GPRS - 3G - GPS - GNSS - RF - ETHERNET

BoB
Break Out Board

TELIT WIRELESS SOLUTIONS

tRF BoB
LE50-868 Inside

FEATURES

◎ **Range:** Up to 2000 m.
◎ **Up to 128 kB Flash, 4kB RAM, 2 kB EEPROM.**
◎ **32.768 kHZ RTC, 4 Timers.**
◎ **Configurable output power.**
◎ **5 I/0 Ports Max available.**
◎ **Hayes mode or 'AT' mode for configuration.**
◎ **Cyclic wake up: wakes up periodically and listens to the radio link.**
◎ **For ultra low-power, low-latency applications.**
◎ **Download Over The Air (DOTA).**
◎ **Pre-certified RF modules, Header Form Factor**
◎ **Cyclic wake up: wakes up periodically and listens to the radio link**
◎ **PCB Dimension:** 47 x 25.4 mm
◎ **Radio Data Rate:** from 4.8 kbps to 115.2kbps
◎ **Transmit (Yellow) - Receive(Red) - Power(Green) LEDs**

47.00mm
25.78mm
2.54mm
22.86mm
25.40mm
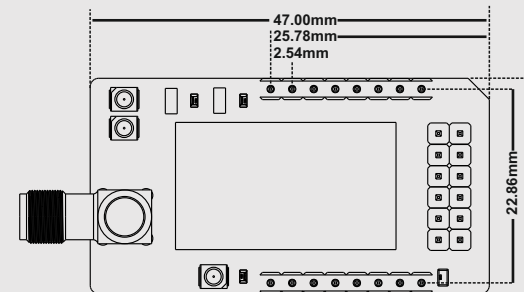
INTRODUCTION
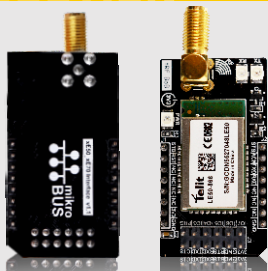
"tRF BoB 50" is a formative with a microBUS structure. It is an effective and easy solution for adding 868 MHz RF communication to your design.It features the Telit LE50-868MHz transceiver module, a SMA connector for an antenna also two radio communication(Tx - Rx) LEDs. tBoB RF 50 communicates with the target board microcontroller via microBUS UART (Rx, Tx), AN, RST, PWM and INT lines. It has a LED diode in order to power indicator.

APPLICATIONS

◎ **Telemetry**
◎ **Automated Meter reading**
◎ **Wireless Sensor Networks**
◎ **Home and Building Automation**
◎ **Wireless Alarm and Security Systems**
◎ **Industrial Monitoring and Control**
◎ **Long range Irrigation Systems**

POWER SUPPLY

Power Supply Voltage: 3.3 V

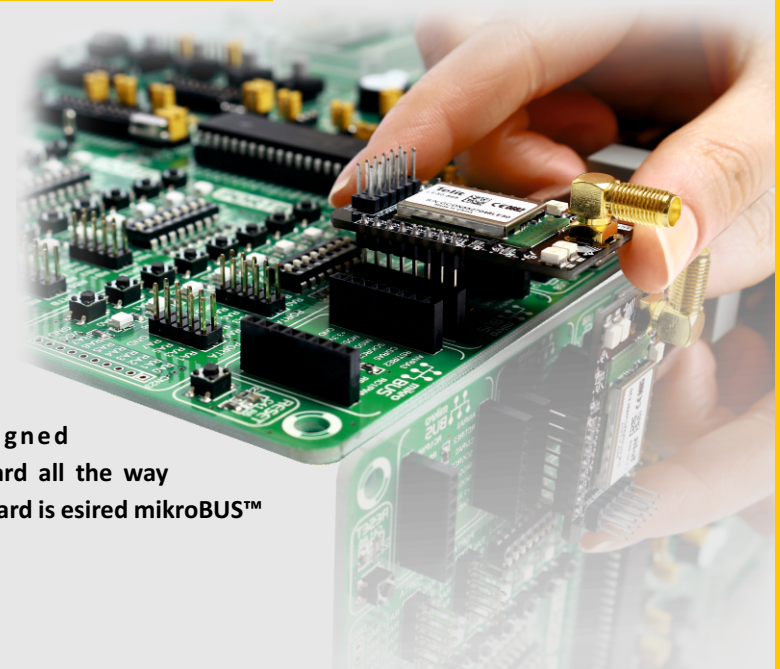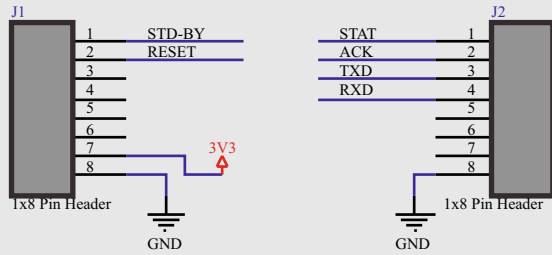Power Supply Current(Min) : 100 mA

PLUGGING THE BOARD

Once you have soldered the headers your board is ready to be placed into desired mikroBUS™ socket. Make sure to align the cut in the lower-right part of the board with the markings on the silkscreen at the mikroBUS™ socket. If all of the pins arealigned correctly, push the board all the way into the socket. your board is esired mikroBUS™ socket.
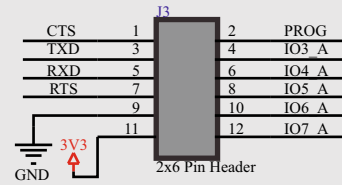
SCHEMATIC

mikroBUS

J1 — 1x8 Pin Header

Pin	Signal
1	STD-BY
2	RESET
3	TXD
4	RXD
5	
6	
7	
8	3V3

GND

J2 — 1x8 Pin Header

Signal	Pin
STAT	1
ACK	2
TXD	3
RXD	4
	5
	6
	7
	8

GND

AUX BUS

J3 — 2x6 Pin Header

Signal	Pin	Pin	Signal
CTS	1	2	PROG
TXD	3	4	IO3_A
RXD	5	6	IO4_A
RTS	7	8	IO5_A
	9	10	IO6_A
3V3	11	12	IO7_A

GND

ANTENNA

ANT1

Signal	Pin	Label
ANT	1	Live Pin
	2	GND

GND

U1 — xE50_xE70 Module

xE50_xE70 Telit RF Module

Signal	Pin	Module Pin
IO1_P	J1	IO1_P / TX LED
IO2_P	J2	IO2_P / RX LED
IO3_A	J3	IO3_A
IO4_A	J4	IO4_A
IO5_A	J5	IO5_A
IO6_A	J6	IO6_A
IO7_A	J7	IO7_A
ACK	J8	Status TX-RX / IO8_AD_DA / ACK TX
STAT	J9	IO9

Pin	Module Pin	Signal
J25	VDD	3V3
J19	TXD	TXD
J21	RXD	RXD
J22	RTS	RTS
J24	CTS	CTS
J29	RF_ANT	ANT
J14	PDI_DATA	
J18	STAND_BY	STD-BY
J16	PROG	PROG
J23	RESET	RESET

Pin	
J11	GND
J12	GND
J13	GND
J15	GND
J17	GND
J20	GND
J26	GND
J27	GND
J28	GND
J30	GND

GND

Transistor / LED section

D2 — IO2, 3V3, R2 1K

Q2 — Pre-Biased NPN, IO2_P, GND

D3 — IO1, 3V3, R1 1K

Q1 — Pre-Biased NPN, IO1_P, GND

D1 — POWER, 3V3, R3 1K

C2 — 1uF, GND

GND