Intraoperative Neuromonitoring
Functional Neurosurgery
Pain Treatment
Neurological Diagnostics

inomed

The next generation of IOM systems

ISIS XPERT

>> AREAS OF APPLICATION

- › Neurosurgery
- › Spinal Column Surgery
- › Orthopaedics
- › Vascular Surgery
- › Cardiothoracic Surgery
- › Rectal Surgery
- › Thyroid Surgery
- › Ear, Nose and Throat Surgery

AEP TOF EEG SEP EMG Spine MER MEP pIOM VEP

The next generation of inomed ISIS IOM systems:
Maximum flexibility for demanding neuromonitoring

ISIS XPERT

>> **Versatile**

>> **Highly configurable**

>> **Easy to use**

The ISIS IOM system family

With the ISIS IOM system family, inomed offers a complete package of products for multimodal intraoperative neurophysiological monitoring. ISIS IOM systems offer outstanding performance, ease of use, flexibility and versatility. Users can choose between three different system options – **ISIS Xpert, ISIS Xpert plus and ISIS Xpress.**

Its modular structure and the ability to flexibly combine different ISIS Headboxes and ISIS neurostimulators mean that the system can be individually configured for specific requirements, enabling multimodal intraoperative neuromonitoring.

Security by design:

>> Integrated into a sturdy cart, making it highly robust and ensuring that all components are protected

>> Optimum surgical hygiene with wipeable mouse, keyboard and screen, and fanless panel PC

>> In-cart storage maximises the life span of accessories

ISIS XPERT plus

>> **Perfect for advanced neuromonitoring**

>> **Includes printer and video module**

>> **Ergonomic, height-adjustable monitor**

ISIS XPERT

>> **High performance standard system for multimodal monitoring**

>> **Excellent value for money**

>> **Wide range of upgrade options**

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ISIS Xpress

›› **Easy to transport**
›› **Space-saving**
›› **Highly configurable**

Flexibility by size:

›› **Portable ISIS IOM system with lightweight, space-saving case**
›› **Ideal for transport during service deployment**
›› **Hand luggage-sized trolley for comfortable transportation and fast check-in at the airport**

ISIS Xpress is the portable version of the ISIS IOM system. It features a lightweight, space-saving case, ideal for ease of transportation during service deployments or when travelling.
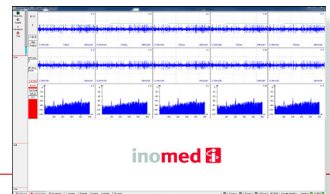
A hand luggage-sized trolley allows easy, safe transportation and means that the compact system is perfect for a fast check-in at the airport.

Upgrading to ISIS MER system

ISIS IOM systems can be upgraded **for use for microelectrode recording (MER)**. The ISIS Headbox MER system is a complete hardware system for target site identification for deep brain stimulation. As a full-service provider, inomed also offers a full range of instruments for stereotactic surgery where required.

› **Comprehensive software package** for use in everyday clinical practice and for advanced research
› **5-channel amplifier** for extracellular recording
› **Integrated constant current stimulator** for intraoperative test stimulation
› **Reusable leads and electrodes** for recording and test stimulation
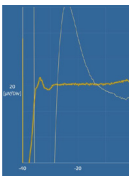› **MicroDrive** for electrode delivery

› ISIS NEUROSTIMULATOR

The unique, flexible, patented **ISIS Neurostimulator** technology has been specially designed to meet the most demanding intraoperative neuromonitoring requirements.

› **High current and direct nerve stimulation** with monophasic, biphasic and alternating pulse waveforms

› Can be used as a **standalone device** or, via the integrated NeuroExplorer software package, as part of the ISIS IOM system

› Unique **current control** for safe stimulation

›› **Artefact-free recording through stimulator design**

The brand-new, german patented stimulation artefact reduction technology allows displaying even very short-latency and low-amplitude signals.
D wave or corticobulbar MEPs: less overlay means better interpretation possibilities.

» Adaptors

Stimulation and recording adaptors for electrode connection.

› Easy and safe to use, thanks to colour-coded ports, connectors and cables

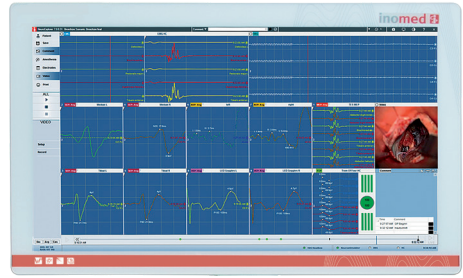› Clear, legible labelling for faster electrode connection

» ISIS Headbox

The core component of the ISIS IOM systems is the ISIS Headbox. These advanced amplifier modules offer the following features:

› Double the number of channels up to 16
› Best signal quality
› Versatile selection especially tailored for demanding application fields
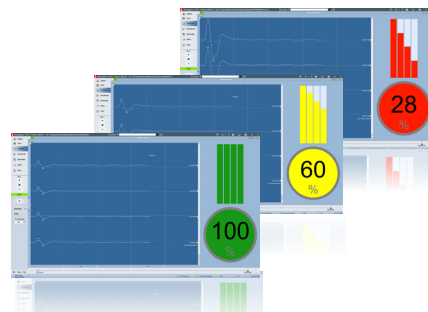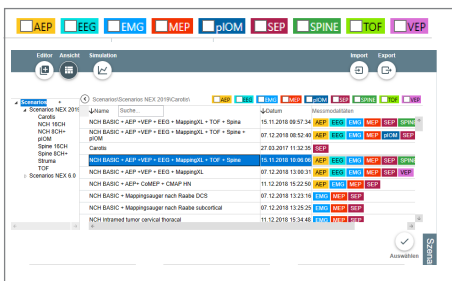
NeuroExplorer

Our software developers are always working to turn technical innovations, user requests and research results into new updates, ensuring that our user-friendly software is continously improving.

>> Meets the latest GDPR requirements
>> New application-oriented software modalities
>> Easy to use
>> Optimised signal processing

The NeuroExplorer 2019 software package offers you:

- **43 proven measurement scenarios** – ready to use and individually customisable for every application

- MEP (transcranial and direct cortical), SEP (including phase reversal), EMG (freerun and stimulated), AEP, VEP, EEG, TOF, spine (automated pedicle screw stimulation, XLIF), pIOM

- Current-controlled stimulation on 12 high-current channels and 1 DNS channel

- **Channel switching made easy** – drag and drop, select from a list, channels are colour coded which are already in use

- **Multi-channel video window** for up to 4 different sources with synchronised recording directly from the measurement window

- Trend view and automatic alerts when thresholds are breached

- Audio feedback and microscope display of data, so the surgeon can receive information with no loss of time

- **Excellent documentation** with manual and automatic screenshots, flexible comment function and measurement screen recording (Screen2video)
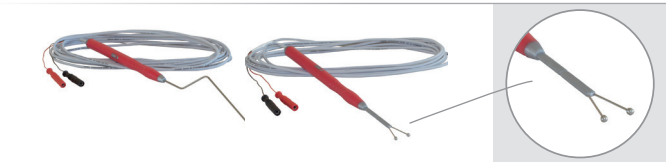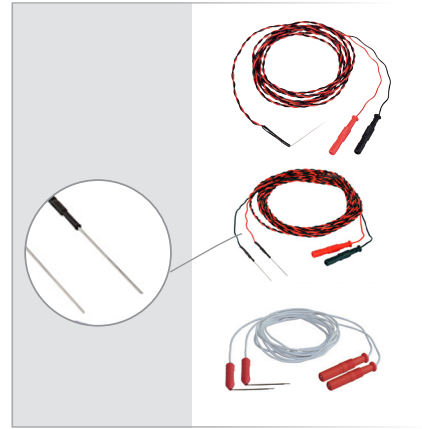
› ACCESSORIES

Devices and high quality IOM accessories from a single provider. Trust in our wide range of stimulation probes and other accessories manufactured in Germany.

■ **Needle electrodes for monitoring and stimulation**
  › Subdermal needle electrodes for EMG/MEP monitoring and SEP stimulation
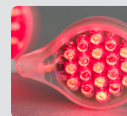 › Special forms for corticobular application, ENT, pediatrics

■ **Stimulation probes and stimulating surgical instruments**
  › Bipolar stimulation probes – concentric (BCS), fork and hook probes
  › Monopolar stimulation probes and surgical instruments (dissectors, hooks, raspatories)
  › Mapping Suction Probe by Raabe for continuous mapping

■ **IOM accessories for special applications**

  › Grid/TES stimulation matrix for optimal use of grid and strip electrodes

  › pIOM set for pelvic autonomic nerve monitoring

  › ALM tube with channel select for highly effective vagus monitoring

  › Tympanic and ball electrodes for near-field AEP recoding

  › LED goggles for VEP

›› For our complete range of accessories, take a look at our online shop on inomed.com!

ISIS **X**PERT
SYSTEM FAMILY

› ADVANTAGES AT ONE GLANCE

- Standard configurations with **16 or 32 full channels** available
- Update with more software options and more channels **(up to 64)** possible anytime
- Three models for every neuromonitoring need (portable, everyday use, high-end research)
- Easy, intuitive software for beginners, many advanced monitoring possibilities for experts
- The **whole range of neuromonitoring** (AEP, brainstem reflexes, EEG, EMG, D wave, DMS, Dynamic mapping, coMEP, tcMEP, MER, NAP, Phase reversal, SEP, Speech mapping, pIOM, VEP)
- **Unique stimulation artifact reduction** in 12 channel high-current and one channel DNS stimulation
- Meets latest GDPR requirements
- **Export all data in EDF+ format** for IOM research
- Multiple connectivity options (several IOM machines, hospital network, OR equipment)
- Thorough documentation (pdf report, manual and automated screenshots in colour and b/w, screen-to-video, multichannel video)
- The **biggest range of IOM accessories** (electrodes, probes, stimulated instruments, LED-goggles …)
- German quality, dedicated support, constant development

ISIS XPERT
SYSTEM FAMILY

ISIS XPERT

ISIS XPERT plus

ISIS Xpress

Configuration	ISIS Xpert®	ISIS Xpert® plus	ISIS Xpress
Sturdy cart with inbuilt system	x	x	–
Portable design with laptop and wheeled case with telescopic handle	–	–	x
Number of accessory compartments	1	2	–
High performance panel PC	x	x	–
Touchscreen	x	x	–
Ergonomic, height-adjustable monitor	–	x	–
Printer	+	x	+
Display external video sources on the measurement screen	+	x	+
Integration with Zeiss Pentero® microscopes	+	+	–
External muting sensor to mute the loudspeaker in the event of disruptive artefacts from electrosurgery	+	+	–
Synchronisation of patient data over the network	+	+	+
Remote monitoring	+	+	+
Upgrade option to 5-channel MER	+	+	+
inomed planning software for DBS	+	+	+

X Included as standard

– Not available with this system

+ Available as an additional option

[1] Configuration with the corresponding software module possible

[2] Included in each system

[3] Not included in the standard package

Software options:

EMG software module[1]
SEP software module with PRSEP[1]
AEP software module[1]
MEP software module[1]
VEP software module[1]
EEG software module[1]
TOF software module[1]
pIOM software module[1]
Spine software module[1]
Software module channel select[1]
Software module HL7[1,3]
ISSS - inomed System Security Solution[2]

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