

Cascade® **IONMAX™**

CASCADE® **PRO**



Surgeries are inherently risky, especially those that involve the brain, spinal cord or nerves. Intraoperative neurophysiological monitoring (IONM) is performed during many different types of surgeries to reduce the risk of devastating, irreversible neurological deficits, such as muscle weakness, loss of sensation, hearing loss, and impairment of essential bodily functions.

IONM involves multi-modal recording of electrical potentials from the nervous system during operations to detect adverse changes, enable corrective action, and offer surgical guidance.

CASCADE IONM SOLUTIONS,
time tested over two decades of innovation,
experience, and investment,
ARE THE FUTURE OF IONM.



CASCADE IONM SOLUTIONS

Comprehensive solutions for patient-centered IONM care



The modular design of Cascade® IOMAX™ lets users tailor each IONM setup to the specific requirements of each surgery.

Cortical Module. Designed for recording and stimulating at, or near, the patient's head, with 16 channels, TCS-9 for dynamic montaging of transcranial MEPs, and Low Current, Auditory and Visual Stimulation. Optional extender pods provide flexible positioning.

32 Channel Amplifier. Expand EEG and phase reversal SSEP recording capabilities with additional channels.

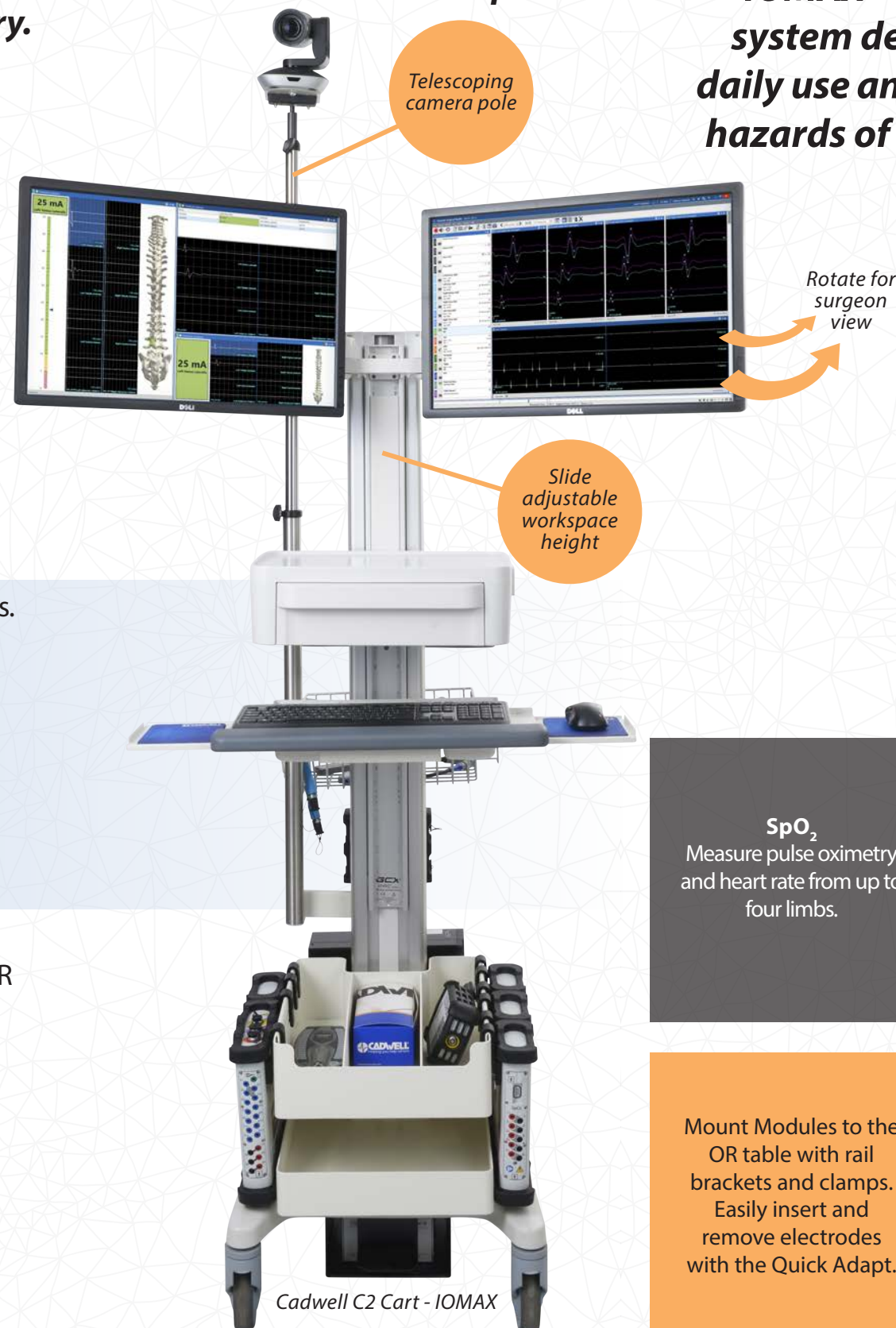
Limb Module. Designed for recording and stimulating the arms and legs with eight recording channels, 5 paired E-Stim outputs, SpO₂ and Heart Rate.

IOMAX systems are scalable from eight to 80 channels.

- Use the Cortical Module on its own
- Configure one 32 Channel Amplifier independently or in combination
- Add up to four Limb Modules via the Cortical Module, or up to two Limb Modules independently

Base Module. Provides power and communication via a single SafeT™ Cable to the OR table, and allows Trigger In/Out interfacing with third-party devices.

LCSwap. Comprehensive switch matrix solution for direct cortical stimulation. Twelve outputs can be independently assigned as anode or cathode; includes two paired outputs for hand-held probes.



IOMAX™ is a compact, robust system designed to withstand daily use and the environmental hazards of the operating room.

SpO₂
Measure pulse oximetry and heart rate from up to four limbs.

Mount Modules to the OR table with rail brackets and clamps. Easily insert and remove electrodes with the Quick Adapt.



Cortical and Limb Modules are drop tested and waterproof.



A configuration to meet every clinical need, simple or complex.

SafeT Cables
Waterproof and completely interchangeable between Modules with color-coded quick-release metal connectors.



Pelican™ carry-on case
TSA-approved lock. Sturdy and secure. Accommodates up to a 80-channel IOMAX system.



The pod-based design of the Cascade PRO is time-tested and user-approved for dynamic surgical environments.



Base Unit. All modality monitoring. Auditory and visual EP stimulation. Electrosurgery and noise detection.

Amplifiers. Choose 16 or 32 channels. Add input extender pods to reach the operating table.

TCS-4 and TCS-1000. Transcranial motor stimulation with 1 or 4 fixed output pairs.

- Delivers high voltage, rapid trains of up to 9 pulses (at 1000V).
- With TCS-4, up to 4 sets of single anode to single cathode output combinations can be created and switched between in software.

ES-IX 2. High and low output stimulators are available for various applications, such as peripheral nerve and direct nerve stimulation.



Cadwell C2 Cart - PRO

All-modality monitoring with 16 or 32 channels.

Patented quick-connect cable fasteners fast-track setup and tear down.



Peripheral stimulators increase case-by-case flexibility.

Patented input extender pod cable shielding reduces noise.

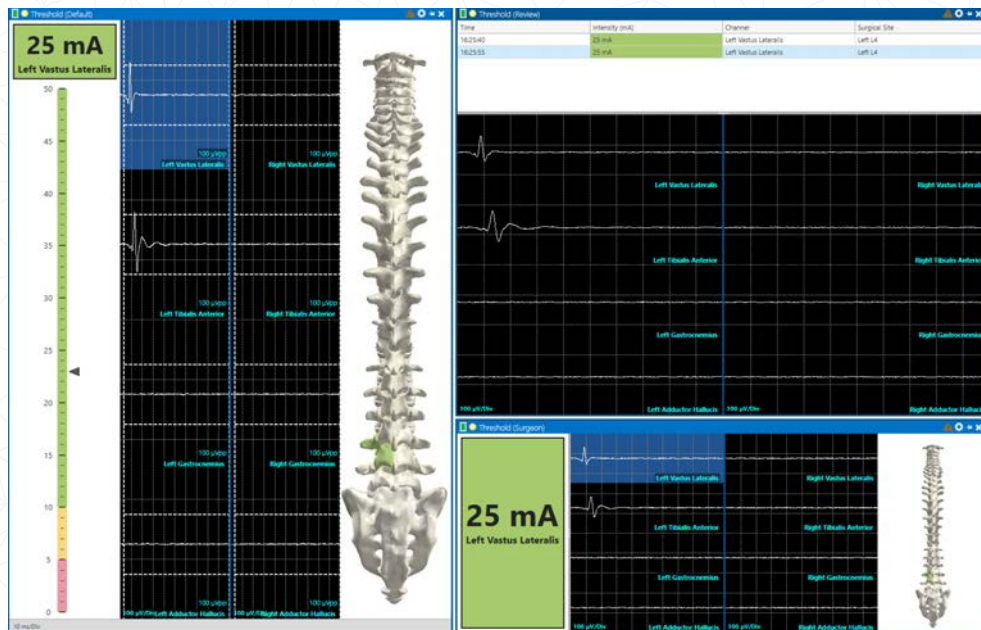


SURGICAL STUDIO

Cascade Surgical Studio software offers an intuitive interface that is compatible with all Cascade IONM systems.

Streamline your workflow

- View live and saved data side-by-side and never miss critical information
- Switch users during a case to log involvement and apply settings without interrupting data acquisition.
- Seamlessly share and manage data and resources across your organization.



Use IOMAX TCS-9 dynamic montaging to achieve optimized MEP results for each patient.

Efficiently pinpoint responses with Automatic Threshold mode.

Deliver clinical excellence

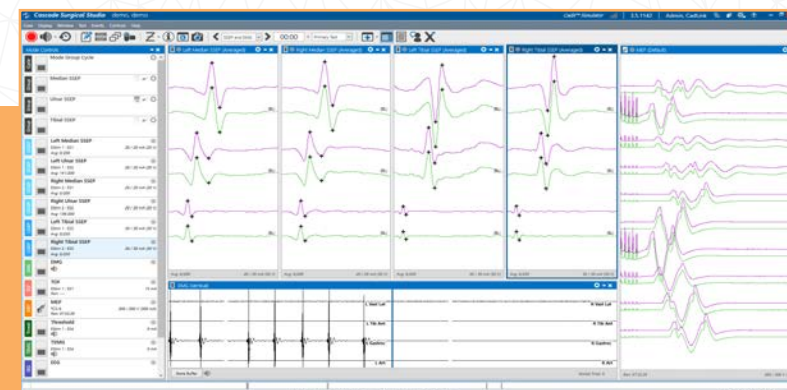
Achieve quick and intuitive direct cortical stimulation with strips, grids, and/or probes using the software-driven switch matrix.

Optimize quality management

- Standardize procedure setups.
- Control access to data and PHI.
- Demonstrate competency with CadX simulator.
- Automatically remove data from the local recording system with CadLink.
- Track case involvement and apply user preferences.

User Roles			Manage roles and permissions for all users.
User Roles	Selected User Role Permissions		
Administrator	Allowed	Permission	Description
None	<input checked="" type="checkbox"/>	View All Records	User can view all records, regardless of User Group assignment.
Physician	<input checked="" type="checkbox"/>	View My Group's Records	User can view any records within their User Group.
Tech	<input checked="" type="checkbox"/>	View My Group's Records	User can view any records within their User Group.
Accessibility If no options are selected, Users can always view their own records			
Administrative			
<input checked="" type="checkbox"/>	Manage Body Sites		User can create, edit and delete body sites.
<input checked="" type="checkbox"/>	Manage CadX Scripts		User can create, edit, and delete CadX scripts.
<input checked="" type="checkbox"/>	Manage Custom Fields		User can create, edit and delete custom fields.
<input checked="" type="checkbox"/>	Manage Mode Templates		User can delete mode templates.
<input checked="" type="checkbox"/>	Manage Patients		User can delete patients.
<input checked="" type="checkbox"/>	Manage Procedure Templates		User can edit and delete procedure templates.
<input checked="" type="checkbox"/>	Manage Report Templates		User can edit and delete report templates.
<input checked="" type="checkbox"/>	Manage System Settings		User can manage settings for the entire site.
<input checked="" type="checkbox"/>	Manage System Settings		User can edit system level settings.
<input checked="" type="checkbox"/>	Manage Users, User Roles, and User Groups		User can create, edit and delete users, user roles, and user groups.
<input checked="" type="checkbox"/>	Preserve / Restore		User can run the Preserve/Restore utility.
Recording and Reviewing			
<input checked="" type="checkbox"/>	Review Records		User can review records.
<input checked="" type="checkbox"/>	Start Procedures		User can start or append to a case.
Record Management			
<input checked="" type="checkbox"/>	Archive Management		User can move archive locations and change auto archive settings.
<input checked="" type="checkbox"/>	Archive Records		User can archive records and restore records from the archive.
<input checked="" type="checkbox"/>	Delete Records		User can delete records.
<input checked="" type="checkbox"/>	Export Records		User can export records, case information, and case data.
<input checked="" type="checkbox"/>	Unlock Records		User can remove all locks on a record.

Set users permissions for recording, reviewing and data management.



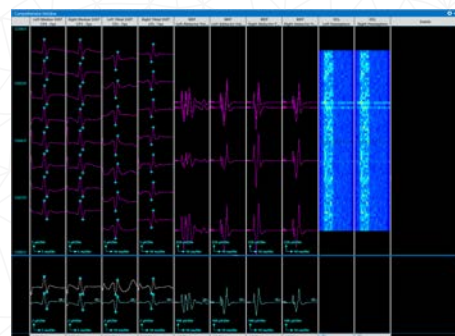
Choose screenshots to include in reports.

Strengthen documentation

- Standardize demographic data collection.
- Enter comments just by typing.
- Choose whether to save the Chat Log.

Stay connected

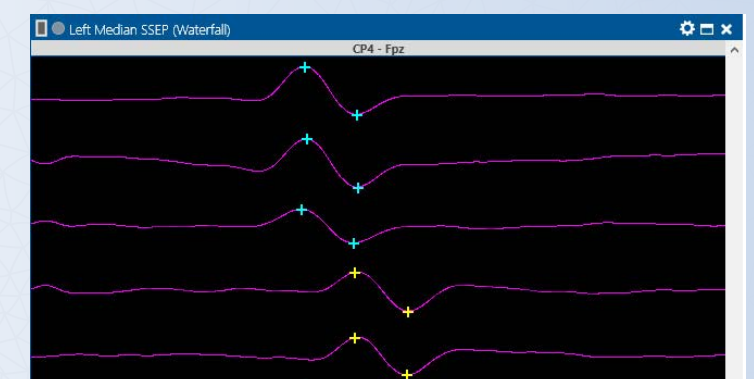
- Remote monitoring and integrated group chat are powerful tools for communication with colleagues during surgery.
- Reviewers have their own display settings and the ability to add to the Event Log and capture screenshots.
- Set up CadLink™ information management to automatically interface with EMR or HIS to import patient demographics and export results and reports.



Get a birds-eye view of the case with Comprehensive Window

Capture Critical Information

- Automatically capture screenshots with every User Event entry.
- Save the previous 30 seconds of EMG with Store Buffer.



Set up color-changing amplitude and latency cursor alerts.



Provide secure and efficient access to clinical information when and where you need it. CadLink helps deliver efficient workflow, quality data and easy reporting by connecting Cascade® Surgical Studio IONM, Arc® EEG, and Sierra® EMG/EP.

Ensure Fail-Safe Data Streaming

Safeguard against network connection failures by temporarily saving data locally and auto-streaming trace and video data to centralized storage on the CadLink Server.

Centrally Manage Setup and Updates

Manage CadLink Clients and settings from the CadLink Server. Update Clients independently of Cadwell applications.

Customize User Settings

All users can access their view and color preferences, even during live review.

Secure All Data and Communication

Encrypt the transfer and storage of patient data. Point-to-point communication ensures safe and efficient data transfer to the CadLink Server.

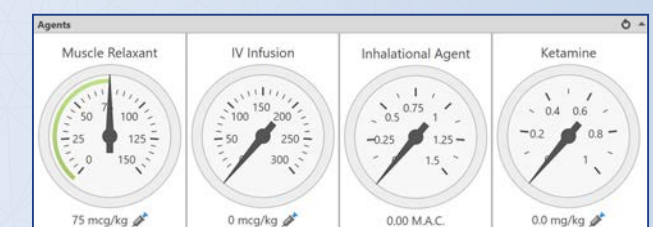
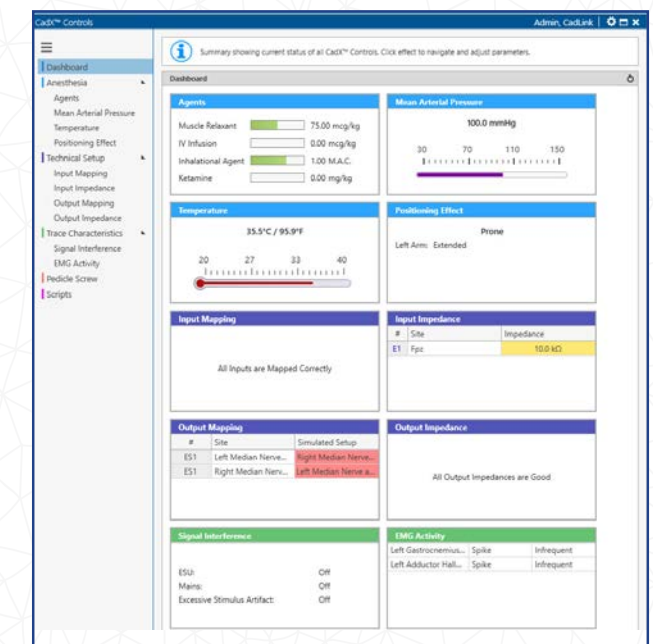
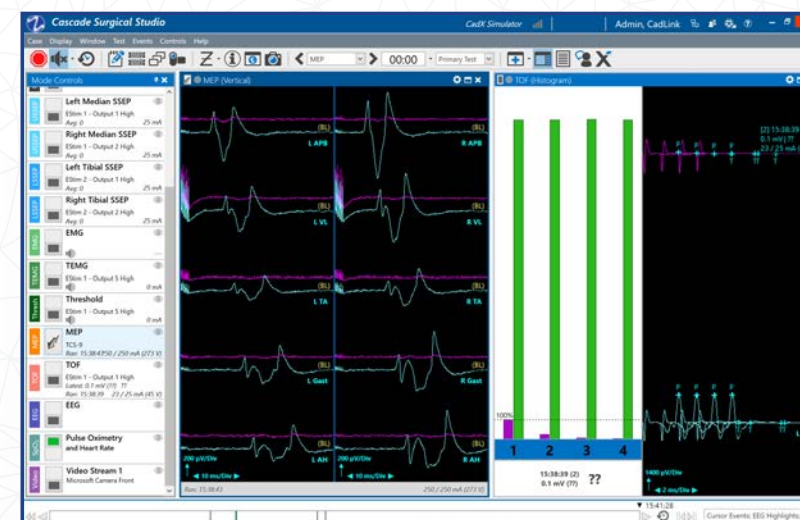
Enable Remote Live Review

Review multiple studies simultaneously from any CadLink client via a local network, Internet, VPN or Citrix. Remote reviewers can customize their own view settings.



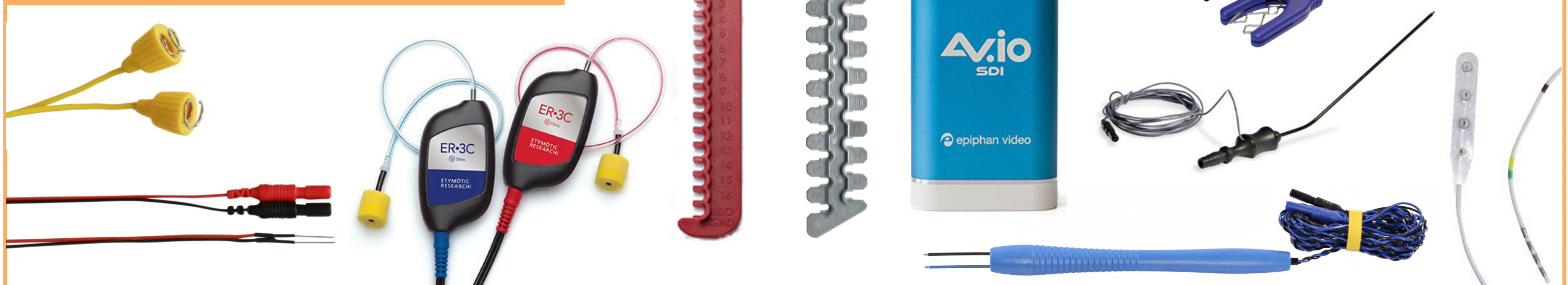
Simulate realistic data demonstrating anesthesia, technical and surgical effects with CadX simulation software.

Train or teach using the same procedure setups and software tools used daily in the operating room.



Manipulate the CadX patient control panel to create real-world scenarios for demonstration and assessment purposes.

VISIT WWW.ESTORE.CADWELL.COM
FOR ALL OF YOUR IONM ELECTRODES, ACCESSORIES AND CONSUMABLE SUPPLIES



We are dedicated to developing industry-leading IONM solutions to help you help your patients.

THE CADWELL STORY

John Cadwell, BSEE, MD, saw a need for innovative and reliable neurophysiology instruments during his residency at the University of Washington School of Medicine.

John combined his experience in electrical engineering and medicine to design the world's first microprocessor-controlled EMG instrument. Together with his brother, Carl Cadwell, DDS, John formed Cadwell Laboratories in 1979.

In the 1980s, Cadwell developed the best-selling 5200A EMG and the Spectrum 32 EEG.

In the 1990s, Cadwell's Sierra took over the EMG line and Cadwell introduced Cascade IONM and Easy EEG.

In the 2000s, Cadwell developed the industry's best integrated report generator and introduced Easy PSG. We introduced Cascade Surgical Studio for Cascade IOMAX, and continue to support Cascade PRO.

Lately, we have expanded our headquarters and opened offices in China, Singapore, the Netherlands, and United Arab Emirates. Our global sales and support teams help physicians and medical centers worldwide help their patients.

Today, our brands include Arc EEG, LTM and ICU cEEG; Cascade® IONM; Sierra® EMG and EP with integrated ultrasound; Easy® PSG, and CadLink™ data management.

Cadwell is staying true to its mission: helping you help others.

Cadwell has a strong history of supporting customers. Please discuss service, support, warranty, and training information with your sales manager or distributor.



Cadwell Industries, Inc.

909 N. Kellogg St. • Kennewick, WA 99336

(800) 245-3001 • +1 (509) 735-6481 ph • +1 (509) 783-6503 fx

www.cadwell.com • info@cadwell.com

