

the art of neuromonitoring

SIQR

Prepared for the future





AVALANCHE® SI 2 – PLUS X Award 2021

Our slogan *the art of neuromonitoring* has expressed our own expectations for our product for many years, but we are particularly proud to have our performance recognised by independent experts. Our AVALANCHE® SI 2 received the coveted PLUS X Award seal of approval in 2021 in 4 categories:

- *High Quality*
- *Design*
- *Ease of Use*
- *Functionality*

The PLUS X Award takes a unique approach. In contrast to many competitors whose recognitions mainly focus on design, the PLUS X Award follows a different philosophy. A high-calibre jury comprising representatives of various industry sectors rigorously examines the nominated products. That makes the PLUS X Award seals of approval not just a benchmark for the best products, but also an unmistakable sign of brand quality.



... **more**

SI 2

- *Multimodal neuromonitoring system – with optional further applications*
- *Enhanced connectivity and greater data security based on Windows 10 IoT*
- *State-of-the-art touchscreen technology with hygiene-optimised glass front*
- *Brilliant sharpness and colour display in the OR*
- *Expanded documentation – trends included in report*
- *Easier connection to hospital information systems via LAN and WLAN*

AVALANCHE® SI 2 – fit for the future. Countless surgeons, anaesthesiologists, and OR nurses around the globe have relied on our proven **AVALANCHE®** model for over 18 years. We knew our new system would have to stand out in every regard. It is our great pleasure to introduce our latest model, **AVALANCHE® SI 2**.

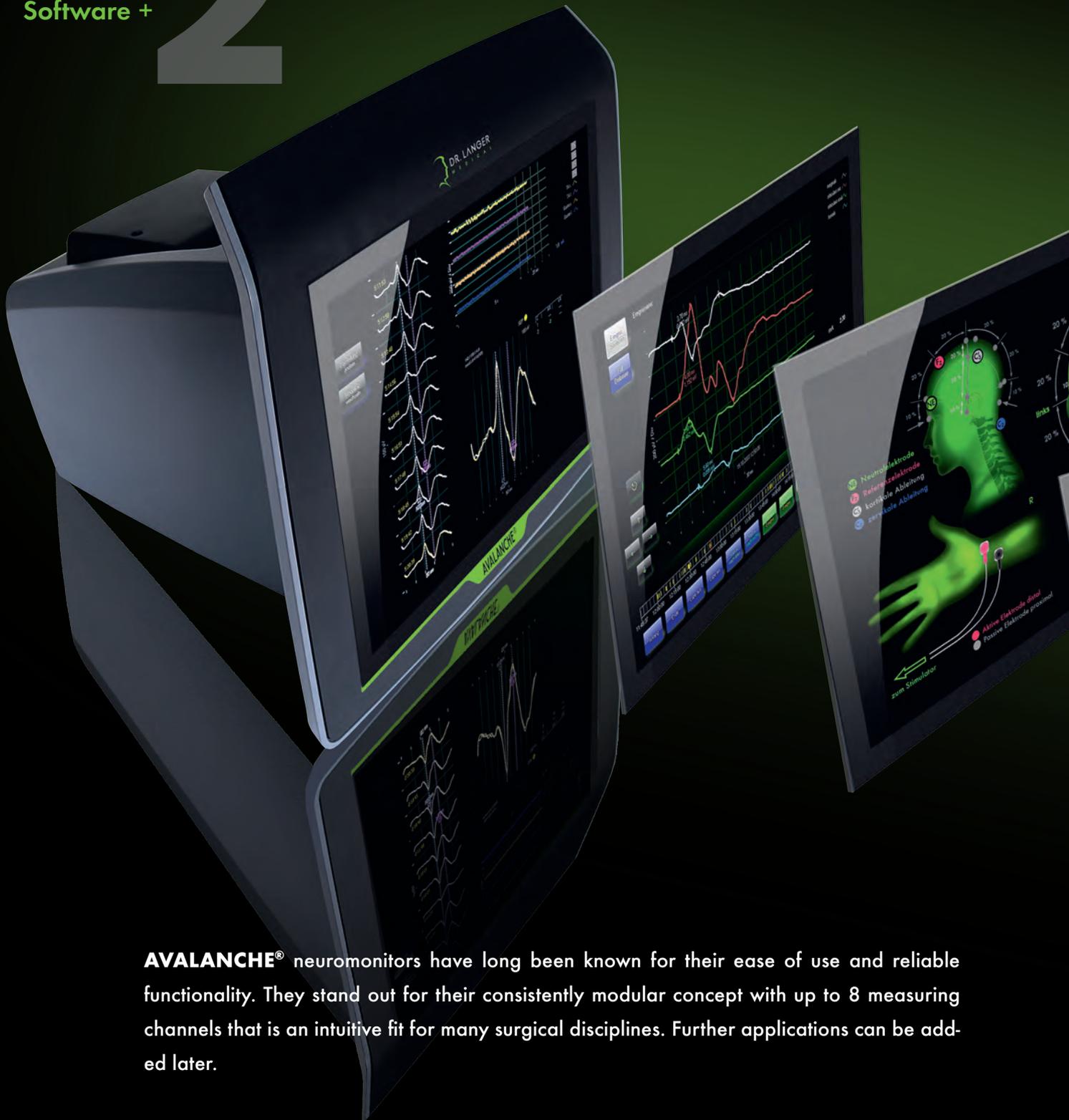
Our **SI 2** is the best **AVALANCHE®** neuromonitoring system ever. We have set it up with the latest technology – faster, more powerful and well-prepared for the digital future in your OR.



The smooth glass front matches the overall modern appearance and highlights the rich colours of the new screen display. It is highly intuitive to operate – exactly what you would expect from a state-of-the-art device. Driven by **Windows 10 IoT**, the latest Microsoft operating system, your neuromonitor will easily integrate into your hospital information system.

SI 2

Software +

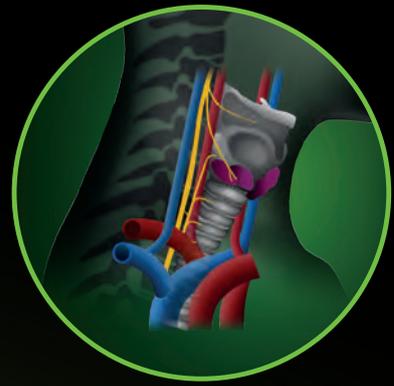


AVALANCHE® neuromonitors have long been known for their ease of use and reliable functionality. They stand out for their consistently modular concept with up to 8 measuring channels that is an intuitive fit for many surgical disciplines. Further applications can be added later.

Our **AVALANCHE® SI 2** neuromonitors can localise and assess the functionality of motor nerves, sensory nerves or cerebral structures during surgery. The stimulators required for most clinical situations are built in. Our accessories catalogue lists all necessary electrodes for stimulation and signal acquisition.

FLAR

WMO



Thyroid Surgery



ENT Surgery



Carotid Surgery

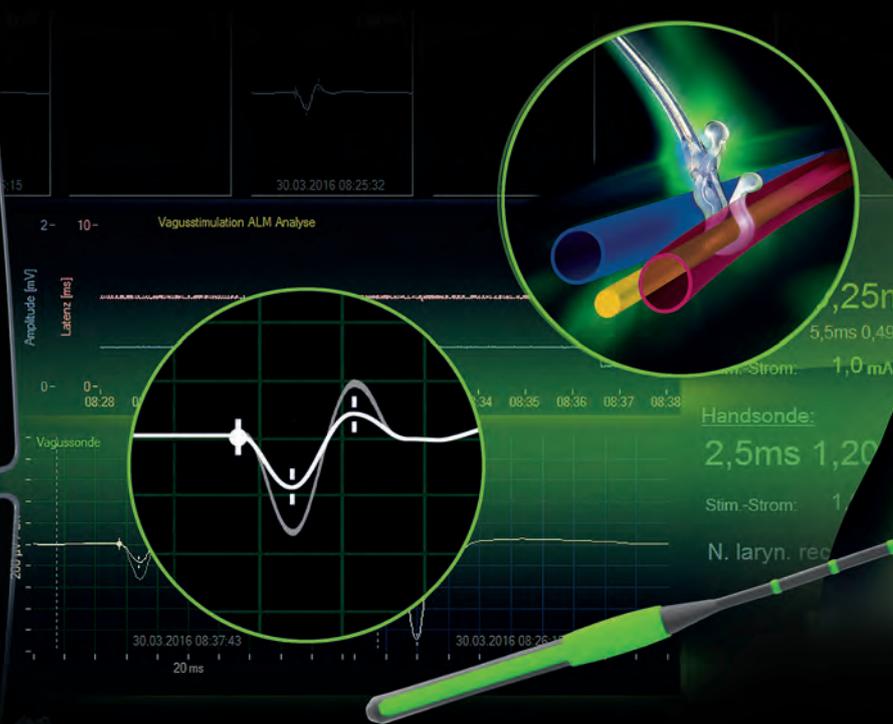


Spine Surgery



... **more**

Thyroid surgery

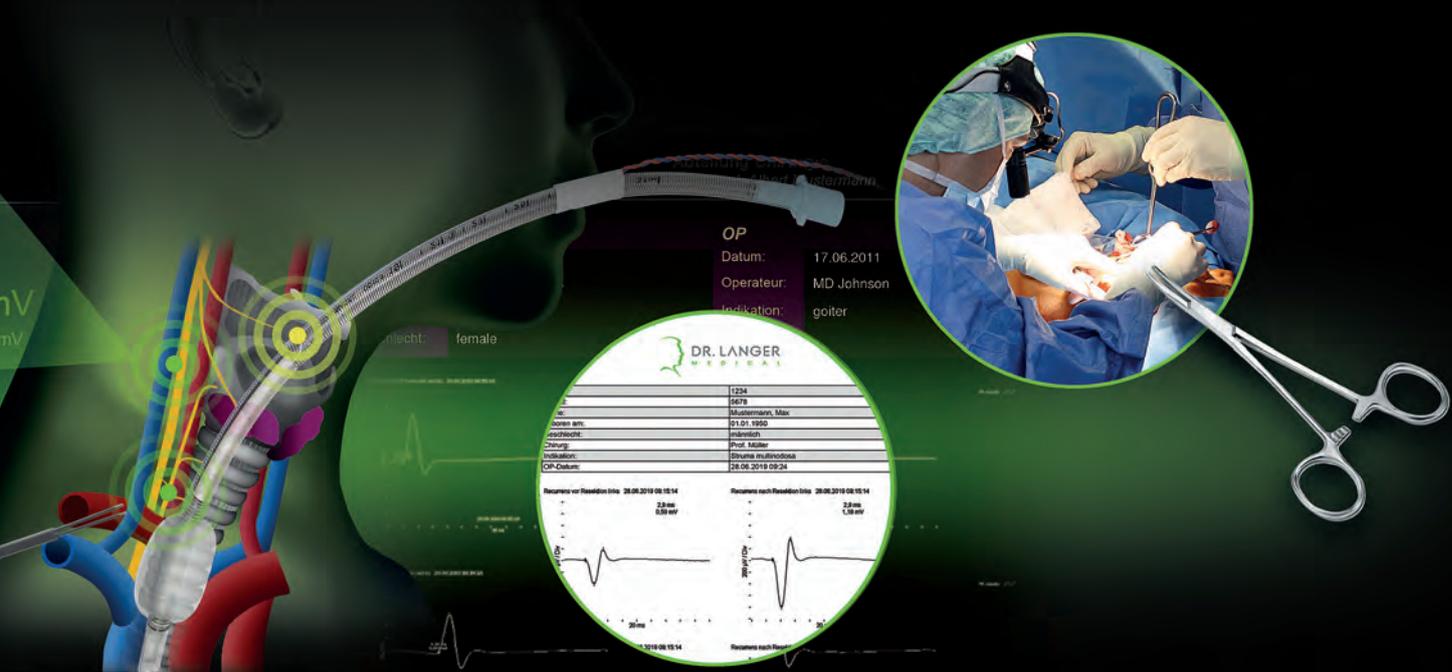


Seamless recurrent nerve monitoring via continuous vagus nerve stimulation

Functional integrity check of motor nerves

Two decades of experience – more than 1000 devices – thousands of surgeries every year. We are a little obsessed with thyroids because that's where most **AVALANCHE**[®] systems are used. When it comes to continuous neuromonitoring, we were inventors and pioneers at the same time. Today, operating rooms wouldn't be the same without this method. The interaction of automatic vagus nerve stimulation – running continuously in the background – and situational manual stimulation at the surgical site makes recurrent nerve monitoring a seamless affair, and much safer than ever before.

If danger lurks, the amplitude and latency will change – promptly and clearly visible from afar on our large screen. We have also installed a threshold-based acoustic warning – fully adjustable, of course. And, we thought trends were so important that they are now part of our new report printout. By the way, that change was made in response to user feedback.



OP
Datum: 17.06.2011
Operateur: MD Johnson
Indikation: goiter

DR. LANGER
MEDICAL

| |
|----------------------------------|
| 1234 |
| 2512 |
| Muellermann, Max |
| Compl seit: 21.01.1990 |
| Profession: Ingenieur |
| Chirurg: Prof. Müller |
| Indikation: Struma multiloculosa |
| OP Datum: 26.06.2010 09:24 |

Recurrents vor Resektion links 26.06.2010 09:15:14
2.8 ms
0.8 mV

Recurrents nach Resektion links 26.06.2010 09:15:14
2.8 ms
1.0 mV

... more ENT surgery





Localisation and functional integrity check for cranial motor nerves

You can use our device to identify nerves in parotidectomies or neck dissections. No more worries about causing nerve lesions in the course of vestibular schwannoma surgery or when placing cochlear implants. The application areas in ENT are as versatile as our **AVALANCHE® SI 2**.

The electromyogram of up to 8 muscles consistently responds to even the smallest nervous irritations. Loud enough for you to hear it – but pleasantly quiet as a rule. One glance at the large monitor with its brilliant colour reproduction will tell you which nerve was irritated. Use our stimulation probes to verify the results for yourself! You will see a hard-to-miss action potential in the vicinity of nerves. Reassuring, isn't it? Can the auditory nerve also be monitored? Absolutely, with our built-in acoustic stimulator. It provides vital information, together with derived cortical AEP signals.

By the way, we carry all the accessories you may need. Our needle electrodes are colour-coded to match the appearance of EMG signals on the screen. That avoids any confusion.

... more Carotid surgery

Lower risks with SEP
measurement

Oxygen perfusion
monitoring

What is your preferred practice for carotid TEA? Do you always place a shunt or do you feel most secure when you can speak with the patient during the operation?

There is no winner in the comparison between general and regional anaesthesia. Our **AVALANCHE® SI 2** neuromonitors supply somatosensory evoked potentials, or SEP for short, during TIVA. Patient preparation does not take longer. Our special software developed for carotid TEA allows for easy interpretation of signal changes. We not only show you how to place the electrodes, but also automatically evaluate the measured signals. Selective shunting in case of alarm, but only if things are really tight. Our large colour screen displays information you can actually see.



A timer shows the clamping time, and even better: it automatically documents important phases, without any additional steps. As a reminder, our **AVALANCHE® SI 2** neuromonitors have a multimodal structure and can be used in multiple departments. Your purchase will pay off after just a few interventions. Just think of your colleagues in general and ENT surgery, who might be pleased to share the device with you.

Did you know that SEP monitoring with a measurement-based approach is considered one of the safest methods for assessing oxygen perfusion during the clamping phase? Is regional anaesthesia still your exclusive go-to method? We hope not. Take us along for your next surgery.

... **more**

Spinal surgery

EMG, SEP, and MEP measurement, monitoring of the afferent and efferent nerve pathways

If you've already learned about the other application areas of our **AVALANCHE® SI 2** device, you have almost heard it all. There's only one other area: spine surgery. Monitor long pathways in minor surgeries with 4 EMG and 4 SEP channels. You can use 8 EMG channels for stabilising interventions or intervertebral disc removal.

Our **AVALANCHE® SI 2** has most stimulators built in. That's no small feat for a portable compact device.

If you need more channels, for example for correcting thoraco-lumbar scoliosis, we recommend our large multimodal neuromonitor **AVALANCHE® PLUS**. Up to 32 channels, with a revolutionary operating concept. You will be inspired.



... Learn more: Customer favourites



Saxophone electrode

continuous vagus nerve
stimulation

It is soft, stands out for its design, and is easy to use. We have given it an optimal shape to adapt to the anatomical conditions of the vagus nerve.

Our **saxophone electrode** is one of the safest aids for continuously monitoring the recurrent nerve. An unbeatable team in combination with our **AVALANCHE® SI 2**. You will be warned before it is too late – at any time. Thanks to continuous stimulations, phases of uncertainty during preparation are a thing of the past. The electrode is positioned perfectly at the nerve and its atraumatic removal is an absolute asset. The two contacts for nerve stimulation are embedded – a unique design.



Stimulation probes

direct stimulation of nerves
and muscles

Compare our **stimulation probes** with those of others. Do you see the difference?

Our probe handles are ergonomically designed to protect your hand. They are easy to manoeuvre to let you reach every corner of the surgical area. With our monopolar or bipolar probes, you can clearly distinguish coarse and fine features. Our new blister packs are shaped to allow for quick removal of our sterile probes, even in stressful situations.

Another plus: the peel-off adhesive labels make documentation easier and save time, which you can probably use more effectively elsewhere.

from the Dr. Langer accessory list!

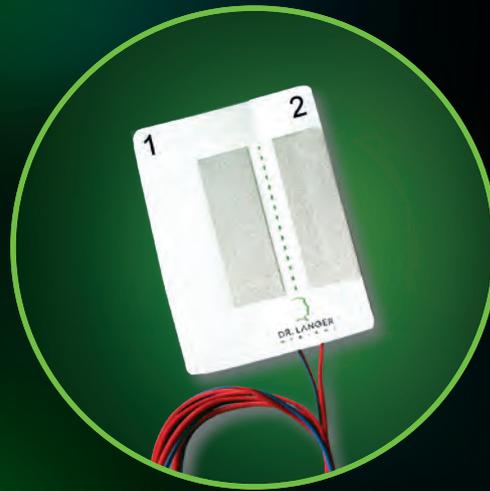


Electrode tube

EMG leads with standard or Woodbridge tube

No time for sticking on an electrode? Or does the proper placement of adhesive electrodes sometimes go wrong?

Then use our **tubes** with fully integrated electrodes. Whether in the standard or spiral version, we can offer the right **electrode tube** in various sizes. The two-sided, extra-large contact surfaces ensure a high level of positioning tolerance with dependable signal acquisition. By the way, did you know that signal quality depends on the size of the contact surfaces, not on their number? Our single-channel **tubes** only need two electrode surfaces, thus enabling a maximum size.



Tube electrode

cost-effective alternative to the electrode tube

Our **tube electrodes** have been on the market for 15 years. Doing things yourself can save money – that's true here as well.

You can place the **tube electrode** on any endotracheal tube with just a few steps. To make it faster, every work step is clearly marked with a numbering system. We've even marked the optimal distance from the cuff. It doesn't get much easier. The two extra-large contact surfaces are only available with our single-channel electrode – for perfect signal quality during the entire surgery. The same electrode can be used for multiple tube diameters – for greater flexibility and cost savings.



Quality made in Germany

Dr. Langer Medical is a team of creators. We jointly support an idea as part of a family-owned medium-sized company. Our goal is to develop practical solutions that simplify your daily work in the OR.

Dr. Langer Medical has been known for quality, dependability and attentive customer service for over 25 years, much to our pride.

Now it's time to really get to know us and our products. Simply get in touch. Our friendly staff is looking forward to talking with you.



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