OpenBAN (biosignalsplux Solo)
Data Sheet

OB 04092017

SPECIFICATIONS

> **Analog Ports:** 1 generic input
> **Integrated Sensors:** triaxial accelerometer; triaxial magnetometer; microphone
> **Sampling Rate:** up to 1kHz
> **Resolution:** up to 16-bit
> **Communication:** Bluetooth Class II; range up to ~10m (in line of sight)
> **Battery:** 720mAh 3.7V LiPo rechargeable (~16h streaming)

Fig 1: OpenBAN

FEATURES

> Single channel acquisition device
> Integrated triaxial accelerometer and magnetometer for motion tracking
> Built-in microphone for sound recordings
> Virtual ground for compatible sensors (e.g. EMG)
> Raw data acquisition from all analog single channel biosignalsplux sensors
> Battery charging via micro USB cable

APLICATIONS

> Life sciences studies
> Biomedical research
> Human-Computer Interaction
> Robotics & Cybernetics
> Physiology studies
> Psychophysiology
> Biomechanics
> Ergonomics

GENERAL DESCRIPTION

The OpenBAN gathers 10+ years of field-proven expertise of biosignalsplux products, offering reliable high performance real-time wireless raw data acquisition from a wide range of sensors. It is an easy-to-use, versatile, reliable and portable platform for physiological data acquisition and is the perfect companion for applications where the use of a single biosignal sensor is needed.

WARNING

Use only **ACCESSORIES APPROVED AND VALIDATED** for biosignalsplux.

biosignalsplux
wearable body sensing platform

PLUX – Wireless Biosignals, S.A.
Av. 5 de Outubro, n. 70 – 8.
1050-059 Lisbon, Portugal
plux@plux.info
http://biosignalsplux.com/

REV A

RADIO CHARACTERISTICS

Operating frequency range	2400 – 2483.5 MHz ISM Band
Modulation method	GFSK (1 Mbps) P/4 DQPSK (2Mbps)
Hopping	1600 hops/s, 1 MHz channel space
Transmission power	Min: -11 dBm Max: +3 dBm
Antenna peak gain (XZ-V)	0.5dBi typical
Average antenna gain (XZ-V)	-0.5 dBi typical
Antenna VSWR	2 max
Certifications (Bluetooth module)	Bluetooth, CE, FCC, IC, Japan and South Korea

LED STATUS

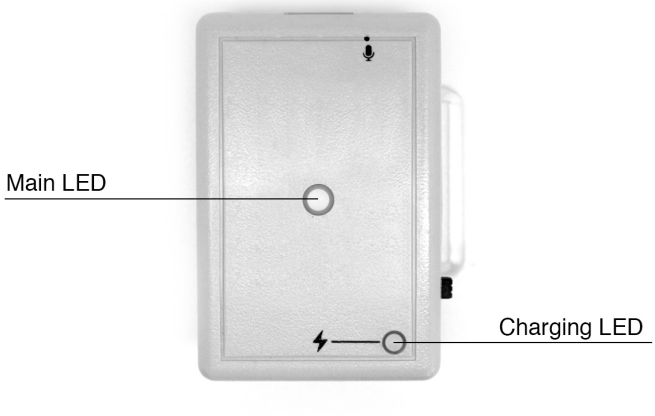

Fig 2: OpenBAN LEDs.

Main LED	
None	Off
1 green blink per second	Device & Bluetooth on; idle
2 green blinks per seconds	Acquiring/streaming data
2 red blinks	Low battery
Battery – Charging LED	
Constantly orange	Charging
Constantly red	Not charging; charging error occurred; switch not in off position
Constantly purple	Charging complete

PHYSICAL CHARACTERISTICS

> **Dimensions (without cloth clip; W x L x H):** 54x35x15mm
> **Dimensions (with cloth clip; W x L x H):** 54x35x24mm
> **Weight:** 45g
> **Color:** Grey

Fig 3: OpenBAN views.