



**Pulse Oximetry Technology**

Measurements You Can Trust

**Count on Nonin.**

# Reliable Readings for Confident Decisions

Some people call it the fifth vital sign. After pulse rate, respiratory rate, body temperature, and blood pressure, more medical professionals than ever check blood oxygen saturation. Indirect SpO<sub>2</sub> measurement through pulse oximetry is fast, easy and noninvasive.

## Testing the Limits of Pulse Oximetry

Every medical care scenario has challenges and complications. Factors such as motion or low perfusion can affect pulse oximetry readings.

Low perfusion can occur in patients who are cold, or have reduced circulation due to diseases such as congestive heart failure or diabetes. Low perfusion results in weak signals—which can lead to false highs or no reading at all.<sup>1</sup>

Patient movement can result in erratic readings, causing clinicians to doubt the quality of data they get from their equipment. This affects their ability to make confident treatment decisions.

Dark skin pigmentation can affect the way red and infrared light are received by some pulse oximetry sensors. This makes it difficult for clinicians to determine true blood oxygen levels.

DIFFERENCE  
OF UP TO **8** %  
POINTS

Care professionals in every field need reliable measurements to make timely decisions

At low saturations, it has been shown that readings on individuals with darkly pigmented skin can be off by up to eight percentage points.<sup>2</sup>

## Responsive Measurements, Even in the Most Demanding Situations

Signal processing technology from Nonin applies advanced algorithms to filter out interference and artifacts, leaving only the true pulse signal. Even in the presence of motion, low perfusion, or other challenging conditions,\* Nonin delivers readings you can trust.



1. Batchelder, P.B., Fingertip Pulse Oximeter Performance in Dyspnea and Low Perfusion During Hypoxic Events. Clinimark Laboratories, Boulder, Colorado. 2016. White Paper.

2. Bickler PE, Feiner JR, Severinghaus JW. Effects of skin pigmentation on pulse oximeter accuracy at low saturation. Anesthesiology. 2005 Apr;102(4):715-9.

\*Refer to oximeter IFU for specific accuracy and performance data.



# Advanced Technologies Deliver True Measurements

Nonin technologies will deliver true readings whenever and wherever you need them—even in the presence of patient motion, low perfusion, dark skin pigmentation or challenging clinical and environmental conditions.

## PureLight® Sensor Technology

Pulse oximetry sensors use red and infrared LEDs to measure deoxygenated and oxygenated hemoglobin. Traditional LEDs may be affected by contamination which affects oximeter calibration, resulting in inaccurate SpO<sub>2</sub> readings below 80%. Only Nonin sensors use PureLight LEDs, which produce a high-intensity pure light spectrum that eliminates variations in readings from patient to patient and sensor to sensor.

## PureSAT® Sensor Technology

Clinically proven PureSAT pulse oximetry technology provides precise measurements—even in the presence of motion, low perfusion, or other challenging factors—so you can make more confident decisions.

PureSAT signal processing reads the entire waveform. Advanced algorithms filter out artifacts and interference to show the true pulse. Using smart averaging, PureSAT adjusts to each patient's condition to give you fast and reliable readings.



PalmSAT® 2500 Series

**10<sup>X</sup>** GREATER  
SIGNAL RESOLUTION  
TRACKS & DISPLAYS  
CHANGE IMMEDIATELY



# Nonin Oximetry Solutions

Nonin designs and manufactures reliable oximetry and capnography solutions for use in a diverse range of settings, from prehospital emergencies to home care monitoring.

Our products are designed with durability to withstand repeated use for long-lasting performance without workflow interruptions.

## Full Suite of Measurements<sup>†</sup>



**Cerebral & Tissue Oximetry**



**Capnography & Capnometry**

### Pulse Oximetry



**Respiratory Rate**



**Pulse Rate**

## Portfolio of Products



### Fingertip

Rugged designs with clinically proven accuracy



### Handheld

Proven durability for portable monitoring requirements



### Patient Worn

Flexible design for stationary or ambulatory monitoring



### Adult, Pediatric & Neonate Sensors

The most durable sensors on the market, with options for every patient



### Tabletop

Simple and dependable monitoring across all care settings



### Multi-Parameter Integration

Versatile technology available in a variety of monitoring products

<sup>†</sup>Not all parameters are approved in all countries. Respiratory rate, COHb and MetHb are not available in the USA.  
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# Count on Nonin.

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## Performance

Responsive, reliable measurements you can trust in any situation



## Product

Durable devices built to withstand repeated use for long-lasting performance



## People

Dedicated sales, engineering and service support for over 30 years

To learn more about our technologies and products, visit [nonin.com/technologies/pulse-oximetry/](https://nonin.com/technologies/pulse-oximetry/)

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