A global leader in noninvasive medical monitoring innovations
Nonin Medical: Leaders in Noninvasive Medical Monitoring

Nonin Medical, Inc. is a technology-driven company and a leader in developing noninvasive medical monitoring solutions that improve the quality of people’s lives. We do this by developing low-cost, high-quality, easy-to-use technologies that empower clinicians to make better decisions and individuals to proactively manage their health.

The foundation of our success is our ability to apply innovative signal processing and sensor design technologies to create small, low power, portable solutions that advance industry standards and meet customers’ evolving needs.

With the introduction of our Continua™-Certified, interoperable, Bluetooth®-enabled wireless devices, we are leading the way in simplifying the exchange of information to lower healthcare costs and increase patient independence. This is made possible by the people of Nonin Medical, who are dedicated to providing outstanding service to loyal customers like you.
Significant Nonin Medical Achievements:

• 1986 – Nonin Medical Inc. founded; first oximeter shipped
• 1990 – Introduced world’s first portable handheld pulse oximeter
• 1991 – Released world’s first oximeter with fiber optic sensor
• 1995 – Introduced world’s first fingertip pulse oximeter
• 1997 – Released world’s first low power pulse oximeter for OEM
• 2004 – Introduced world’s first pulse oximeter with Bluetooth® wireless technology
• 2007 – Launched pulse oximeter/capnograph monitor to US and Canada
• 2008 – Founding member of Continua™ Alliance Group
• 2008 – Released world’s first interoperable, fingertip pulse oximeter with Bluetooth® wireless technology
• 2009 – Recipient of Bluetooth SIG’s “Best of CES” Award
• 2009 – Introduced the world’s first and only dual-emitter, dual-detector regional oximetry system
• 2010 – Certified to Microsoft® HealthVault™ eHealth consumer platform
• 2011 – Introduced adult absolute regional oximetry sensor for cerebral/somatic applications
• 2011 – Released world’s first regional oximetry OEM Solution
• 2011 – Introduced world’s first regional oximetry system that automatically accounts for pediatric brain tissue development variation when measuring oxygen saturation levels
• 2012 – Announced US expanded indications for Onyx® Vantage, the first finger pulse oximeter with accuracy claims for expanded use on thumbs and toes
• 2013 – Introduced in Europe the world’s first universal oximetry system combining pulse oximetry and regional oximetry into one system
• 2013 – Introduced in Europe the world’s first medical device featuring Bluetooth® Smart wireless technology: the Nonin 3230 Bluetooth® Smart OEM finger pulse oximeter for eHealth/telemedicine applications
• 2013 – Won Frost & Sullivan’s North American Product Quality Leadership Award for Pulse Oximeters
• 2014 – Winner of Bluetooth SIG’s “Bluetooth Breakthrough Award” for the Nonin 3230 Bluetooth® Smart OEM/eHealth finger pulse oximeter
PureSAT® SpO₂ Technology

Nonin Medical’s clinically proven PureSAT pulse oximetry technology utilizes intelligent pulse-by-pulse filtering to provide precise oximetry measurements — even in the presence of SpO₂ changes, motion, low perfusion or other challenging conditions. Through identification of the best and most reliable signals, users are provided with accurate information and the fastest response time to physiological changes.

PureLight® Sensor Technology

Nonin’s PureLight sensor technology provides only the purest red and infrared LEDs to create unparalleled accuracy — especially at critical SpO₂ levels. Nonin’s PureLight LEDs hold a steady calibration curve, even at SpO₂ levels below 80% where reliable information is even more critical.

Nonin...when getting accurate SpO₂ values matter

Respiratory patients often have complex conditions with co-morbidities. Your ability to make the right decision is often dependent on getting an accurate SpO₂ reading. Nonin has over 25 years of clinical usage experience. Our oximeters are superior under challenging conditions, including SpO₂ changes, motion and low perfusion.

Nonin’s finger pulse oximeters provide accurate readings for:

- Pediatric Patients
- Any Digit
- Dark Skin Pigmentation
SpO₂ Values You Can Trust

Desaturations
- Nonin PureSAT technology uses pulse-by-pulse filtering to provide precise SpO₂ measurements. The leading competitors use measurement averaging across numerous pulses resulting in a delayed or inaccurate reading during saturation changes.
- In a comparison in which a subject desaturated from 98% to 82% SpO₂ over a 1.4 minute time period, only Nonin tracked to the 82% while two leading competitors registered changes of only 3 points.

Low perfusion
- Nonin PureSAT technology filters out noise artifact to achieve proven accuracy in low perfusion.

Dark skin tones, ambient light and pediatric-to-adult finger sizes
- Nonin PureSAT technology and PureLight sensors enable accurate readings in these challenging conditions. Many competitors do not.

Superior Durability
- Nonin’s quality construction provides durability in clinical conditions.
- Drop durability – after 50 drops from 3 meters onto a hard surface, Onyx® remained unbroken. Two leading competitors broke into pieces within 2–4 drops.
- Moisture resistance – Onyx passed a 10-minute test against ingress of water per IEC 60529 testing protocol.
- Warranty – Onyx® Vantage has a 4-year warranty.

Made in America
Nonin is the inventor of fingertip pulse oximetry. Our finger oximeters are produced in the USA. We have dedicated customer and technical service staff to serve you globally from Minnesota and The Netherlands. Many of the numerous other brands of finger oximeters are made by two manufacturers in China.

1Accuracy and durability studies are located at nonin.com/PureSAT
Empower Your Patients to Succeed at Home

The home environment contains many challenges confounding your patients’ ability to successfully measure and manage their conditions. In addition, accurate reading of SpO₂ values is among the most important factors for successful management of Long Term Oxygen Therapy.

Refer Your Patients to a Nonin GO₂ Finger Oximeter

Nonin’s proven accuracy and durability under challenging conditions has been shown to surpass leading imported oximeters, giving your patients the confidence to manage their conditions and maintain their activities.

- **Accurate** – especially in challenging conditions¹
  - Nonin GO₂ is engineered with the same trusted technology that you have come to rely on. As a result, your patients can more confidently get accurate readings in challenging conditions:
    - O₂ saturation changes
    - Low perfusion
    - Skin tone ranges – light to dark
    - Ambient light and finger size variability

- **Durable** – in home-use environments¹
  - Break resistance – in a drop test, GO₂ withstood at least 25 drops from 3 feet onto a hard surface. Two imported competitors broke into pieces within 2–4 drops.
    - 2-year warranty (most imported oximeters have 1-year warranties).
  - Moisture resistance – GO₂ passed a 10-minute test against ingress of water. All three imported competitors that were tested stopped working at 58 seconds.

- **Confidence to be active** – your patients will be more likely to stay active if they know their measurements are accurate.

¹Accuracy and durability studies are located at nonin.com/PersonalHomeUse/NoninDifference

“[COPD] patients should all have oximeters to guide their oxygen use during all activities of daily living.” – Dr. Thomas L Petty, MD

GO₂™ Achieve, Model 9570-A
Finger Pulse Oximeter
Available in 6 colors: Blue, Green, Orange, Red, Pink and White

GO₂™, Model 9570
Finger Pulse Oximeter
Available in 6 colors: Blue, Green, Orange, Red, Pink and White

Order online at nonin.com/BuyNonin

**GO₂ and GO₂ Achieve are warranted only for personal home use:**

- GO₂ is a medical device and US federal law restricts this device to sale by or on the order of a licensed clinician.
- GO₂ Achieve is not defined as a medical device in the US and therefore does not require a prescription.
The Onyx® II 9550 finger pulse oximeter provides fast, clinically proven SpO₂ and pulse rate readings in the widest range of patients and settings for accuracy you can act on. In addition, the Onyx II 9550 is rugged enough to be used in the most demanding environments and has US Army and US Air Force Aeromedical Certification for use in helicopters. With 2500 spot checks and 48-month battery storage life, the Onyx II 9550 really delivers.

The WristOx2®, Model 3150 is the most advanced wrist-worn pulse oximeter available. Ideal for daily activity monitoring and overnight studies, the reliable Model 3150 is comfortable and unobtrusive. It is simple and easy to use — providing patients with increased independence during continuous monitoring applications. Data can be downloaded via a USB cable or wirelessly with Bluetooth® technology and analyzed using nVISION® software.

The Memory Volume Indicator (MVI) Mode now available with the Model 3150 provides a graphic display of the amount of data recorded in hours and minutes. This provides IDTFs and homecare companies with time-saving verification of recorded data during oxygen qualification studies.

WristOx2®, Model 3150 compatible sensors can be found on page 21.
Nonin’s handheld oximetry products provide a simple universal tool for patient monitoring — from spot checks to continuous monitoring. Their compact size, ease of operation, exceptional battery life, and choice of alarm or non-alarm versions are ideal for your portable monitoring needs — regardless of the patient’s location.

The PalmSAT® 2500 Series is rugged enough to be used in the most demanding environments and has US Army and US Air Force Aeromedical Certification for use in helicopters.

The portable 9840 Series monitors feature reliable CO₂ detection technology for endotracheal tube placement verification, as well as Nonin’s proven PureSAT SpO₂ technology for accurate readings in challenging environments.

Nonin offers a range of pulse oximeters for use in a variety of environments for neonates through adults. Ease of use, portability and long battery life make these monitors a perfect choice for any patient setting. You can rely on Nonin’s proven PureSAT SpO₂ technology for fast and consistent readings — even in challenging conditions with motion and low perfusion.
The Avant® 2120 is a multi-purpose device offering proven SpO₂ monitoring and noninvasive blood pressure (NIBP) in a compact, easy-to-use, portable unit. Ideal for pediatrics through adults, the Avant 2120 offers an assortment of Nonin sensors and blood pressure cuff sizes to adapt to each patient application. With Nonin’s proven PureSAT technology, you can depend on accurate readings with the most challenging patients.

Developed specifically for conditional magnetic resonance (MR) environments, the compact Model 7500FO pulse oximeter is ideal for monitoring infant to adult patients in both fixed-site and mobile MR facilities. Built with safety and usability in mind, fiber-optic cables and sensors virtually eliminate radio frequency burns and image artifacts associated with traditional equipment. For added convenience, sensors are easily secured using a simple toe or finger wrap.
PureLight® SpO₂ Sensor Technology

PureLight sensor technology, combined with Nonin’s PureSAT signal processing, provides proven, consistent results — patient to patient and sensor to sensor.

Nonin’s use of pure red and infrared LEDs contributes to unparalleled accuracy — even at critical SpO₂ levels. Choose from an array of reusable and single-patient use disposable options.

Sensor + Oximeter = System

Nonin sensors are designed for use with Nonin oximeters to provide clinicians and patients proven accuracy, reliability and consistency in the widest range of patients and clinical settings.
Reusable Flex Sensors and Disposable Wraps

**Adult Flex System**

- 8000J Adult Flex Sensor
- 8000FW Adult FlexiWrap®

**Infant Flex System**

- 8008J Infant Flex Sensor
- 8008FW Infant FlexiWrap®

**Neonate Flex System**

- 8001J Neonate Flex Sensor
- 8001FW Neonate FlexiWrap®

**Reusable Sensors**

**8000SL**
Large Soft Sensor
(> 40 kg / > 88 lbs)

**8000SM**
Medium Soft Sensor
(> 30 kg / > 66 lbs)

**8000S**
Small Soft Sensor
(> 30 kg / > 66 lbs)

**Pediatric Finger Clip**
(8–30 kg / 18–66 lbs)

**Adult Finger Clip**
(> 30 kg / > 66 lbs)

**Ear Clip**
(> 40 kg / > 88 lbs)

**Reflectance**
(> 30 kg / > 66 lbs)
**Sensors – Disposable Extended-Wear**

Durafoam Disposable Sensors

- **6500 Series Durafoam Sensor**
- **6500SA** Durafoam Disposable Sensor – Standard
  - Thickness: 5–21 mm / 0.19–0.82 in
  - Weight: > 30 kg / > 66 lbs
- **6500MA** Durafoam Disposable Sensor – Small
  - Thickness: 5–21 mm / 0.19–0.82 in
  - Weight: > 30 kg / > 66 lbs

For use with adult and pediatric patients

**Sensors – Wrist-worn**

WristOx₂®, Model 3150 Sensors

- **8000J-WO2** WristOx₂ – Flex
  - Weight: > 30 kg / > 66 lbs
- **8000AA-WO2** WristOx₂ – Clip
  - Weight: > 30 kg / > 66 lbs
- **8000SM-WO2** WristOx₂ – Medium Soft Sensor
  - Thickness: 10 mm–19 mm / 0.4–0.75 in
  - Weight: > 30 kg / > 66 lbs
- **8000SS-WO2** WristOx₂ – Small Soft Sensor
  - Thickness: 7.5 mm–12.5 mm / 0.3–0.5 in
  - Weight: > 30 kg / > 66 lbs
- **8000SL-WO2** WristOx₂ – Large Soft Sensor
  - Thickness: 12.5 mm–25.5 mm / 0.5–1.0 in
  - Weight: > 30 kg / > 66 lbs

**WristOx₂, Model 3150 with Soft Sensor**

**31501 Adapter**

**Additional Information:**

- **US Customer Service:** 800.356.8874 | customerservice@nonin.com
- **Int’l Customer Service:** +31(0)13-79 99 040 | customerserviceintl@nonin.com
EQUANOX™ rSO₂ Sensor Technology

The latest advancement in near-infrared spectroscopy (NIRS), Nonin’s EQUANOX rSO₂ technology offers real-time management of patients at risk for compromised oxygen saturation to the brain or other tissues. Our patented dual emitter/dual detector EQUANOX sensor architecture delivers greater accuracy than conventional NIRS cerebral technologies by providing stable, rapid and reliable signals and eliminating ambient light and electromagnetic interferences.
Universal Oximetry System (Regional rSO₂ and Pulse SpO₂)

SenSmart™ Model X-100
Universal Oximetry System

Shown with Model 8004CA Sensors and 8100SM SpO₂ Sensor

Cerebral and Somatic rSO₂ and SpO₂ Oximetry for Adult, Pediatric and Neonate Patients

An innovative design that pairs simple with smart, Nonin’s SenSmart™ Model X-100 Universal Oximetry System is the first system to provide a side-by-side view of regional oximetry (rSO₂), pulse oximetry (SpO₂) and pulse rate values for real-time decision making:

- **Versatile** – SenSmart-compatible rSO₂ sensors and/or SpO₂ sensors can monitor up to six sites (cerebral or somatic) on adult, pediatric or neonate patients. In addition, the SenSmart System is designed to accommodate many more parameters in the future.

- **Accurate** – Fast, accurate and reliable readings even in patients with dark skin, low perfusion and other challenging conditions.

- **Easy** – The smaller, lighter and less-intrusive Nonin SenSmart Universal Signal Processors automatically recognize Nonin rSO₂ or SpO₂ sensor signals. The monitor then displays the corresponding values and color-coded channel number you have chosen to connect to.

- **Convenient** – The portable, pole-mountable, easy-to-operate SenSmart Monitor offers Bluetooth® wireless connectivity and comes with SenSmart Download Data Management Software (see pg. 36). The SenSmart System interfaces with Philips® VueLink® or Intellibridge, Philips CompuRecord, Spectrum Medical-VIPER®, and Sorin Perfusion Data Management System®.

**rSO₂ Sensors**

- Model 8004CB (Adhesive) SenSmart™ EQUANOX™ Advance Neonatal/Pediatric Sensor 4-wavelength (For patients < 40 kg)
- Model 8004CB-NA (Non-Adhesive) SenSmart EQUANOX™ Advance Neonatal/Pediatric Sensor 4-wavelength (For patients > 40 kg)
- Model 8003CA SenSmart™ EQUANOX™ Classic Plus Sensor 3-wavelength (For patients > 40 kg)
- Model 8004CA SenSmart™ EQUANOX™ Advance Sensor 4-wavelength (For patients > 40 kg)

**SpO₂ Sensors**

- 8100SL Large Soft Sensor (12.5 mm–25.5 mm / 0.5–1.0 in digit thickness)
- 8100SM Medium Soft Sensor (10 mm–19 mm / 0.4–0.75 in digit thickness)
- 8100SS Small Soft Sensor (7.5 mm–12.5 mm / 0.3–0.5 in digit thickness)

*SenSmart SpO₂ Soft Sensors are only for use with the SenSmart™ Model X-100 Universal Oximetry System.*
EQUANOX™ Model 7600  
Cerebral/Somatic Oximetry System  
Shown with Model 8004CB-NA and 8004CB rSO₂ Sensors

**Adult, Pediatric and Neonatal Regional (rSO₂) Oximetry**

Nonin’s EQUANOX™ Model 7600 Regional Oximetry System offers real-time management of adult, pediatric and neonate patients at risk for brain damage or other major organ injury during surgery and in critical care environments. The EQUANOX System detects changing levels in cerebral or somatic oxygenation, allowing clinicians to react before injury occurs:

- **Cerebral and Somatic Monitoring** – Up to four channels displayed on one screen for monitoring oxygen saturation in the brain and somatic sites on the body, including kidney and liver sites.

- **Absolute Accuracy** – 8004CA or 8004CB 4-wavelength sensors assure accurate measure of tissue saturation at a point in time, not just relative or trending accuracy of changes.

- **Consistency and Reliability** – Rapid, reliable response to change without signal instability from ambient electrical and light interferences.

- **Portability and Connectivity** – Lightweight, durable monitor with long battery life and pole-mounting capability for continually monitoring patients during intra-hospital transport. Data output available via Bluetooth® wireless technology or RS232 connection. Interfaces with Philips® VueLink or Intellibridge (through Philips IntelliVue® Monitor), Philips CompuRecord Anesthesia Information System, Spectrum Medical VIPER Independent Data Management System and Sorin Perfusion Data Management System.

**Specially designed rSO₂ sensors for unique patient populations**

Nonin’s pediatric/neonate rSO₂ sensors (for patients < 40 kg) differ from our adult rSO₂ sensors (for patients > 40 kg) in that they feature adhesive and non-adhesive versions for delicate skin, a small footprint for space-saving placement, short light-path spacing for pediatric-appropriate tissue-depth readings, and the world’s first algorithm for calculating accurate, patient-specific rSO₂ values that account for variation in pediatric brain tissue development.
Nonin EtCO₂ Technology

Nonin’s fast, first-breath EtCO₂ technology with WIDESCREEN™ touch-panel display monitor offers proven PureSAT® SpO₂ and sidestream EtCO₂ capabilities in a wide range of home care and clinical settings for both intubated and non-intubated patients. Portable, accurate, easy to use and cost effective, LifeSense® and RespSense™ are perfect for monitoring in low acuity areas in and outside the hospital setting.

Ideal for spot check and continuous EtCO₂ monitoring, Nonin’s EtCO₂ technology delivers the earliest indicator of an adverse event in the breathing function of a patient in multiple environments. Nonin’s EtCO₂ technology provides an accurate, first-breath EtCO₂ value and waveform. Highly portable, the LifeSense and RespSense are ideal for endotracheal tube placement verification, waveform trend monitoring, detecting changes in ventilation, and continuous monitoring for airway integrity, procedural sedation monitoring, sleep studies and emergency transport (EMS). The RespSense monitor meets the rigorous International Standards Organization (ISO) requirements for medical electrical equipment used during professional transportation of a patient outside of the healthcare facility. Not all monitors meet these ISO standards.
OEM Solutions*

Nonin’s OEM technology solutions provide you with greater flexibility for more applications. Our easy-to-integrate products and dedicated customer support team have helped more than 100 OEM customers bring low power, high accuracy medical devices to market. With over 1 million Nonin pulse oximeters sold, Nonin’s installed base is one of the world’s largest in the medical professional and homecare segments.

Nonin offers OEM product evaluation kits to help you evaluate how our OEM solutions will work for you. Each development kit includes the OEM product, demonstration software, technical documentation and any additional interface components required to operate the OEM device with your PC. Try one of our development kits to quickly and easily see how Nonin’s OEM solutions can meet your monitoring needs.

*Note: All Nonin OEM global products are serviced through the US.
Veterinary Solutions

Nonin Medical’s innovative and economically priced veterinary monitors are engineered with high quality SpO₂ and EtCO₂ technologies that feature enhanced sensitivity to low perfusion signals. The integration of these proven technologies with our veterinary-specific software and patented sensor technology enables our veterinary oximeters to accurately monitor the wider pulse rate range of animals (18 – 450 BPM).

Nonin’s PureLight® veterinary oximetry sensors are reliable and easy to use on a wide range of animals for both short-term and continuous noninvasive monitoring. Backed by a six-month warranty, choose from three sensor designs that can be used with any of Nonin’s veterinary oximeters.
nVISION® is a cost-effective software solution designed to provide easy viewing, professional analysis, report generation, and reliable data storage for basic oximetry screening applications. This includes pre-screening for sleep studies and Six Minute Walk Test (6MWT).

eVISION® regional oximetry data management software is an easy-to-use program that provides comprehensive cerebral oximetry reporting formatted to the standards of the Society of Thoracic Surgery (STS) National Cardiac Surgery Database — making it ideal for reducing workload, saving time and enhancing patient data administration.

For use only with Nonin wrist-worn, handheld and tabletop pulse oximeters (pages 11–15).

For use only with the Nonin EQUANOX™ Model 7600 Regional Oximetry System (pages 26–27).
SenSmart™ for universal oximetry reporting

SenSmart Download Software provides easy viewing and graphing of regional (cerebral and somatic tissue) and pulse oximetry data in a customized view for efficient data interpretation.

- Regional oxygen saturation (rSO₂) data shown in trend and discrete data format; conforms to adult STS Cardiac Surgery Database format
- Oxygen saturation (SpO₂) data shown in graph and discrete data format
- Download via Bluetooth® and Serial/RS232

For use only with the Nonin SenSmart™ Model X-100 Universal Oximetry System (pages 24–25).
Nonin products are sold in more than 125 countries through direct, distributor, GPO and other sales channels.

For help with finding a distributor or placing an order:

**US Customer Service:**  800.356.8874  |  customerservice@nonin.com

**International Customer Service:**
+31 (0) 13 - 79 99 040  |  customerserviceintl@nonin.com

**Sales/Distributor Locator Tool:**  nonin.com/Sales/DistributorLocator

Please contact your authorized distributor for more information:

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Rx only on all products unless otherwise noted.