

# Data doesn't rest

Clinically relevant, objective, and continuous Cardiology, Respiratory, Sleep, and Energy Expenditure data collection for therapy evaluation.

- Determine next steps for therapy development from trial to trial

## Wrist-worn wearable device

- 24/7 data capture, accessed remotely via mobile and web apps
- · Multiple clinically relevant, validated, objective endpoints based on accelerometry and photoplethysmography (PPG) signals
- End-to-end solution inclusive of consultation regarding study design, device recommendation, and data analysis
- 24/7 customer service and support

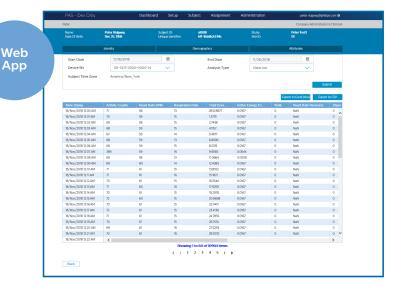


Intelligence for active evaluation of therapy support and future patient care.

## Customizable studies enables data to be hidden or visible to participants.



App



## **Features and Specifications**

Accessories	
Charger and user manual	Charging cradle with USB connector; 5 V DC and 250 mA
Battery	
Battery type	3.7 V 90 mAh built-in rechargeable li-polymer battery
Typical battery life	3 days
Recharge time	90 minutes to full charge
Communications	
Bluetooth	Low energy Bluetooth
Communication range	Approximately 2 meters (6 feet)
Mobile devices	Tested on devices from leading mobile manufacturers
Dimensions	
Size	Approx. 200 mm × 24 mm (small); Approx. 230 mm × 24 mm (large)
	Height of enclosure: 11 mm; Height of strap: 3 mm
Weight	Approx. 25 g / 0.9 oz
Display	Monochrome matrix display
Environmental attributes	
Moisture protection rating	IPX5/IPX7 (Health Band); IP21 (charging cradle)
Storage & transportation conditions	Temperature: $-20 ^{\circ}\text{C}$ / $-4 ^{\circ}\text{F}$ to $60 ^{\circ}\text{C}$ / $140 ^{\circ}\text{F}$ ; Relative humidity: < 93%.
	Atmospheric pressure: 700 hPa to 1060 hPa
Memory	
Memory size	4 MB
Monitoring capacity	7 days before rewriting
Recording	
Data output	60-sec epoch; 30-sec epoch for sleep/wake; aggregated per period
Off-wrist detection	Through pulse rate detected via photopletysmography (PPG)
Recording time	Continuous recording excluding charging time and off wrist periods
Sensors (Accelerometer and PPG)	
Accelerometer	MEMS 3 axis (x,y,z)
Accelerometer dynamic range	+/- 8g
Accelerometer sampling rate	16 Hz
Accelerometer RMS noise	<2.1 mg
PPG frequency	525 nm for both LEDs
PPG sampling rate	32 Hz
PPG sensor	Optical Heart rate sensor (2 LEDs equally distributed
	on a single axis, centers aligned.)
Warranty	2 year standard

## **Endpoints**

#### Cardiology

- · Heart rate
- Resting heart rate

## **Energy Expenditure**

- Activity counts
- Active energy expenditure
- Active minutes
- Activity types: walk and run
- Step counts
- Total energy expenditure
- · VO2 Max
- Cardio Fitness Index

### Respiratory

- · Respiratory rate
- Resting respiratory rate

#### Sleep

- · Sleep efficiency
- Sleep onset latency
- Total sleep time
- Wake after sleep onset

