



PHILIPS

Connected sensing
solutions

Wearable biosensor



Keep watch, know more,
respond quickly

One convenient
wireless sensor
measures key
parameters for
patients requiring
more frequent
monitoring

In many hospitals, the number of higher acuity patients on general floors and in emergency department waiting areas is increasing, while at the same time the caregiver/patient ratio is decreasing. Philips wearable biosensor helps caregivers keep a close watch on patients. It is designed to work with Philips IntelliVue GuardianSoftware to aid early identification of patient deterioration and detect falls, driving early intervention.

The biosensor is a medical-grade, self-adhesive, single-patient-use, wireless device worn discreetly on the chest to continuously measure vital signs and posture and detect falls.

Comprehensive and valuable patient data from a single biosensor

Small and discreet, the wearable biosensor lets patients move unimpeded.

While wearing the biosensor, patients can move freely in their room or throughout the unit.* The biosensor automates the process of collecting patient vital signs, limiting disturbances to the patient. The biosensor allows patient mobility, and integrating with IntelliVue GuardianSoftware provides peace of mind that each patient's vital signs are being watched while caregivers are attending to other activities.

Philips wearable biosensor

- Automatically and continuously gathers respiratory rate, heart rate, and body posture, and detects falls and sends data to IntelliVue GuardianSoftware
- Can be discreetly worn on the chest and does not require cables or wires, providing patient comfort and freedom of movement
- Is fully disposable,** self-adhesive, battery-operated, and designed for four-day use to limit cross-contamination and eliminate cleaning and maintenance
- Encrypts data, providing data security and aiding Health Insurance Portability and Accountability Act (HIPAA) compliance
- Uses Bluetooth low-energy technology to eliminate the need for a battery charger; can also coexist alongside WLAN
- Provides temporary memory storage of more than ten hours

* The coverage area is the line of sight within 33 feet (10 meters) of the relay device. Beyond the coverage area, the patient needs to carry the relay device in a pouch.

** Batteries must be disposed of or recycled in accordance with local regulations.

Continuous measurement and unencumbered movement

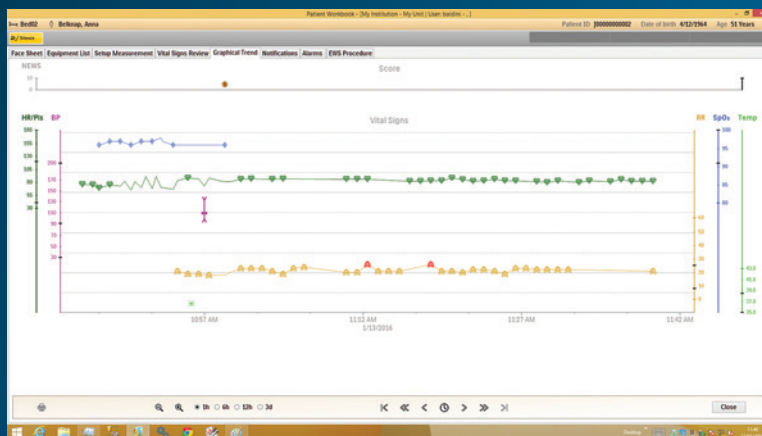
Philips wearable biosensor packs powerful technology, including an accelerometer to detect respiration and motion and a Bluetooth, low-energy radio for communication. The biosensor is single-patient-use, battery-operated, and designed to last up to four days.

Keeping patient comfort in mind, Philips wearable biosensor has no cables or wires, so patients can move freely in their rooms and throughout the unit.* Caregivers can remain confident that their patients are being monitored, even while they are out of sight.

Philips wearable biosensor is designed for integration with IntelliVue GuardianSoftware to derive actionable insights and to help enhance patient care.



Wearable biosensor is comfortable for patients to wear, with no wires or cables to restrict movement.



Respiration is one of the earliest and most specific signs of deterioration.¹ Philips wearable biosensor monitors respiration, taking the ambiguity out of this often-subjective and difficult-to-measure patient parameter.

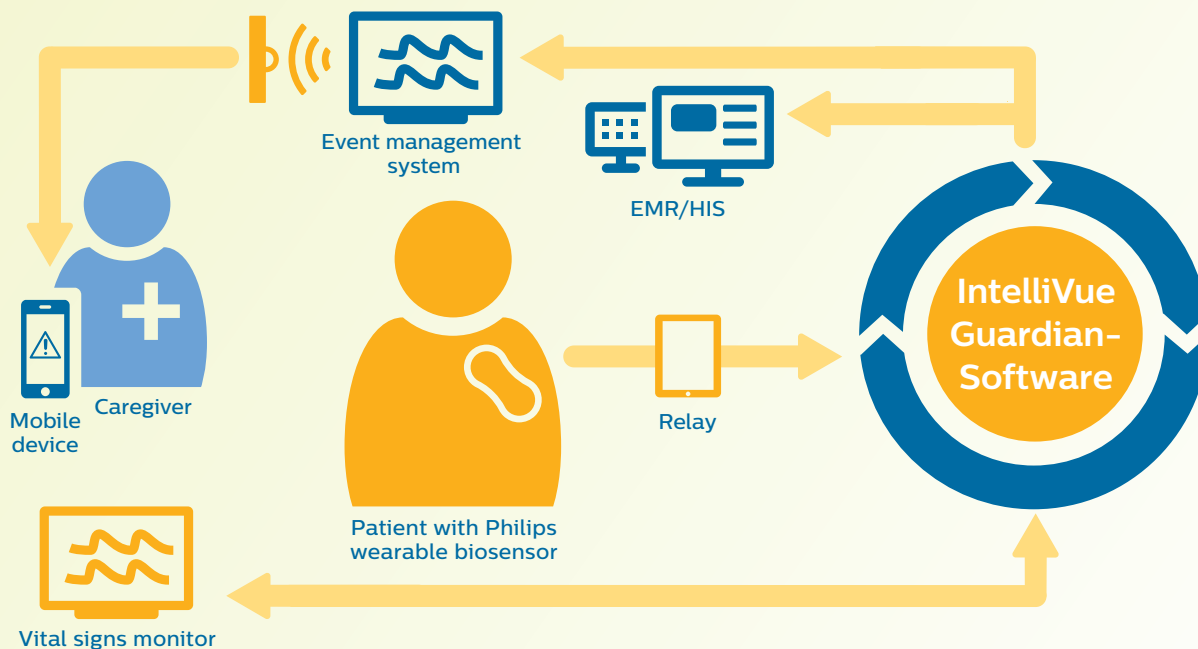
Philips wearable biosensor integrates with IntelliVue GuardianSoftware

It's been shown that 66% of cardiac arrest patients show abnormal signs and symptoms up to six hours prior to cardiac arrest, but physicians are only notified 25% of the time² and that the "two most important predictors for patient adverse events are respiratory rate and heart rate."³ Continuous patient data captured by the biosensor is automatically sent to the IntelliVue GuardianSoftware running in the background. Guardian verifies clinically significant changes or deterioration by analyzing the combined trend of the measurements over a configurable period of time. If deterioration is verified, a meaningful and actionable notification can automatically be sent to the responsible caregiver per the hospital's policy to drive early intervention. Vital signs, observations, and scores can automatically be sent to the EMR systems per the hospital's configured needs.

In the general care department, as well as in the waiting areas of the emergency department, directing caregiver attention to early signs of potential adverse events can help reduce possible transfers to the ICU.

- **Offer** comprehensive insight into your patients' condition to help you manage their care on the general care floors and in ED waiting areas
- **Aid** in the early identification of patient deterioration to help drive early interventions which could help reduce associated adverse events, complications, unplanned transfers back to the ICU, and longer lengths of stay
- **Help** enhance workflow efficiencies and aid limited staff resources with an automated solution
- **Provide** mobility and comfort to patients and peace of mind to caregivers

IntelliVue Guardian Solution data flow



Communication relay, built for durability

The relay transmits patient data from the wearable biosensor through the hospital's WLAN network to IntelliVue GuardianSoftware. The relay is rugged, waterproof, and designed to protect against damage due to impact. It guards against dust entry and withstands water immersion to depths of 1.8 m (6 ft) and up to 30 minutes (IP67).



Wearable biosensor, relay, and accessories

Product number	Product description	Quantity
Wearable biosensor		
989803200061	Philips wearable biosensor, hydrocolloid	5/box
Relay		
989803197441	Global relay starter kit (relay, case, power supply and cord, global wall outlet plug adapters, wall mount relay holder)	1 kit
989803197461	Relay (relay, power supply and cord, global wall outlet plug adapters)	1
Accessories		
989803198021	Relay case	1
989803198011	Wall mount relay holder	1
989803198391	Relay power supply and cord	1
989803198721	Global wall outlet plug adapters	1 kit

1. Creitikos M, Chen J, Hillman K, Bellomo R, Finfer S, Flabouris A, MERIT study investigators. The objective medical emergency team activation criteria: a case-control study. *Resuscitation*. 2007 Apr;73(1):62-72. Epub 2007, Jan 22.
2. Franklin C, Mathew J. Developing strategies to prevent in-hospital cardiac arrest: analyzing responses of physicians and nurses in the hours before the event. *Crit Care Med*. 1994;22(2):244-247.
3. Chaboyer W, et al. *Am J Crit Care*. 2008;17:255-263.

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