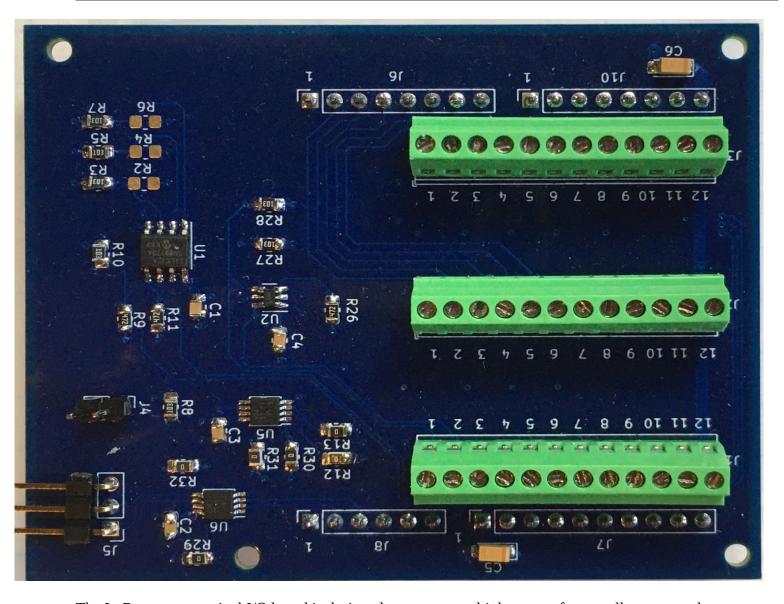
## LoRa Sensor Terminal I/O Board



The LoRa sensor terminal I/O board is designed to support multiple types of externally connected sensors with I2C, SPI, UART, or Analog I/O interfaces.

24LC32A 4K byte EEPROM : Connected to I2C bus 1, can be used for device configuration and data logging.

## TTL RS-232 I/O

UART1 – Debug port

UART2 – User port

## LTC4311 I2C Bus Accelerator:

Up to 1 meter length connections to I2C bus 2 at 400Khz.

Dimension: 2.5" x 3.0"

3x -12 Position Screw Terminals (2.54mm)

J1

**I2C Bus 2 Terminals** 

Pin	Signal	Function
1	I2C2_SCL	I2C Bus 2 clock. This pin is connected to I2C bus accelerator
2	I2C2_SDA	I2C Bus 2 data. This pin is connected to I2C bus accelerator
3	I2C2_SCL	I2C Bus 2 clock. This pin is connected to I2C bus accelerator
4	I2C2_SDA	I2C Bus 2 data. This pin is connected to I2C bus accelerator
5	I2C2_SCL	I2C Bus 2 clock. This pin is connected to I2C bus accelerator.
6	I2C2_SDA	I2C Bus 2 data. This pin is connected to I2C bus accelerator.
7	GND	
8	GND	
9	GND	
10	+5V	
11	+5V	
12	+5V	

**ADC/DAC IO and UART2 Terminals** 

Pin	Signal	Function
1	ADC_IN9	ADC Input 9
2	ADC_IN8	ADC Input 8
3	ADC_IN7	ADC Input 7
4	DAC_OUT2	DAC Output 2
5	DAC_OUT1	DAC Output 1
6	UART2_TXD	Transmit Data *
7	UART2_RXD	Receive Data *
8	AGND	
9	AGND	
10	AGND	
11	+5V	
12	+5V	

<sup>\*</sup> UART2 transmit data and receive data are buffered with a 5v tolerant 3.3V line driver/buffer.

J3 General Purpose I/O or alternate function Terminals

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Pin	Signal	Function
1	PB15	GPIO, SPI2_MOSI
2	PB14	GPIO, SPI2_MISO
3	PB13	GPIO, SPI2_SCK
4	PB12	GPIO, SPI2_NSS
5	PA10	GPIO
6	PA9	GPIO
7	PA1 *	GPIO
8	GND	
9	GND	
10	+5V	
11	+5V	
12	+5V	

<sup>\*</sup> PA1 is connected to a 4.7K pull up to 5V. This can be used for a DB18B20 1-wire temperature sensor or

other function.

## **J4**

Pin	Signal	Function
1	PA0	Pulled up with 4.7K resistor to 3.3V
2	GND	Ground

J5 TTL RS-232 Port (UART1)

Pin	Signal	Function
1	TXD	Transmit Data *
2	RXD	Receive Data *
3	GND	Ground

<sup>\*</sup> UART1 transmit data and receive data are buffered with a 5v tolerant 3.3V line driver/buffer.