bytes returned from *command*.  
*\_\_s32 i2c\_smbus\_write\_block\_data(int file, \_\_u8 command, \_\_u8 length, const \_\_u8 \*values):* Transmits the array of bytes *\*values* as a parameteres to *command*.

## DOW TEMP API

*void w1temp\_init():* Initializes the onewire functions.  
*int w1temp\_getcount():* Returns the count of dow devices on the bus.  
*double w1temp\_get\_temp\_celsius(int index):* Returns the temperature of the device in celsius.  
*double w1temp\_get\_temp\_fahrenheit(int index):* Returns the temperature of the device in fahrenheit.  
*void w1temp\_close():* Closes down the library.