

TEKTELIC eBEAT

LoRaWAN® Device for Continuous Health Monitoring

The **TEKTELIC eBeat Arm Band IoT Device** provides the intermittent monitoring of key physiological parameters, including skin temperature, pulse rate, SpO₂, respiration rate, and heart rate variability through a comfortable wearable form factor. With a 3+ month battery life, and designed for wireless use with LoRaWAN® connectivity, eBeat enables reliable remote health monitoring across clinical, senior care, and home environments. Leveraging low-power, long-range communication, it supports scalable deployment with extended battery life for ongoing patient and wellness monitoring.



IP 22



3 + MONTH

Sensing Measurements



SKIN
TEMPERATURE



SPO₂



PULSE RATE



RESPIRATION
RATE



HEART RATE
VARIABILITY



BATTERY LEVEL
INDICATOR

Features

- ✓ **Built for 24/7 wear and intermittent data collection**, ensuring users are covered with **3+ months of battery life***
- ✓ **Quick and easy device onboarding, configuration & data viewing** using TEKTELIC eDoctor™ web and mobile applications
- ✓ **Optimized low-power design** enabling extended battery life (up to several months) for continuous wearable health monitoring
- ✓ **Quick and easy device onboarding & data viewing** using TEKTELIC LeapX™ mobile application
- ✓ **Comfortable, lightweight arm-band form factor** designed for prolonged use in clinical, senior care, and home environments
- ✓ **Battery status reporting** for visibility into remaining battery life and maintenance planning
- ✓ **Intermittent monitoring of vital physiological parameters**, including heart rate, body temperature, SpO₂, respiration rate, and heart rate variability
- ✓ **Rapid deployment** for scalable hospital or care facility deployments
- ✓ **Supports FUOTA (Firmware Update Over-The-Air)** for efficient remote firmware management
- ✓ **Compatible with standard LoRaWAN® gateways and network servers** for broad interoperability
- ✓ **Wireless, battery-powered operation** enabling flexible, untethered deployment without reliance on local infrastructure

*Actual battery life varies based on configuration, data rate, and operating temperature.

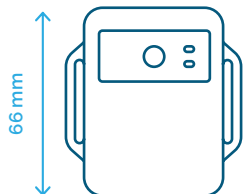
11.7 mm



36.2 mm



66 mm



Technical and Functional System Specifications

General System Parameters			
Operational Temperature	5°C to 40°C		
Storage Temperature	-25°C to 70°C		
Operational Relative Humidity	15% to 90%		
Ingress Protection	IP22		
Size	Device: 66.0 x 36.2 x 11.7 mm		
	Strap: 450.0 x 28.0 x 5.0 mm		
Weight (including batteries)	Device: 45 g		
	Strap: 10 g		
Battery	1 x Panasonic CR2477 (1000 mAh)		
Battery Life			
Reporting Period - 5 min @SF10	90 days		
Reporting Period - 5 min @SF7	110 days		
Wireless Parameters (LoRa)			
RF Power (Max)	14 dBm		
RF Sensitivity	-137 dBm (SF12, 125 kHz)		
Channel Plans	EU868, US915, AU915, AS923-1,-2,-3,-4, IN865, KR920		
Antenna	Internal		
LoRa Device Class	Class A		
Specification Version	1.0.4		
Specifications	Range	Accuracy	Resolution
Pulse Rate	30-240 bpm	+/- 3 bpm	1 bpm
Respiration Rate	4-36 bpm	+/- 2 bpm	1 rpm
SpO2	70-100%	+/- 4%	1%
Skin Temperature	30°C to 43°C	+/- 0.3°C	0.05°C
Heart Rate Variability	0-255 ms	N/A	1 ms
Certifications & Compliance			
Regulatory	FCC, ISED, FDA 510(k) (PENDING)		
Product Safety	IEC 60601-1 (PENDING)		
Environmental	RoHS		

TEKTELIC Communications is a premier supplier of complete LoRaWAN® IoT solutions. Our end-to-end systems combine network infrastructure, devices, and applications to enable easy, fast, and cost-effective deployment for the most demanding IoT challenges.