



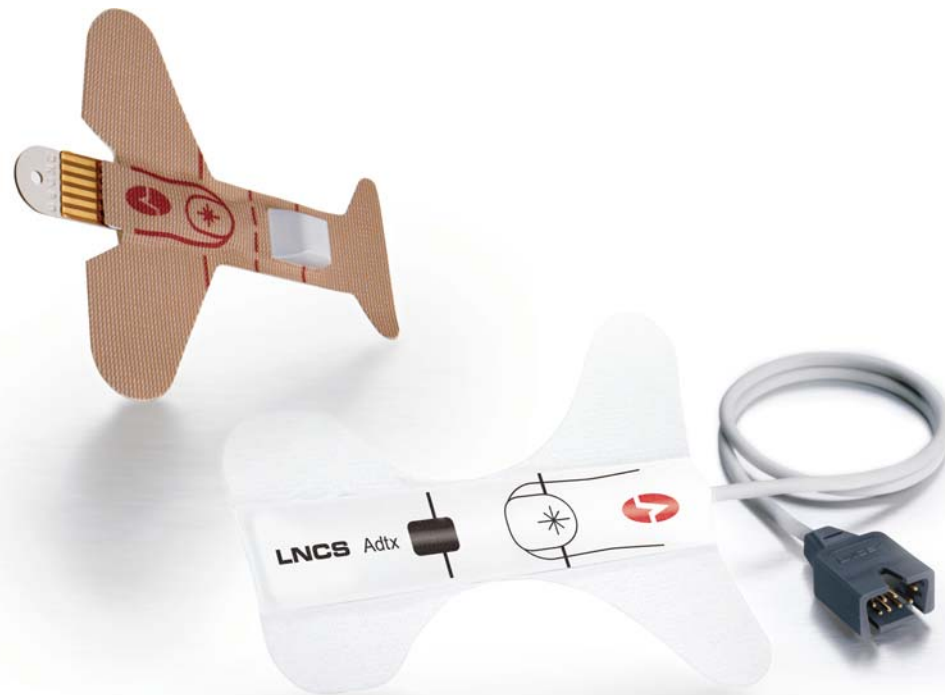
Instruments and sensors containing Masimo SET technology are identified with the Masimo SET logo. Look for the Masimo SET designation on both the sensors and monitors to ensure accurate pulse oximetry when needed most. 

Masimo Corporation 40 Parker Irvine, California 92618 Tel 949-297-7000 Fax 949-297-7001 [www.masimo.com](http://www.masimo.com)

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 Masimo SET.

**pulse oximetry sensors  
2007**



7367-3478C-0906

# Overview



Masimo's broad range of pulse oximeter sensors are designed to meet your clinical needs regardless of the setting—operating room, emergency room, post anesthesia care unit, critical care units, labor and delivery, transport, outpatient surgery, Sleep lab, exercise physiology lab and more.

When used with Masimo SET pulse oximeters, both Masimo SET LNOP® (Low Noise Optical Probe) sensors and the Masimo SET LNCS® (Low Noise Cabled Sensor, pronounced “links”) let you harness the power of Masimo Signal Extraction Technology—the first pulse oximetry technology that provides accurate, reliable clinical data during periods of patient motion and low perfusion.

The complete line of LNOP and LNCS sensors are described for you in this brochure. For more detailed information on which sensors are right for your particular application, contact your Masimo representative or visit us on the web at [www.masimo.com](http://www.masimo.com).

Masimo LNOP adhesive sensors are our most advanced and durable single-patient pulse oximetry sensors. They feature a remarkably low noise floor with a very high signal to noise ratio, extraordinary shielding, and a recessed photodetector, allowing them to offer the patented ability to read accurately through motion, low perfusion, and other difficult challenges when used with Masimo SET. The LNOP Adult and Pediatric sensors come in two types of tape material: a clear tape similar to that of Nellcor<sup>®</sup> sensors, and a unique brown colored, thicker, durable tape. LNOP adhesive sensors are available in a wide assortment of designs and sizes for your patients' specific needs.



**LNOP Adt/Adult**  
 > 30 kg

Sensor Part #1001



**LNOP Adtx/Adult**  
 > 30 kg

Sensor Part #1829



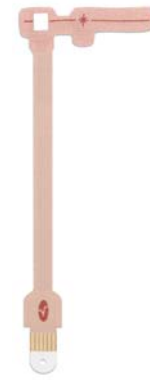
**LNOP Pdt/Pediatric**  
 10 - 50 kg

Sensor Part #1025



**LNOP Pdtx/Pediatric**  
 10 - 50 kg

Sensor Part #1830



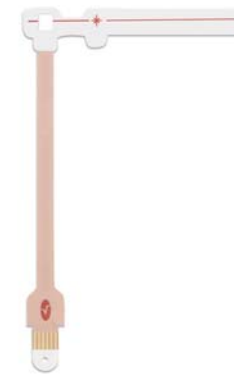
**LNOP Inf-L/Infant**  
 3 - 20 kg

Sensor Part #1800  
 Replacement Tape Part #1801



**LNOP Neo-L/Neonatal & Adult**  
 < 3 kg or > 40 kg  
 Sensor Part #1798

Replacement Tape Part #1799



**LNOP NeoPt-L/Neonatal Pre-term**  
 < 1 kg

Sensor Part #1651  
 Replacement Posey Part #1926



**LNOP Neo/Neonatal**  
 < 10 kg

Sensor Part #1002  
 Replacement Tape Part #1054

Masimo offers a broad line of reusable sensors that provide flexibility in application, including adult and pediatric digit clip sensors, ear or forehead sensors for central core monitoring, and the LNOP YI Multi-site sensor with a variety of wraps. In addition to patented, industry-leading technology that delivers unparalleled performance, especially when patients are moving or have low perfusion, LNOP reusable sensors have been engineered for the superior combination of comfort, fit, and durability. Further, this hallmark design has improved moisture resistance, and is resistant to electro-surgical interference and noise from bright ambient light. As with all Masimo SET solutions, the end result is the identification of true alarms and minimization of false alarms. LNOP sensors are compatible with all Masimo SET oximeters.



**LNOP DCI**  
Adult Digit Sensor  
> 30 kg  
Sensor Part #1269



**LNOP DCIP**  
Pediatric Digit Sensor  
10 - 50 kg  
Sensor Part #1276



**DCSC**  
Adult Direct Connect Sensor  
> 30 kg  
Sensor Part #1396 (3 ft), #1969 (12 ft)



**LNOP YI Multi-site Sensor**  
> 1 kg  
Sensor Part #1544

**CleanShield<sup>®</sup> Wrap**  
> 1 kg  
Wrap Part #1596



**Standard Wrap**  
> 1 kg  
Wrap Part #1597



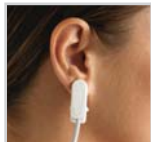
**Standard Petite Wrap**  
> 1 kg  
Wrap Part #1598



**Foam Wrap**  
> 1 kg  
Wrap Part #1602



**LNOP DC-195**  
Adult Digit Sensor  
> 30 kg  
Sensor Part #1560



**LNOP TC-I**  
Adult Ear Sensor  
> 30 kg  
Sensor Part #1794

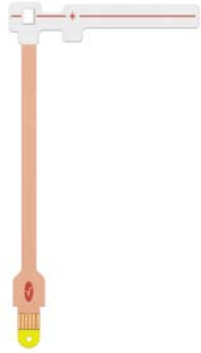


**LNOP TF-I**  
Adult Transflectance Sensor  
> 30 kg  
Sensor Part #1793, Headband Part #1608

Masimo's LNOP SoftTouch line of sensors is designed to be used whenever skin sensitivity issues are a concern, such as with extremely low birth weight infants. Masimo SoftTouch sensors incorporate soft foam and VelAid™ hook and loop attachment wraps that come in a variety of configurations to address a wide range of clinical uses.



**LNOP SofTouch NeoPt-L**  
< 1 kg  
Sensor Part #1651  
Replacement Posey Part #1926



**LNOP Newborn Neonatal**  
< 3 kg  
Sensor Part #2203  
Replacement Posey Part #1926



**LNOP SofTouch NeoPt**  
< 1 kg  
Sensor Part #1003  
Replacement Posey Part #1053



**LNOP YI Multi-site with Foam Wrap**  
> 1 kg  
Sensor Part #1544  
Replacement Posey Part #1602

In addition to pioneering read-through motion and low perfusion pulse oximetry, Masimo was the first to introduce other breakthrough designs, including sensors with built-in intelligence. Below are two specialty sensor lines featuring this sophisticated technology.

## LNOP Newborn™ Sensors

The LNOP Newborn sensor is specifically designed with newborn resuscitation in mind. When the Newborn sensor is connected to Masimo-equipped technology version 4.1.0.1 or higher, it automatically enables the fastest SpO<sub>2</sub> and pulse rate readings at maximum sensitivity. In addition to providing optimal performance, the Newborn sensor allows quick application. With a unique combination of a VelAid™ SofTouch® hook-and-loop attachment, and adhesive emitter and detector strip, the sensor stays secure even when the site is wet. The Masimo LNOP Newborn sensor allows clinicians to focus their attention on their patients instead of using valuable seconds configuring the monitor to deliver the performance they need during critical situations.

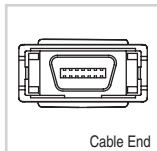
## LNOP Blue™ Sensor

Neonatal, infant, and pediatric patients with congenital heart disease have unique physiology, which has frequently made it impossible for clinicians to obtain reliable pulse oximetry readings. This limitation has impacted the clinicians' ability to rely on continuous SpO<sub>2</sub> measurements to determine the precise cardiac medication and ventilatory management these patients require. After extensive research and development, Masimo introduced LNOP Blue, the first and only adhesive sensor proven accurate on pediatric patients with congenital heart disease with saturations as low as 60%.<sup>1</sup> LNOP Blue provides clinicians with the reliable, continuous pulse oximetry they need to better manage the cardiac medications and ventilation therapy of these critical patients.

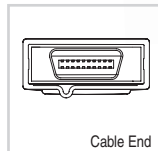
<sup>1</sup> Whitney GM, Tucker LR, Hall SR, Chang AC. Clinical evaluation of the accuracy of Masimo SET and Nellcor N-595 oximeters in children with cyanotic congenital heart disease. *Anesthesiology* 2005; 103:A1344.



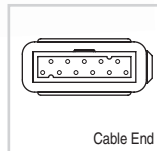
Different patient cables are available to connect LNCS or LNOP sensors to a variety of pulse oximeters and multi-parameter monitors equipped with Masimo SET. Adapter cables are also available for monitors with conventional technology, allowing standardization on sensors throughout a facility with a mixed inventory of instruments.



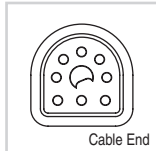
**LNOP Patient Cable**  
Masimo SET Oximeters and monitors with Masimo SET  
Cable Part #1173 (4 ft), #1005 (8 ft), #1006 (12 ft)



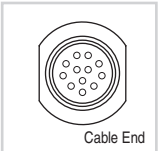
**Red LNOP Patient Cable**  
Masimo SET Rainbow equipped Oximeters  
Cable Part #2058 (4 ft), #2059 (8 ft), #2060 (12 ft)



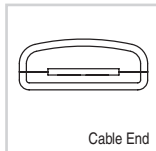
**LNOP to GE**  
GE Solar and DASH Monitors with Masimo SET  
Cable Part #1978



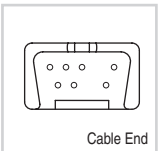
**LNOP to Philips Patient Cable**  
For use with Masimo SET Intellivue Modules, Philips FAST SpO<sub>2</sub> technology Intellivue Modules or Intellivue MMS  
Cable Part #2282 (12 ft)



**AC-1 Philips 12 Pin Cable**  
Allows use of LNOP Sensors with Philips non-Masimo SET Monitors  
Cable Part #1849 (12 ft)



**LNOP PC04 Ext**  
Extension Cable for LNOP Patient Cable  
Cable Part #1619 (4 ft)



**MAC-1 Adapter Cable**  
Allows use of LNOP Sensors with LNCS Patient Cables or conventional Nellcor Cables  
Cable Part #1645 (18 in), #1927 (12 ft)

Masimo LNCS sensors maintain the quality, reliability and accuracy expected of the Masimo SET family, with industry-leading noise shielding first introduced in Masimo's LNOP line. The LNCS line has the accuracy and reliability you've come to expect from Masimo, especially in cases of patient motion and/or low perfusion. As with all Masimo SET solutions, LNCS allows for the accurate detection of more true alarms while minimizing false alarms to improve clinician effectiveness and patient outcomes. LNCS sensors can also connect to devices with conventional technology, allowing a facility with a variety of monitors to standardize on one sensor line.



**LNCS Adux**  
Adult Sensor  
> 30 kg  
Sensor Part #1859



**LNCS Pdux**  
Pediatric Sensor  
10 - 50 kg  
Sensor Part #1860



**LNCS Inf-L**  
Infant Sensor  
3 - 20 kg  
Sensor Part #1861



**LNCS Neo-L**  
Neonatal Sensor  
< 3 kg or > 40 kg  
Sensor Part #1862



**LNCS NeoPt-L**  
Neonatal Pre-term Sensor  
< 1 kg  
Sensor Part #1901



Masimo's LNCS line of sensors offers a full array of reusable options for various application sites. In addition to patented, industry-leading technology that delivers unparalleled performance, especially when patients are moving or have low perfusion, LNCS reusable sensors have been engineered for the optimal combination of comfort, fit and durability. Further, this latest design has increased moisture resistance and continues to resist electro-surgical interference and noise from bright ambient light. As with all Masimo SET solutions, the end result is the identification of true alarms and minimization of false alarms. LNCS sensors can also connect to devices with conventional technology, allowing a facility with a variety of monitors to standardize on one sensor line.



**LNCS DCI**  
Adult Digit Sensor  
> 30 kg  
Sensor Part #1863



**LNCS DCIP**  
Pediatric Digit Sensor  
10 - 50 kg  
Sensor Part #1864



**LNCS DCSC**  
Adult Direct Connect Sensor  
> 30 kg  
Sensor Part #1396 (3 ft), #1969 (12 ft)



**LNCS YI Multi-site Sensor**  
> 1 kg  
Sensor Part #2258



**CleanShield<sup>®</sup> Wrap**  
> 1 kg  
Wrap Part #1596



**Standard Wrap**  
> 1 kg  
Wrap Part #1597



**Standard Petite Wrap**  
> 1 kg  
Wrap Part #1598



**Foam Wrap**  
> 1 kg  
Wrap Part #1602

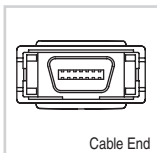


**LNCS TC-I**  
Adult Ear Sensor  
> 30 kg  
Sensor Part #1895

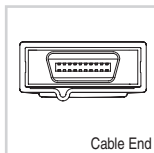


**LNCS TF-I**  
Adult Transreflectance Forehead Sensor  
> 30 kg  
Sensor Part #1896, Headband Part #1608

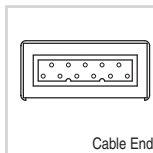
Different patient cables are available to connect LNCS or LNOP sensors to a variety of pulse oximeters and multi-parameter monitors equipped with Masimo SET. Adapter cables are also available for monitors with conventional technology, allowing standardization on sensors throughout a facility with a mixed inventory of instruments.



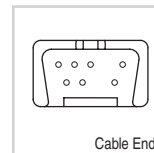
Cable End



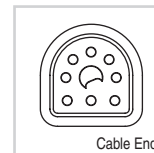
Cable End



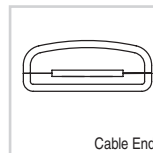
Cable End



Cable End



Cable End



Cable End

**LNCS Patient Cable**  
For Masimo SET Oximeters  
Cable Part #2017 (4 ft),  
#1814 (10 ft), #2013 (14 ft)

**Red LNCS Patient Cable**  
For Masimo SET Rainbow equipped Oximeters  
Cable Part #2055 (4 ft), #2056 (10 ft), #2057 (12ft)

**LNCS to GE Cable**  
For GE Solar and Dash Monitors with Masimo SET  
Cable Part #2016 (10 ft)

**LNCS Ext-4**  
Extension Cable for LNCS Patient Cable  
For Medtronic LP12 with Conventional Nellcor  
Cable Part #2021 (4 ft)

**LNCS to Philips Patient Cable**  
Masimo SET Intellivue Modules, Philips FAST  
SpO<sub>2</sub> Intellivue Modules or Intellivue MMS  
Cable Part #2281 (10 ft)

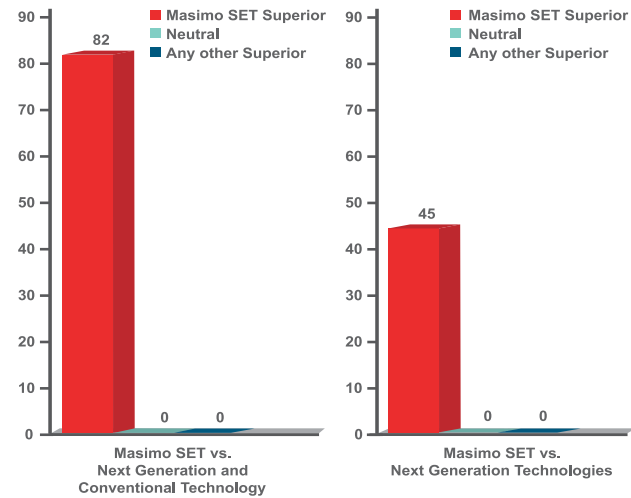
**LNCS to LNOP Patient Cable Adapter**  
Allows use of LNCS Sensors with LNOP Cables  
Cable Part #1816 (18 in)

# Clinical Validation of Masimo SET.

Accurate monitoring when you need it most.®

While clinical literature often reflects an even distribution of opinion on different medical issues and technologies, a review of the independent literature on pulse oximetry overwhelmingly demonstrates the superior performance of Masimo SET pulse oximetry. The graphic (right) demonstrates the distribution of conclusions when Masimo SET is compared head-to-head with Next Generation and conventional pulse oximetry. Note that in 45 independent and objective comparative studies, the researchers conclude that Masimo SET is superior to all other Next Generation pulse oximetry. In the 82 independent and objective studies that compare Masimo SET to all pulse oximetry (both conventional and next generation), all conclude Masimo SET is superior.

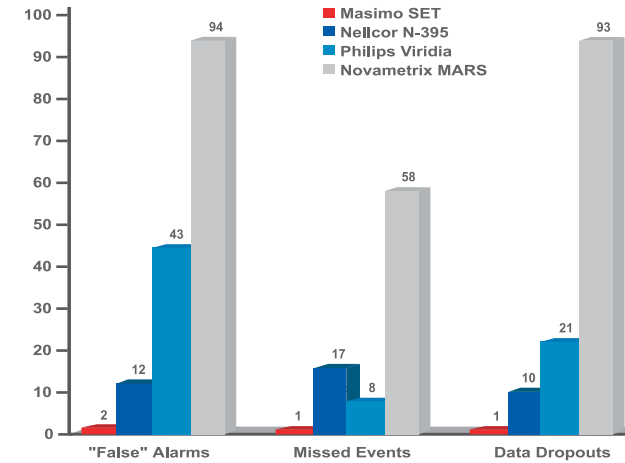
independent and objective published studies<sup>1,2</sup>



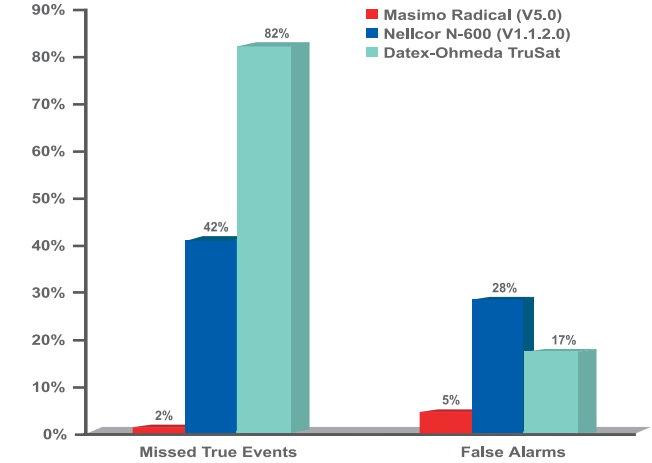
# Proven Performance of Masimo SET.

Superior performance across patient populations.

motion and hypoxemia<sup>1</sup>



motion and low perfusion<sup>2</sup>



<sup>1</sup> Lutter et al. (2002) Testing was conducted on patients on intra-aortic balloon pumps, thus introducing artificial "pulses". Both pulse oximeters did not match the ECG heart rate.

<sup>2</sup> All studies published between 1995 and 2006 comparing Masimo to other pulse oximetry technologies which were conducted under established scientific protocols without bias toward any technology and were not conducted or commissioned by a manufacturer.

<sup>1</sup> Hay WW, et al, Reliability of conventional and new oximetry in neonatal patients. *Journal of Perinatology*. 2002; 22:360-366.

<sup>2</sup> Nitin Shah, M.D., Laverne Estanol, M.S. Comparison of three new generation pulse oximeters during motion and low perfusion in volunteers. *Anesthesiology* 2006; 105: A929.