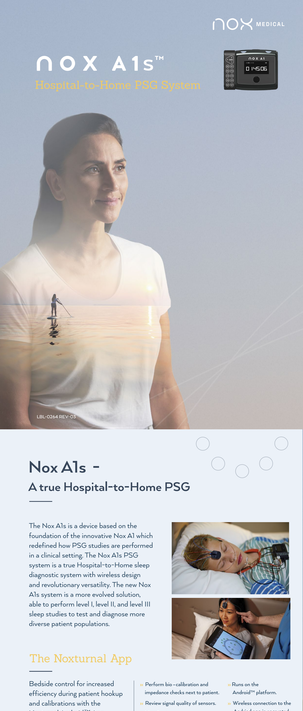
NOX A1s™

Hospital-to-Home PSG System

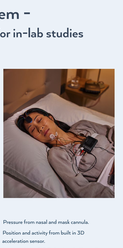


LBL-0264 REV-02

Nox A1s -

A true Hospital-to-Home PSG

The Nox A1s is a device based on the foundation of the innovative Nox A1 which redefined how PSG studies are performed in a clinical setting. The Nox A1s PSG system is a true Hospital-to-Home sleep diagnostic system with wireless design and revolutionary versatility. The new Nox A1s system is a more evolved solution, able to perform level I, level II, and level III sleep studies to test and diagnose more diverse patient populations.



The Nocturnal App

Bedside control for increased efficiency during patient hookup and calibrations with the Nocturnal Android™ App

- Perform bio-calibration and impedance checks next to patient.
- Review signal quality of sensors.
- View live traces.
- Runs on the Android™ platform.
- Wireless connection to the Android app is encrypted.

Flexible PSG System with High Quality Signals

- Dual purpose capability to perform in-lab and at-home sleep testing.
- Small and lightweight PSG recorder designed with patient comfort in mind.
- High quality signals both in Type I in-lab setting, and Type II home unattended setting.
- Complete PSG system with integrated RIP and PTAF that fits in the palm of your hand.
- Built-in redundancy and advancements in technology integration for low failure rates.
- Nox A1s can be used for patients greater than 2 years of age.

Complete PSG system -

Meeting AASM standards for in-lab studies

With the Nox A1s the clinician has all the necessary channels satisfying the AASM criteria for in-lab PSG studies. The Nox A1s together with the Nox C1 can be used to monitor and score sleep recordings in real time within a clinical setting. With the Nox A1s the cables are minimized and customizable so the patient is not tethered to the bed.

Advanced Technology

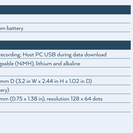
- High quality signals for Type I in-lab setting.
- 10 unipolar inputs for EOG and EEG.
- 3 unipolar EMG sub-mental inputs.
- 4 configurable bipolar inputs (Thermistor, ECG, EMG).
- Built-in Bluetooth® BLE 5.0 technology.
- Sound from built-in microphone.
- Pressure from nasal and mask cannula.
- Position and activity from built in 3D acceleration sensor.
- Integrated Nox RIP Technology (calibrated).
- Pulse, SpO2, and pleth waveform from a Bluetooth® enabled oximeter.
- Minimum of 10 hours recording time with a disposable alkaline battery.

Nox C1 Access Point

- Allows recorded signals from the Nox A1s to transmit to the control room.
- 12 DC inputs.
- Built in Differential Pressure Sensor.
- 2 x USB Ports.
- 2 x RS-232 Serial Ports.
- LAN port.
- Ambient Light Sensor.

Noxturnal Software

The Noxturnal software is a multi-function platform that unleashes the full potential of the Nox A1s along with the Nox T3s. Offering study configuration, automatic analysis, scoring, and advanced reporting tools, Noxturnal is a powerful tool in the hands of any clinician



Powerful and User-Friendly Software

- Accurate and reliable automatic scoring analysis.
- Customizable workspace layouts and event types.
- Single click scoring.
- Easily customizable reports include tables, graphs, and narrative interpretation.
- Import or export EDF format.
- Continuous impedance control.
- Recording results window providing a quick glance signal and result overview.

Noxturnal EMR Interface

The Noxturnal EMR Interface is a single solution for connecting all of your Nox Medical devices.

- HL7 connection.
- Bi-directional EMR interface.
- PDF reports can be exported.
- Connects to all major EMR systems.

Accurate Results In-Lab and At Home

Unmatched simplicity in PSG setup

The Nox A1s system has advanced ambulatory capabilities. As demonstrated in research published in the peer-reviewed journal Sleep and Biological Rhythms[1], the system can be used effectively in patients' homes.

[1] Yoon, D.W., Hong, H., Baik, I. et al. Evaluation of the feasibility and preference of Nox-A1 type 2 ambulatory device for unattended home sleep test: a randomized crossover study. Sleep Biol. Rhythms 17, 297–304 (2019). https://doi.org/10.1007/s41105-019-00223-4

Technical Specifications

Nox A1s Technical Specifications

Signal Specifications:	
Available Signals	Thorax and Abdomen RIP, Nasal pressure/Mask pressure, Snore Signal, Audio and snoring channel, 13 unipolar channels, 2 bipolar channels, Position, Activity, SpO2, pulse, plethysmography, and more.
Unipolar Channels	13x Unipolar Channels - Touch proof connector DIN 42-802, ±3.2mV input range < 1 µVrms noise, 512 kHz sampling rate
Bipolar Channels	4x Bipolar Channels Keyhole connector, ±1024mV input range, < 3 µVrms noise, 512 kHz sampling rate, 24-bit ADC
Flow/Pressure Signal	2x RIP Channels Thorax and abdomen respiratory inductance plethysmography, 200 Hz Sampling. 1x Flow/Pressure Channel -5cmH2O to +50cmH2O input pressure range, DC-80 Hz, <1 mmH2O noise
Activity/Position Signals	Internal 3 axis, 12 g
Sound Signals	1MHz sampling, internal 8 kHz bandwidth
Wireless Interface	Bluetooth® V5.0 BLE wireless interface for external devices
Ambient Light	1 Hz

Performance Specifications:	
Storage Capacity	4 GB
Recording Time	20-30 hours with new lithium battery
PC Communications	USB 2.0 hi-speed

Physical Specifications:	
Power Source	One 1.5VAA battery during recording; Host PC USB during data download
Battery Type	Nickel-metal hydride rechargeable (NiMH), lithium and alkaline
Battery Cover	Tamper proof and locked
Device Dimension	82 mm W x 62 mm H x 26 mm D (3.2 in W x 2.44 in H x 1.02 in D)
Weight	Weight 92 g (203g with battery)
Display	OLED dimensions 19 x 35 mm (0.75 x 1.38 in). resolution 128 x 64 dots
USB Connection	USB Type C

Software:

Minimum PC Requirements
Windows 8.1 and higher Processor: X64 based Intel or AMD, 1.7 GHz or faster 2GB RAM, 4 GB of free disk space Resolution: 1024 x 768 or higher

Distributed by:
Nox Medical

CE 2797
Gentse Ottiliadreef 44 | 8340 Damme | Belgium
US Address: 10505 Roosevelt Cir Suite 5000 | Suwanee, GA 30024 | USA
Manufactured by: Nox Medical | Kerkenveld 3 | 3001 Heverlee | Leuven | +32(0)16 692 990 | info@noxmedical.com | noxmedical.com