

Next Generation SedLine[®] Brain Function Monitoring Paediatric Application

Helping Clinicians Monitor Depth of Anaesthesia



Next Generation SedLine helps clinicians monitor the state of the brain under anaesthesia in patients 1-18 years of age

- > Paediatric-specific signal processing engine, which improves performance of the Patient State Index (PSi) in the paediatric population
- > Four simultaneous channels of frontal electroencephalogram (EEG) waveforms, enabling bilateral data acquisition and processing of EEG signals
- > A Multitaper Density Spectral Array (DSA), which may enhance visibility of EEG features

Paediatric and Adult Anaesthesia Differ in Multiple Ways

Changing Physiology

The use and monitoring of anaesthesia on paediatric patients can differ from its use on adults.

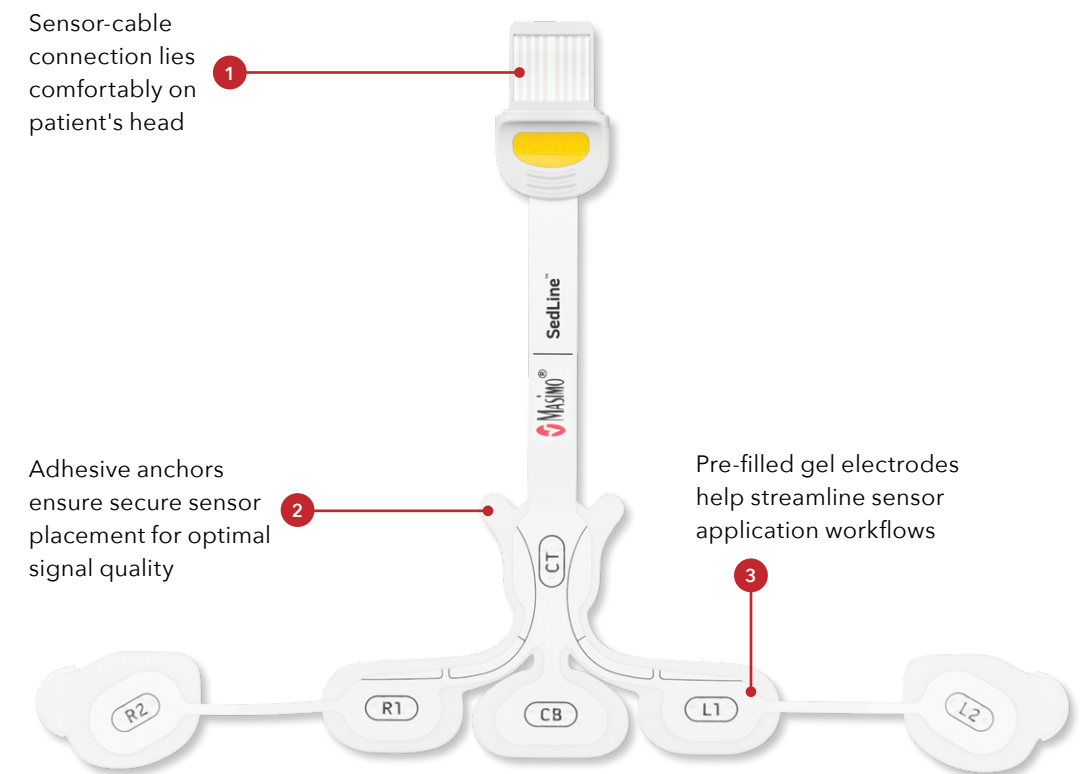
The rate of brain development is greatest during the foetal and early childhood periods, making EEG interpretation challenging in these populations.¹

SedLine provides PSi, a proprietary computed variable related to the effect of anaesthetic agents, which may assist with difficult EEG interpretation.

The Effects of Anaesthesia

Maintaining an appropriate level of anaesthesia is key to preventing anaesthesia-related events and enable faster recovery.²

SedLine helps monitor depth of anaesthesia so that clinicians can make informed decisions about appropriate levels of sedation.



Next Generation SedLine Brain Function Monitoring helps clinicians monitor the state of the brain under anaesthesia with bilateral data acquisition and processing of four leads of EEG signals into a single parameter, the Patient State Index (PSi).



Key Features of Next Generation SedLine

Patient State Index (PSi)

Next Generation SedLine features a paediatric-specific signal processing engine to provide a Patient State Index (PSi), a processed EEG parameter related to the effect of anaesthetic agents, suitable for use on children.

The PSi can be trended to allow clinicians to observe changes based on a single value that represents EEG from both sides of the brain.

Multitaper Density Spectral Array (DSA)

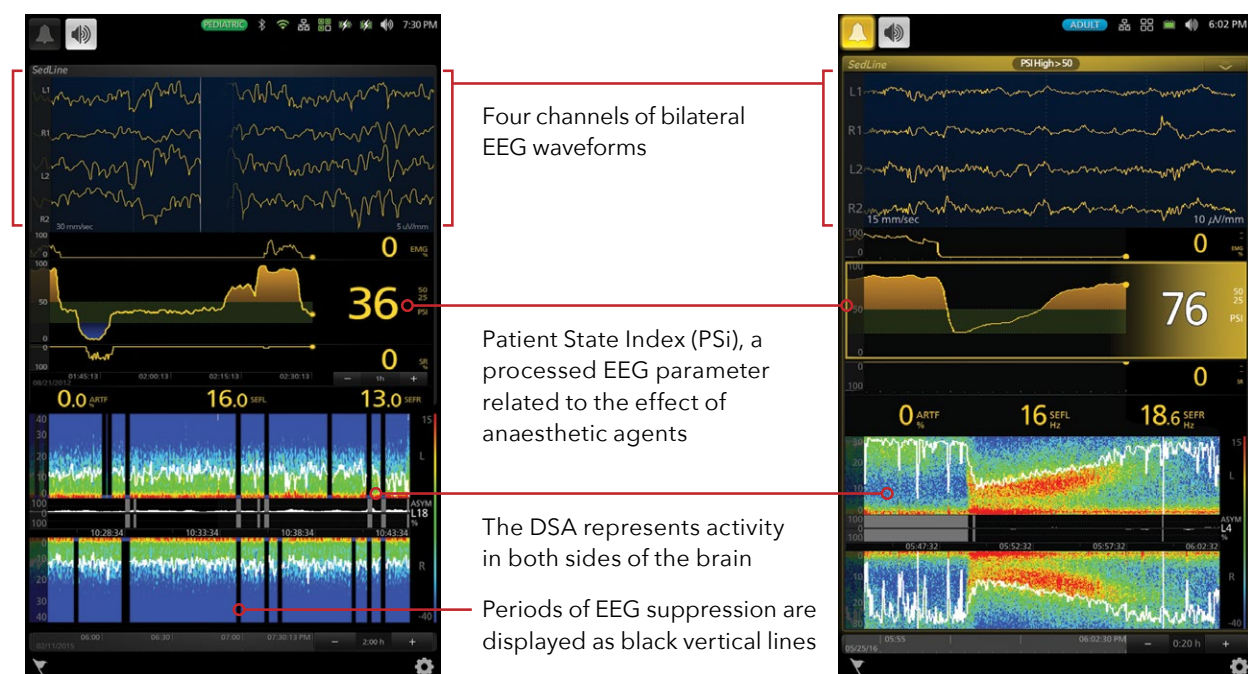
Next Generation SedLine offers clinicians the flexibility to choose to display either an enhanced Multitaper Density Spectral Array (DSA) or a standard Hanning DSA. The DSA contains left and right spectrograms representing the power of the EEG on both sides of the brain.

When using a Multitaper DSA, EEG data are transformed into the frequency domain, which may provide a better display of EEG features.



Next Generation SedLine on Root®

The Next Generation SedLine module easily plugs into the Root patient monitoring and connectivity platform via Masimo Open Connect® (MOC-9®) ports. Root's customisable, easily interpretable display offers multiple views of brain monitoring information, expanding visibility in the operating room and intensive care unit.



A More Complete Picture of the Brain

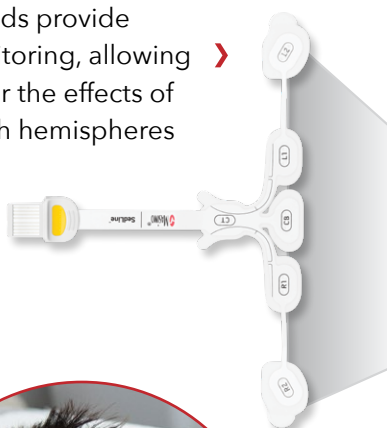
Next Generation SedLine can be used simultaneously with O3® Regional Oximetry on the Root platform for a more complete picture of the brain.

RD SedLine™ EEG Sensor

- > Small size and soft foam pads allow for ergonomic application on paediatric patients
- > Intuitive sensor application helps improve clinician workflows
- > Streamlined design allows for simultaneous application with O3 paediatric sensors to provide a more complete picture of the brain



Four active EEG leads provide bilateral brain monitoring, allowing clinicians to monitor the effects of anaesthesia on both hemispheres



- < Application graphics for paediatric O3 regional oximetry sensor placement simplify simultaneous application of both monitoring technologies

SedLine Specifications

PHYSICAL CHARACTERISTICS	ENVIRONMENTAL
Module Physical Dimensions Width 1.3 in (3.3 cm) Length 4.0 in (10.2 cm) Thickness 0.8 in (2.0 cm)	Module Operating Conditions Operating Temperature 41-104°F (5-40°C) Operational Humidity 15-95%, non-condensing Module Storage Conditions Storage Temperature -40-158°F (-40-70°C) Storage Humidity 15-95%, non-condensing Exposure to Pressure 500-1060 mbar
Application Site Forehead Active Channels 4 Active Electrodes L1, L2, R1, and R2	Ground Electrode CB Reference Electrode CT Duration of Use Maximum of 24 hours Latex Content Does not contain natural rubber latex

¹ Davidson et. *Current Anesthesiology Reports* 3, no. 1 (2013): 57-63.). ² Musialowicz et al. *Current Anesthesiology Reports* 4, no. 3 (2014): 251-260.

The RD SedLine EEG Sensor is not licensed for sale in Canada.

For professional use. See instructions for use for full prescribing information, including indications, contraindications, warnings, and precautions.

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