

PRODUCT INFORMATION

EndoSTROBE P System

Universal. Innovative. Future-proof.



4K⁺
Full HD

3D⁺

See more than others.



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 The universal camera processor with integrated light source for highest requirements in the ENT endoscopy. 4

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EndoSTROBE P – multifunctional ENT endoscopy system of the future

- Rigid and flexible ENT video endoscopy for practice, outpatient department and OR
- Video microscopy
- Stroboscopy
- Swallowing diagnostics
- Electroglottography
- Voice diagnostics

The system components of the EndoSTROBE P system form a compact unit which delivers optimal quality and outstanding convenient operation.



The innovative XION EndoSTROBE P System is specially designed for ENT medicine. The system is characterized by high image quality, ease of use and user-friendly acquisition, processing and storage of data.

Thanks to the EndoSTROBE P universal system it is now possible to optimally operate all endoscopic applications in ENT OR and ENT ambulance with the same Endoscopic system.

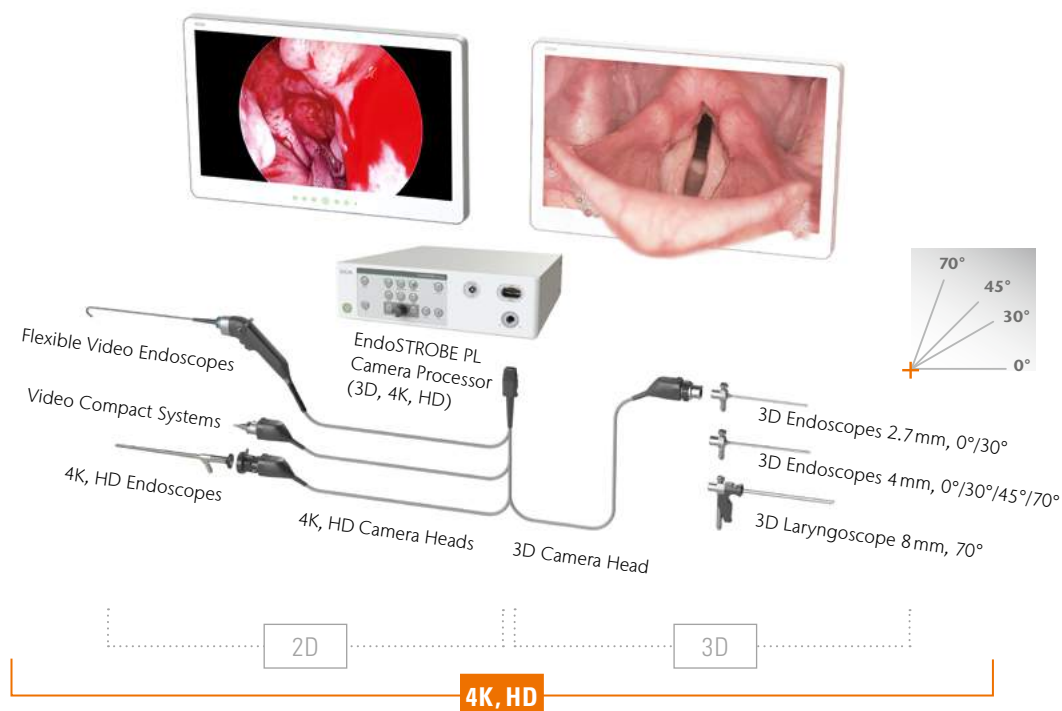
EndoSTROBE PL Processor

The universal camera processor with integrated light source for highest requirements in the ENT endoscopy.

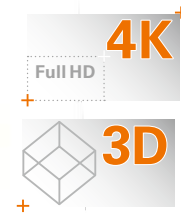
A revolutionary camera technology, newly developed by XION, forms the basis of the MATRIX Spectar, which meets all requirements of modern endoscopy.

The Spectar camera platform has been designed to operate all current and future camera heads as well as rigid and flexible video endoscopes. The XION Spectar has been prepared both for native sensor resolutions up to 4K (4x HD) as well as for demanding 3D endoscopic applications. Based on decades of experience in endoscopy, this concept offers completely new possibilities, while maintaining the now familiar ease of handling.

- Universal camera processors for 2D and 3D endoscopy with native sensor resolutions up to 4K/UHD
- Excellent image quality by means of innovative, proprietary image processing routines
- Noiseless, flicker-free stroboscopy in 4K, HD and 3D
- Improved tissue differentiation using PIET Image Enhancement
- A patented automatic regulation of light intensity eliminates burning
- Picture-in-picture function
- Real-time EGG (electroglottography) with picture-in-picture fade-in to the live image
- Minimum image latency
- Consistent and future-proof Spectar connector for all 2D and 3D camera heads and video endoscopes
- Fanless and thus completely noiseless operation
- Supported by exclusive XION functionalities such as built-in microphones, integrated LED lighting and integrated optics pre-heating
- XION module housing system for the optimal integration in XION device environments, i.e. direct mounting in XION trolleys or EndoDESK systems without the use of storage shelves
- XION PowerControl – central power-on control in the XION trolley
- Clearly arranged, intuitive keypad
- System settings via an easy-to-control on-screen display (OSD)
- Extensive adjustment options for device settings via the DiVAS software
- Programmable keys on the camera heads and video endoscopes
- Programmable, OR-compatible, non-battery wireless footswitch
- Highest patient safety by laser-optical isolation within the camera processor
- XION safety concept prevents loss of monitor image in the event of a computer crash
- USB service interface for device diagnostics and firmware updates
- Kensington lock on the rear panel of the device



EndoSTROBE PL camera processor

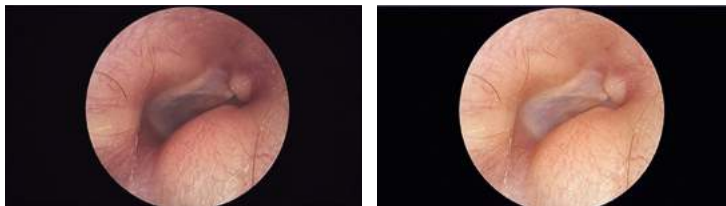


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EndoSTROBE PL Camera Processor with integrated LED light source
SD / Full HD / 4K / UHD
3D functionality in conjunction with 3D attachments
stroboscopy, EGG, PIET

Advanced diagnostic options with PIET

XION's Professional Image Enhancement Technology (PIET) extends the system by adding three situational visualisation technologies. Modes PIET lumino, PIET chromo and PIET spectro are available in all resolutions (HD, 4K) as well as in 2D and 3D endoscopy.



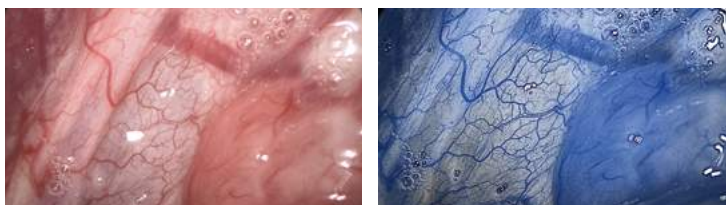
PIET lumino

Both bright as well as dark areas are equally well represented



PIET chromo

Details are highlighted, and the colour contrast is intensified



PIET spectro

By shifting the colour spectrum, tissue structures are displayed in a more differentiated manner

Documentation

All 2D and 3D images as well as video data can be archived at any time in conjunction with the XION DiVAS software. The system can be connected to KIS and PACS via standard interfaces such as HL7 and DICOM. Unrestricted communication and data compatibility is thus assured.

Technical Data	
Degree of protection	IP20
Protection class	I
Power consumption	max. 150 W
Power supply	AC IN: 100 to 240 V / 50 Hz to 60 Hz
Dimensions (W x H x D)	350 mm x 108 mm x 365 mm
Operating temperature	+10°C to +40°C
Output interfaces	
Video	2 x DVI-D: Video format 2D: 1080p@60Hz Video format 3D: 1080p@60Hz (Interleaved) 1080p@60Hz (simultaneous) 1080p@60Hz (Frame-by-Frame) ()
	4 x 3G-SDI: Video format 2D: 1080p@60Hz 4K Video format 3D: 1080p@60Hz (Interleaved) 1080p@60Hz (simultaneous) 1080p@60Hz (Frame-by-Frame) (simultaneous)
Audio	1 x Line Out, 3.5 mm stereo jack
Controlling external recording devices	2 x 3.5 mm mono jack
Input interfaces	
Application parts	1 x Spectar application part (camera head / video endoscope) 1 x EGG electrodes, ext. microphone
Audio	1 x Audio
Control	1 x Footswitch or receiver for wireless footswitch
LED light source	
Power consumption	max. 72 W
Service life	ca. 60,000 h
Color temperature	ca. 6,500 K
Light guide cable interface	Light outlet type XION/STORZ Optional change adapter type WOLF, OLYMPUS, PENTAX
Stroboscopy function	
Frequency range	ca. 80 ... 1,000 Hz, +- 2Hz
Sound level	50-110 dB(A) +-2dB(A)
QOQ tolerance (Quasi Open Quotient)	0.01
Applied standards	DIN EN 60601-1-1-2, DIN EN 15223-1 DIN EN 1041, DIN EN ISO 14971 DIN EN 62366, MEDDEV 2.7.1 DIN VDE 0404-3 / DIN VDE 0752 /

Spectar – Highest Level 2D Endoscopy

Spectar Camera Head HD with Zoom

The highly sensitive Full HD sensor of the Spectar camera head provides detailed image reproduction. The extremely compact, ergonomic soft-touch design and low weight make the Spectar camera head very easy to handle. Both of the ergonomically arranged function keys can be freely programmed by the user. An optical parfocal zoom (f = 16 through 32 mm) allows the image size to be individually adapted without compromising quality and without the need for refocusing.



- Lightweight, ergonomic soft-touch design
- Two customisable keys
- Integrated zoom lens 2x
- Coupler for standard eyepieces in compliance with DIN
- Spectar connector

329 200 001 Spectar Camera Head HD with Zoom

Sterile Adapter



Made of titanium, the XION sterile adapter makes it possible to change the optics under sterile conditions. The camera cover can be fixed easily and securely. The sterile adapter is extremely light and highly resistant to various sterilisation methods.

320 080 050 Sterile Adapter

Technical Data

Image sensor	1/3" Full HD, 1,920 x 1,200
Lens	Parfocal zoom, 2x (16–32 mm)
Coupler	For standard eyepieces in compliance with DIN 58105
Plug connector	Spectar universal connector
Dimensions (l x w x h)	112 mm x 45 mm x 50 mm
Weight	217 g without cable / 513 g with cable
Storage and operating temperature	+10°C through +40°C
Transport temperature	-20°C through 60°C
Cable length	3 m
Keys	Two keys, freely programmable
Reprocessing	Immersible, can be gas-sterilised, can be plasma sterilised
Type of protection	IP 67
Application class	BF

Spectar Camera Head 4K

The high resolution 4K sensor of the Spectar camera head provides extremely detailed, crisp, sharp, bright, low-noise images in conjunction with the EndoSTROBE PL camera processor. The 4x resolution compared to HD, and the extended colour space make it possible to detect very fine vessels and tissue structures easily – even when enlarged in zoomed display. This provides greater precision and safety for the surgeon. In addition, visibility and ease of use are greatly enhanced.



- Razor sharp, extremely detailed images
- Higher sensitivity and reduced noise
- Even the finest tissue structures can be reliably identified with the electronic zoom
- Better visibility and ease of use, more precision and safety
- Natural colour reproduction for a wide range of different applications
- Lightweight, compact, ergonomic soft-touch design
- Two customisable keys
- Coupler for standard eyepieces in compliance with DIN
- Spectar connector



329 218 001 Spectar Camera Head 4K

320 080 050 Sterile Adapter

Technical Data

Image sensor	1/3" 4K / UHD; 4,096 x 2,180 / 3,840 x 2,160
Lens	Focal length f = 22 mm
Coupler.....	For standard eyepieces in compliance with DIN 58105
Plug connector.....	Spectar universal connector
Dimensions (l x w x h)	112 mm x 45 mm x 50 mm
Weight	217g without cable / 513g with cable
Storage and operating temperature	+10°C through +40°C
Transport temperature	-20°C through 60°C
Cable length	3 m
Keys	Two keys, freely programmable
Reprocessing	Immersible, can be gas-sterilised, can be plasma sterilised
Digital zoom.....	1,4x, 2x, 2,8x
Type of protection.....	IP 67
Application class.....	BF

Spectar C-mount Camera Head for microscopy

The compact C-mount camera head can be easily mounted on any surgical microscope. This ensures highest quality for video recordings and for co-observation.



- Connection on microscopes
- 2 variations: HD and 4K
- Simple integration
- Extremely compact
- Accurate in detail, high contrast and true colour images
- Spectar connector

329 200 002 Spectar 2D Camera Head HD, C-mount

329 218 002 Spectar 2D Camera Head 4K, C-mount

Technical Data

Resolution.....	UHD / 4K or Full HD
Pull plug connector.....	Spectar universal connector
Dimensions (W x H x D).....	50mm x 39 mm x 33mm (length 150mm incl. kink protection)
Weight.....	130g without cable / 570g complete
Storage and operating temperature.....	10°C to +40°C
Transport temperature.....	- 20°C to +60°C
Connector cable.....	6m
Reprocessing.....	insertable, gas sterilisable, plasma sterilisable
Type of protection.....	IP 67
Application class.....	BF

Spectar – 3D Endoscopy

Spectar 3D Camera Head

In conjunction with XION 3D endoscope attachments, the extremely compact, lightweight Spectar 3D camera head provides brilliant 3D images with endoscope outer diameters upwards from 2.7 mm. The modular overall concept of the Spectar camera platform and the economic endoscope attachments make it possible to expand the EndoSTROBE PL processor to a state-of-the-art 3D endoscope system at just moderate cost.

The XION sterile adapter between the 3D camera head and the endoscope attachment ensures that the endoscope is held securely and sterile camera drapes can be attached easily. It is therefore possible to easily change the optics under sterile conditions.



- Lightweight, ergonomic soft-touch design
- Two customisable keys
- Easy switching from 3D to 2D
- Sterile adapter for efficient draping and easy changing of lenses under sterile conditions
- Spectar connector

329 204 001 Spectar Camera Head 3D HD

130 600 000 Sterile Adapter for 3D Camera Head 329 204 001

Technical Data

Image sensor	1/3" Full HD, 1,920 x 1,080
Lens	3D special lens
Coupler.....	Connector for XION 3D sterile adapter
Plug connector.....	Spectar universal connector
Dimensions (l x w x h)	100 mm x 40 mm x 45 mm
Weight.....	150 g without cable / 446 g with cable
Storage and operating temperature	+10°C through +40°C
Transport temperature	-20°C through 60°C
Cable length	3 m
Keys	Two keys, freely programmable
Reprocessing.....	Immersible, can be gas-sterilised, can be plasma sterilised
Type of protection.....	IP 67
Application class.....	BF

3D Endoscope Attachments

Different lenses for different applications are available for the EndoSTROBE P 3D endoscopy system. Two different design forms, each with specific design features can be distinguished:

130 603 1xx 3D endoscope attachments, diameter 2.7 mm, different application lengths, direction of view 0° and 30°

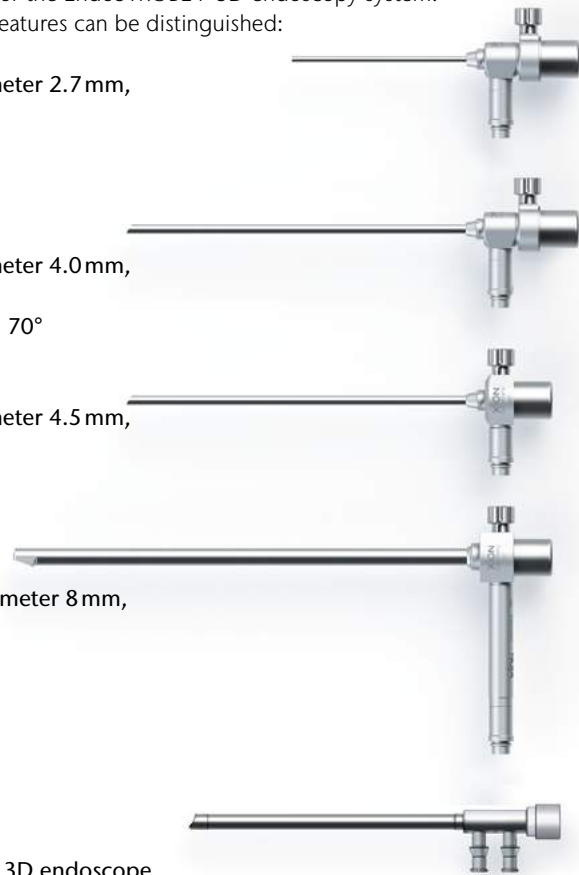
130 604 1xx 3D endoscope attachments, diameter 4.0 mm, different application lengths, direction of view 0°, 30°, 45° and 70°

130 615 1xx 3D endoscope attachments, diameter 4.5 mm, different application lengths, direction of view 0° and 30°

130 618 157 3D laryngoscope attachment, diameter 8 mm, 185 mm application length, direction of view 70°

130 205 xxx Suction and irrigation sheaths for 3D endoscope attachments, diameter 4.5 mm, different application lengths, direction of view 0° and 30°

130 204 xxx Suction and irrigation sheaths for 3D endoscope attachments, diameter 4.0 mm, different application lengths, direction of view 0°, 30°, 45° and 70°



3D Align



Optimum playback of stereoscopic images and fatigue-free working are possible only when the stereo image is precisely set. The 3D Align provides the user with a tool which easily performs an automatic alignment. 3D Align consists of a dot matrix with an attachment mount for all common XION stereo endoscopes. The stereo endoscope is placed in the attachment mount; next the camera key on the left is pressed within one to two seconds the endoscope is aligned. Successful alignment is displayed on the monitor screen.

By combining this process with the white balance procedure that is familiar to all users, the time required for doing this is reduced to a minimum.

130 600 010 3D Align, Tool for automatic alignment of 3D endoscopes

Spectar – Flexible Video Endoscopes

Spectar Video Nasopharyngoscope XN HD

The unique and innovative technology of the Spectar camera platform supports work with flexible HD video endoscopes. The features provided facilitate more exact reproduction of surface structures and more precise treatment.

The Video Nasopharyngoscope XN HD delivers homogeneously illuminated, high contrast images with excellent depth of field and highest definition.



- Highest image resolution and convenient handling
- Extremely clear, bright, high contrast, high resolution images facilitate a detailed representation
- Camera sensor, light source, optics, microphone and control keys are integrated in a single instrument and connected to the Spectar camera processor by means of just a single cable
- Electronic magnifications of 1.2 x and 1.5 x are possible
- Integrated LED lighting – No separate light source required!
- Excellent, homogeneous illumination of the endoscopic image
- Ergonomically formed handle
- Symmetrically designed for left and right-handed users
- Programmable function keys
- Suitable for both machine and/or manual reprocessing

329 309 401

Spectar Flexible Video Nasopharyngoscope XN HD

Technical Data

Field of view	80°
Direction of view	0°
Focal range.....	5 mm – 50 mm
Working length.....	320 mm
Shaft diameter.....	3,6 mm / 3,9 mm distal
Bending angle up / down	130° / 130°
Min. bending radius.....	8 mm
Function keys.....	Two keys, programmable
Stroboscopy.....	Integrated microphone compatible with XION Spectar stroboscopy systems
Plug connector.....	Spectar universal connector
Cable length	1.5 m
Weight (without cables)	320 g
Type of protection	IP 67
Application class.....	BF

MATRIX DS Data Station

Digital evaluation and archiving with DiVAS



The MATRIX DS Data Station with integrated DiVAS software is approved for usage in the medical environment and forms the basis for digitally recording, managing and evaluating of patient, image, video, audio and measurement data in XION endoscopy systems. It is an integral part of the archiving and analysis systems as well as all integrated operating room solutions from XION.

An essential requirement for making fast and efficient findings is a powerful software component that digitally records, assesses, documents and archives various diagnostics and therapy data. The modular structure of the DiVAS software facilitates adaptation of the function range to current requirements and leaves open all future extension options.

The DiVAS software module Base/Patient Management is always an integral part of the MATRIX DS Data Station.

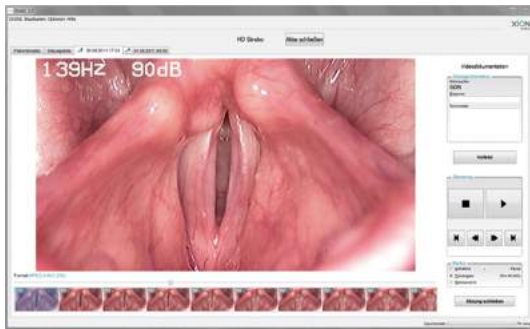
350 010 882

MATRIX DS, multilingual Data Station including WIN10, DiVAS Base / Patient Management, HD/4K Grabber

Technical Data

Processor.....	Intel Core i5
Chipset.....	Intel Q87 Express Chipset
RAM memory.....	4GB
Slots.....	4 x 1.5V DDR3 DIMM, maximum 32 GB
Onboard graphics.....	Integrated graphics processor, HD 4600. 1 x VGA Sub D port 1 x DVI-D port, resolution up to 1920 x 1200 1 x Display port, V1.2
External connections.....	1 x LAN RJ45 (10/100/1000MBit) 2 x USB front-side, 4 x USB rear-side (USB 2.0/1.1) 2 x USB rear-side (USB 3.0 3.0/2.0) 2 x PS2 AUDIO IN/OUT (3 x 3.5 mm jack)
Power supply.....	100–240V AC 50 to 60 Hz
Current consumption.....	max. 2.5 A
Dimensions (W x H x D).....	350 mm x 172 mm x 363 mm
Weight.....	approx. 8.6 kg
Operating temperature.....	10°C to +40°C
Protection class.....	Class I
Degree of protection.....	IP 20

DiVAS module Video Documentation



350 020 010 DiVAS Video Documentation

350 020 019 DiVAS Full HD/4K Video, supplement to 350 020 010 Video Documentation module

350 020 025 DiVAS 3D Video, supplement to 350 020 010 Video Documentation module

While the video image is being displayed live on the monitor, the data can be recorded in background at the resolution that is provided by the camera (e.g. FullHD 1,080p). The video format used is H.264. The videos can be subsequently viewed individually or in parallel, and the images can be individually analysed, cut, archived or exported.

Essential properties

- Live preview on up to 4 monitors, picture-in-picture functionality, support for dual screen mode with full screen video on the 2nd monitor
- Support for two video sources simultaneously
- Video playback, also framewise (image-by-image)
- Loss-free, non-destructive cutting of video recordings. To save memory space, destructive (final) cutting can be performed later in background.
- Print function for individual images (frames)
- Export single images (frames) as external files in Microsoft Word documents or via the clipboard
- For presentation purposes, videos can be exported in WMV format
- The QUICK-START function facilitates fast video diagnostics without the need to first create a patient file. Sessions that were created in this way, can subsequently be supplemented with the necessary data or they can be discarded.
- Export of video data into the Dysphagia, Stroboscopy, Electrolaryngography modules, Evaluations of stroboscopy
- Diagnostic input
- PACS export via DICOM/HL7
- Programming camera-head buttons, device settings

DiVAS module Photo Documentation



350 020 011 DiVAS module Photo Documentation

During the endoscopy process it is possible to take any number of photos; these can subsequently be viewed individually or as a slide show, compared, evaluated, deleted, exported, archived and printed.

Essential properties

- Photo Recording
- Playback, including slide show
- Print function for individual images
- Export of individual images as external files in Microsoft Word documents or via the clipboard
- The QUICK-START function facilitates quick photo diagnostics without the need to first create a patient file. Sessions that were created in this way, can subsequently be supplemented with the necessary data or they can be discarded.
- Diagnostic input
- PACS export via DICOM/HL7

DiVAS module Stroboscopy Analysis



350 020 022

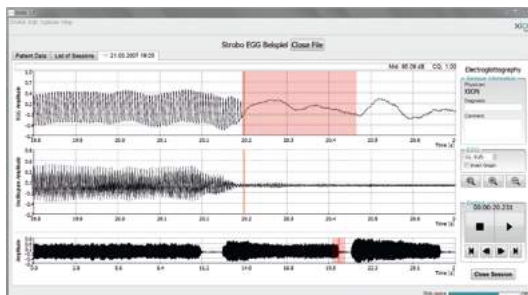
DiVAS module Stroboscopy Analysis

The stroboscopy analysis serves as an efficient, process-oriented evaluation of a stroboscopic examination that has been created and exported by means of a video documentation session. The result of the analysis is then documented in an automatically created medical report.

Essential properties

- Evaluation of an existing video recording using a stroboscopy record
- Export as a text report (Microsoft Word or OpenOffice document). The document is created automatically based on user input.
- Options for modifying text modules used for reporting
- User input is checked for completeness prior to export

DiVAS module Electroglottography



350 020 012

DiVAS module Electroglottography

353 009 003

Set of electrodes for electroglottography

When using XION EndoSTROBE camera systems with integrated EGG module it is possible to perform electroglottography synchronously with video stroboscopy and audio recording so that new possibilities for diagnostics are opened up. For this purpose the EGG curve is blended into the stroboscopic live image. After the examination has been completed, the recorded signal can be analysed in detail oscillation for oscillation.

Essential properties

- Recording and presenting the EGG and the voice signal in real time
- Adjustment options for CL (criteria level)
- Calculation of the CQ (based on CL) and the sound pressure level for individual periods
- Zoom function
- EGG can be inverted with a mouse click
- Results can be exported as an image
- Print function
- Diagnostic input

DiVAS module Strobokymography



350 020 015

DiVAS module Strobokymography

A strobokymogram is used for specifically evaluating stroboscopic findings. One image line each is taken from successive images of a video stroboscopic recording, and these image lines are then arranged beneath each other to form an overall image. The vertical axis of the kymogram represents the time behaviour. A single glance now reveals the wave motion of the vocal folds during phonation. The amplitude and phase differences as well as deviations in symmetry and periodicity of the vocal folds are more easily recognized and quantified.

The position and rotation of the line to be evaluated can be adjusted. Intelligent image processing reduces the impact of movement artefacts.

Essential properties

- Kymography resolution can be set
- The position of the scan line can be set and saved for each kymogram
- Kymograms can be created and saved and then displayed as thumbnails in a film strip
- Calculation of closing-opening quotient
- Export of individual kymograms as external files, into Microsoft Word documents or via the clipboard
- Print function
- Support for image stabilisation and orientation to reduce motion artefacts (only SD resolution, not for HD)

Swallowing diagnostics with DiVAS

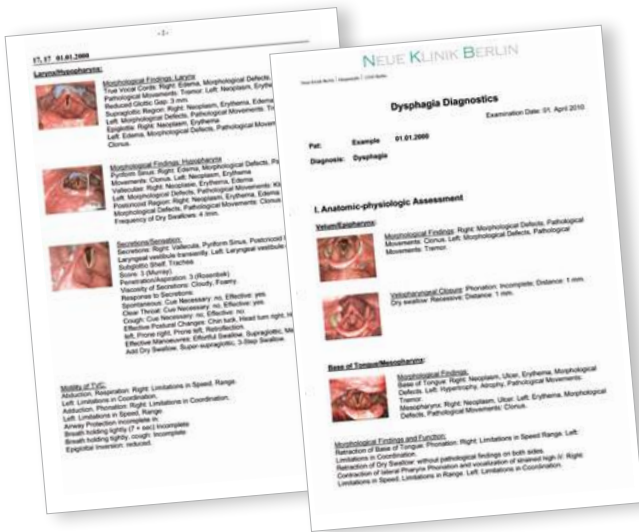
DiVAS Module Swallowing Diagnostics (FEES)



The DiVAS module Swallowing Diagnostics/FEES (Flexible Endoscopic Evaluation of Swallowing) provides an effective method for a standardized evaluation and documentation of an endoscopic swallowing examination. It follows international standards and stands for highest quality examination and diagnosing.

Single-image accurate representation of the swallowing process and the slow-motion representation facilitates objective assessment and evaluation based on three criteria:

- Changes in morphological structures
- Speed and coordination of the movement processes
- Proof of residues, penetration and aspiration.



The simultaneous presentation of the examination video and the evaluation makes analysis easier, saves time, and unifies the findings. Conclusive images can easily be dragged & dropped into the evaluation.

By automatically generating a summary in the form of a medical report, all assessed parameters, the image material and the diagnostic results with individual remarks and therapy recommendations are comprehensively documented.

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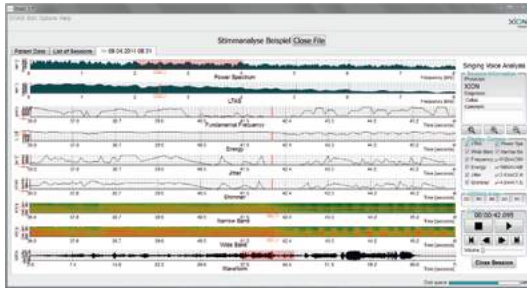
DiVAS module Swallowing Diagnostics (FEES)

Essential properties

- Evaluating an existing video recording using a FEED protocol
- Saving the entries made and checking them for completeness prior to export
- Exporting as a text report (Microsoft Word or OpenOffice Writer document)
- The document is created automatically based on user input.
- Support for different protocols that can be dynamically loaded
- Options for modifying text modules used for reporting

Voice analysis with DiVAS

DiVAS module Singing-Voice Analysis



350 020 013 DiVAS module Singing-Voice Analysis

352 009 010 Microphone headset for DiVAS voice diagnostics, with USB port

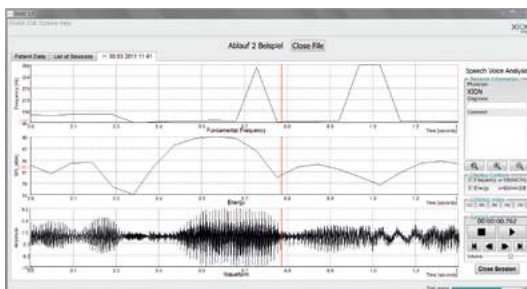
Voice analysis is particularly suitable for objectivising auditory findings and measuring specific aspects, because the data gained are not filtered by subjective processes of perception.

The power spectrum also displays the singer's formant, which is a representation of the sustainability of an un-amplified singing voice.

Essential properties

- Recording and representing the voice signal in real time (oscillogram)
- Identification and representation of different analyses:
 - Fundamental frequency (F0)
 - Level
 - LTAS
 - FFT
 - Broadband spectrogram
 - Narrowband spectrogram
 - Shimmer
 - Jitter
- Zoom function
- Calculation of the median and the deviation for displayed zoom ranges for F0, level, shimmer and jitter
- Creating and printing a summary evaluation
- Printing individual analyses
- Exporting individual analyses
- PACS export via HL7 as PDF
- Diagnostic input

DiVAS module Speaking-Voice Analysis



350 020 024 DiVAS module Speaking-Voice Analysis

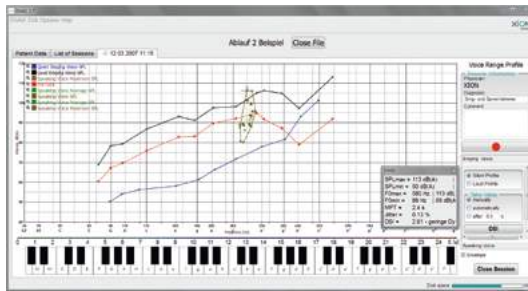
352 009 010 Microphone headset for DiVAS voice diagnostics, with USB port

Speaking-voice profiles are measured to determine the ability of a speaking voice to enhance, and what vocal pitch range is necessary to do so. Due to the minimum methodical effort required, recording speaking-voice profiles as a means of documenting findings and following the course of a therapy becomes a method that is particularly suitable for daily practice.

Essential properties

- Same functionality as the singing-voice analysis, however only fundamental frequency and level are calculated and displayed as diagrams. The mean values and the deviation are calculated for these two parameters only.
- Export of audio data from a voice-field session to obtain a scatter plot
- Input of RBH (optionally GRBAS) values
- PACS export via HL7 as PDF

DiVAS module Voice Range Profile



350 020 014 DiVAS module Voice Range Profile

352 009 010 Microphone headset for DiVAS voice diagnostics, with USB port

Measuring the voice range profile is important on the one hand to evaluate the capability of a voice and on the other hand to check the progress of phonosurgical and logopaedic therapies.

A loudspeaker is used to record a loud and a soft singing and speaking voice. The diagram displays the voice range profile as a normalized sound-pressure level over the voice frequency. The phonation time is determined, the Dysphonia Severity Index (DSI) can be calculated, and the envelope curve can be displayed.

Essential properties

- Measuring vocal range and dynamic range of the voice
- Measuring speaking voice field and singing voice field in real time
- Measuring the soft and the loud voice, and representing the measurement points for the entire level and for the part of the singer's formant
- Measuring the speaking voice and presenting the measured values as a scatter plot or as two crosses: Mean value and maximum value
- Determining the minimum and maximum sound pressure level and frequency in real time
- Determining the maximum phonation time (MPT) in real time
- Calculating the Dysphonia Severity Index (DSI) – another method for calculating MPT and jitter
- Setting target tone using a keyboard
- Drawing the envelope curve of the singing voice profile
- Importing comparative voice profiles
- Optional colour-marking for the phonation time
- Printing the voice profile
- Exporting the voice profile as an image
- Exporting the voice profile as a voice-profile file
- Exporting the voice profile to a voice analysis
- PACS export via HL7 as PDF

DiVAS module Voice Strain Test



350 020 016 DiVAS module Voice Strain Test

352 009 010 Microphone headset for DiVAS voice diagnostics, with USB port

The voice strain test is a method for determining the performance of a particular voice, particularly for people who are professionally exposed to severe voice strain.

The test involves giving the subject a specified text to read with alternating minimum levels of loudness that must be maintained within certain specified times; the levels are then recorded and analysed. Besides a test run to prepare the patient for the process, DiVAS offers both a standard test and as well as an individually configurable test.

Essential properties

- Recording and evaluating the vocal loudness of the speaking voice for the duration of the test process
- Predefined cycling test (10 cycles, 1 minute each, at varying levels of 75 or 80 dB (A))
- User defined test (all parameters freely selectable)
- Optional test run before the test, as an exercise for patients
- Calculation of the mean fundamental frequency for each evaluation period
- Presentation of the results in tabular form and export to Microsoft Excel
- PACS export via HL7 as PDF

DiVAS module Voice Handicap Index



350 020 023 DiVAS module Voice Handicap Index

In order to capture the intra-psychic, communicative and social importance of a dysphonia, a self-assessment by the patient is beneficial. This task can be systematically accomplished by presenting to the patient the problems that exist or can arise with the use of the voice; the patient is then requested to state how much he or she is affected by these problems.

Using the Voice Handicap Index delivers standardized and comparable results for diagnosing voice disorders.

Essential properties

- Loading, filling in and saving the VHI-9 protocol
- Exporting data to the medical report from other sessions

Monitors

4K, Full HD, 3D

XION provides a variety of high-quality monitors that are approved for medical applications, to always ensure optimum quality for the most diverse areas of application.



- | | |
|-------------|----------------------------------------------------------------------------------|
| 330 027 001 | 27" - Full HD medical LCD monitor |
| 330 027 002 | 27" - Full HD medical LCD monitor (greater brightness, optimized image contrast) |
| 330 031 001 | 31" - 4K medical LCD monitor |
| 330 055 001 | 55" - 4K medical LCD monitor |
| 330 026 101 | 26" - Full HD / 3D medical LCD monitor |
| 330 031 101 | 31" - 4K / 3D medical monitor |

XION Equipment Trolley

A unified design concept for the entire system



XION's compact and space-saving trolleys offer the highest level of stability, flexibility and variety of equipment options. Due to their modular system, they can be configured for the widest range of applications, and can subsequently also be adapted to changing requirements again and again.

- Optimum user convenience facilitated by central power control for all devices
- Maximum patient safety due to integrated isolation transformer and insulation monitor
- The XION-Module housing system allows direct and space-saving mounting of the devices in the device trolley
- IF-award-winning, uniform and functional design of the overall system comprising trolley, device system and accessories such as drawers or restraint systems
- Sophisticated, surgery-grade ventilation concept
- Exterior connector panel for connection to peripheral video sources or a temporary second monitors, insulated 1GB/s network connection for KIS/PACS
- Exemplary cable management
- Integration of components such as speakers, monitor power supplies, optics preheaters
- Integrated receiver for wireless foot switch
- Versatile system of holders for optics and cameras



Everything from one source: Endoscopy systems since 1991

XION develops and manufactures devices, endoscopes and instruments for the minimal invasive diagnostics and therapy. In close cooperation with leading hospitals, XION creates practical and user-friendly system solutions. Well-established and interdisciplinary expertise in the fields of precision mechanics, optics, electronics and software are our basis for setting new standards in endoscopy. All products are manufactured at XION headquarters in Berlin, Germany and sold worldwide through an international network of branch offices and dealers.



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