

## iPetWearR



Introduced at CES 2022, ITRI is presenting **iPetWearR**, the world's first smart wearable device using contactless micro-physiological radar sensing technology for pet health monitoring. This sensor package continuously monitors the health parameters of pets including heart rate, respiration, and activity to identify their health status via user-friendly operation.

### **Technology Breakthroughs and Features:**

- **Non-contact detection:** The low power Doppler radar technology developed by ITRI for pulse and chest motion detection achieves instant, non-skin-contact monitoring. iPetWear's sensor is lightweight, allowing pets of various sizes to easily wear it on their collar, and does not require direct contact with skin for accurate health monitoring.
- **Multi-functional monitoring:** iPetWearR tracks and records various physiological measurements for pets, including heart rate, breathing, sleep/awake status, and activity. The accompanying app displays real-time data, keeps long-term records, and provides alerts when an abnormality is detected.
- **High accuracy:** The motion/activity detection of iPetWear's 6-Axis G-sensor has an error rate of under 5%. The low power radar used for heart rate/respiration rate detection has an error rate

of under 10%.

- Flexible and customized usage: Users attach the device close to the pet's neck or chest. The sensing technology can also be integrated into various pet mattresses, addressing customized pet needs.
- Cost-effective: The basic US\$80 product package includes a sensor device, collar (with various sizes to choose from), and a user-friendly cross-platform Android/iOS APP.

#### **Technical Specifications:**

- Length: 1.9 in
- Width: 1.4 in
- Height: 0.5 in
- Weight: 0.8 oz
- Collar size: XS/S/M/L
- Data transmission: Bluetooth BLE
- Operating temperature: 5 °C-50 °C
- Humidity: 20%-80% RH
- Detection Range: Heart rate: 48-300 bpm; Respiration rate: 6-60 bpm

#### **Applications:**

iPetWear provides physiological (HR/BR/Sleep/Activity) measurements for different types of pets. It can be used in the home or animal shelters, in both indoor and outdoor conditions. This innovation is an ideal tool that assists pet owners, caretakers, or veterinarians in animal health management.