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X-2600 Series Video System Center Technical Specifications



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1 General Description

The X-2600 series video system center is designed to realize multispectral illumination by using a white light LED and a blue-violet LED. It can highlight the superficial mucosal micro-vessels, which is benefit to the identification and diagnosis of the lesion parts. It can provide high quality videos and images for diagnosis and treatment under the endoscope.

System maintenance and upgrade, and performance enhancement can be completed by updating software, thus to improve product value.

The video system center complies with the international and national standards.

2 Advanced Technologies

- Compatible with flexible endoscopes and rigid endoscopes
- High-definition video imaging
- Full-digital image processing
- Image denoise and enhancement
- CHb pseudo-color display
- Hot plugging of the endoscope
- Endoscope identification
- Aspheric optical technique
- Touch screen
- 3A light adjustment mode
- High color rendering index and high luminous flux in white light mode
- High brightness and high contrast in special light mode
- Spectral focused imaging (SFI)

- This mode can highlight the contour of the superficial and middle mucosal vessels, which is applicable to the lesion identification and early cancer screening in the middle and far fields.
- Versatile intelligent staining technology (VIST)
 - This mode can highlight the contour of the superficial mucosal vessels and mucosal surface micro-structure, which is applicable to the accurate diagnosis of early cancer in the middle and near fields.
- Enhanced white light (EWL)
- Automatic white balance
- White balance memory

3 Models

- 16 models

X-2600, X-2600S, X-2600A, X-2600B, X-2500, X-2500S, X-2500A, X-2500B, X-2400, X-2400S, X-2400A, X-2400B, X-2300, X-2300S, X-2300A, X-2300B

4 Technical Specification

- Image enhancement

There are three enhancement modes (1–3) and the enhancement level of each mode is 0 – 8.

- Color tone adjustment
 - Red: -8 – +8
 - Blue: -8 – +8
 - Chroma: -8 – +8
- Color enhancement

There are three enhancement modes (1–3) and the enhancement level of each mode is 0 – 8.

- Automatic Gain (AGC)
- Contrast Adjustment
- Three IRIS modes
 - For flexible endoscopes: Auto mode, Peak mode, Average mode
 - For rigid endoscopes: Full screen, Wide screen, Circular screen
- Zoom: There are three zoom levels (1–3) and the magnification factor can be set from 1.0 to 4.0.
- Brightness adjustment
 - Modes: automatic and manual modes
 - Light intensity level: level 1 – level 19
- Image freezing
 - Real time image freezing
 - Methods: remote buttons, keyboard, footswitch or touch screen
 - PIP feature
- Operation mode: Laparoscope mode, Thoracoscope mode, Hysteroscope mode, Cystoscope mode, Arthroscope mode, Sinoscope mode, Bronchpscope mode, Ureteroscope mode, Resectoscope mode, Fiberscope mode. ,
- Moire effect removal (For rigid endoscopes)
- Image storage
 - Methods: remote buttons, keyboard, footswitch or SNAP button on the front panel
 - Resolution: 1920 × 1080, 1920 × 1200
- CHb pseudo-color image display: on/off

- Main video

For flexible endoscopes:

- Resolution: 1920 × 1080
- Video edge shape: circle
- Real-time image frame rate: 60fps

For rigid endoscopes:

- Resolution: 1920 × 1080
- Real-time image frame rate: 60fps

- Video recording

- Methods: remote buttons, keyboard, footswitch or RECORD button on the front panel
- Resolution: 1920 × 1080, 1920 × 1200
- Image frame rate: 30fps;
- Output format: mp4
- Remaining recording duration indication
- Remaining storage capacity indication
- Video splitting: none, 500M, 800M, 1G, 2G。 Default:1G

- Air-feeding system:

- Air-pump flow levels: low/medium/high
- Pressure range: 0-65Kpa
- Maximum air flow volume:
High: 3.7L/min ~ 5.5L/min
Medium: 3.0L/min ~ 4.7L/min
Low: 2.0L/min ~ 3.7L/min

- Transillumination feature
 - When the transillumination feature is enabled, the output light flickers alternately in maximum intensity and minimum intensity, and it lasts for 6-8 seconds.
- Lamp: White light LED, 70W; blue-violet LED, 130W
- Lamp operating mode
 - Continuous
 - Standby
- Total luminous flux output: ≥ 800 lm, allowance: -10%
- Correlated color temperature (CCT): 3000K - 7000K
- Color rendering index: ≥ 90 in white light mode
- Average service time of the lamp: 50000 hours (continuous use)
- Lamp service time indication
 - When the lamp is on, the accumulated working time of the lamp is counted every other minute and indicated.
 - The service time indicator starts blinking when the service time reaches 50000 hours.
- Average service time of the lamp: 50000 hours (continuous use)
- Camera head
 - Three remote buttons
 - Functions: freeze, zoom, illumination mode, IRIS, image enhancement, color enhancement, contrast, AGC, screenshot, video recording, auto white balance, increase of image brightness, reduction of image brightness.
 - Degree of protection against harmful liquid of camera head: IPX7
 - Single chip CMOS

- Alarm prompt function
- Power-failure protection
- Signal noise ratio: 45dB
- The customizable functions of footswitch include freeze, zoom, illumination mode, IRIS, image enhancement, color enhancement, CHb pseudo-color image, contrast, AGC, screenshot, video recording.
- Support system version update

5 Ports

- Ocular specifications: $\varnothing 32\text{mm}\pm 0.1\text{mm}$
- Camera head port
- Endoscope port $\times 1$
- Power supply port
- Equipotential Terminal
- Footswitch port (FOOT SW) $\times 1$
- Network port (ETHERNET) $\times 1$
- RS485 port $\times 1$
- Video output ports: DVI-D $\times 2$ and 3G-SDI $\times 2$, HD-SDI $\times 1$
- USB 3.0 port $\times 3$

6 Patient List

The information in the patient list are name, ID, exam date, doctor, endoscope mode, status and exam number. More than 10000 patient information can be entered into the system.

7 Size and Weight

- Size: 491±7mm(L)×376±7mm(W) × 204±5mm(H)
- Weight: 16.7±1 kg (approx.)

8 Image Monitor (Optional)

- Size: 24-inch color LCD、 27-inch color LCD
- 24-inch color LCD:
 - Input port: DVI×1、 SDI×1、 VGA×1、 S-VIDEO×1
 - Output port: DVI×1, SDI×1
- 27-inch color LCD:
 - Input port: DVI×1、 SDI×1、 VGA×1、 DP×1、 HDMI×1
 - Output port: DVI×1, SDI×1

9 Compatible Equipment

- X20 series endoscopes:
 - EG-X20 video gastroscope
 - EC-X20 series video colonoscope, EC-X20 and EC-X20L
- Camera head:
 - 10-110-201 Focal length: 19-38mm
 - 10-111-201 Focal length: 18mm
 - 10-112-201 Focal length: 32mm
 - 10-100-201 Focal length: 18mm
- Light guide cable: 92-480-300、 92.350.300

- Storage device: 64GUSB flash disk x 1
- Waterproof multilanguage keyboard x 1
- Footswitch x 1(optional)
- Trolley: HD-330, HDT-500

10 Safety Standards

- IEC 60601-1:2005+A1:2012+A2: 2020
- IEC 60601-2-18:2009
- IEC 60601-1-2:2014+A1:2020

11 Environment Requirements

- Operation

Temperature: 0°C - +40°C

Relative humidity: 30% - 80%

Atmosphere pressure:

700hPa - 1060hPa

- Storage

Temperature: -5°C - +40°C

Relative humidity: 30% - 80%

(non-condensing)

Atmosphere pressure:

700hPa - 1060hPa

- Transport

Temperature: -20°C - +55°C

Relative humidity: 20% - 90%

Atmosphere pressure:

700hPa - 1060hPa

- Safety classification

Type of protection against electric shock: Class I

Degree of protection against electric shock: Type - BF applied part

- Power supply

Input voltage: AC 100V - 240V 50/60Hz

Input power: 350VA

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12 Appendix

Appendix A

		X-2600 Series				X-2500Series				X-2400Series				X-2300Series			
Models		X-2600	X-2600S	X-2600A	X-2600B	X-2500	X-2500S	X-2500A	X-2500B	X-2400	X-2400S	X-2400A	X-2400B	X-2300	X-2300S	X-2300A	X-2300B
Fuction	Optical spectrumform	4 combining form: 1、 WL/SFI/VIST; 2、 EWL/SFI/VIST; 3、 SFI、 VIST; 4、 EWL/SFI				3 combining form: 1、 WL/SFI/VIST; 2、 EWL/SFI/VIST; 3、 SFI/VIST				3 combining form: 1、 WL/SFI/VIST; 2、 EWL/SFI/VIST; 3、 EWL/SFI				2 combining form: 1、 WL/VIST; 2、 EWL/SFI			
	ZOOM	√	√	√	×	√	√	√	×	√	√	√	×	√	√	√	×
	CHb	√	√	×	×	√	√	×	×	√	√	×	×	√	√	×	×
	Video recording	√	×	×	×	√	×	×	×	√	×	×	×	√	×	×	×
Configurati on	Monitor	24/27	24/27	24/27	24/27	24/27	24/27	24/27	24/27	24/27	24/27	24/27	24/27	24/27	24/27	24/27	24/27
	Flexible endoscopes	Gastrointestinal endoscope:EG-X20,video gastroscope,EC-X20series video colonoscope,EC-X20 and EC-X20L															
		Electronic cystoscope,Electronic choledochoscope,Electronic nasopharyngoscope, 500 series gastrointestinal endoscope etc															

Note:

- The specifications of this product may change without any prior notification.
- Some products or features may not be available in some countries.
- For further information, please contact the local distributor.

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最终完成日期: 2024-05-24 14:39:35

封面

精卫II英文技术规格书文档发布:

变更描述: 901-23072-A01 X-2600 Series Video System Center Technical Specifications
901-21945-A01 EG-X20 Technical Specifications
901-21946-A01 EC-X20 Series Technical Specifications

工作流: [Sono]文档发布/变更流程V1

创建日期: 2024-05-21 13:45:35

变更类别: /

所属项目: PJ191101-EUS 精卫;PJ200106-EUM 精卫镜体

精卫II英文技术规格书文档发布:

变更原因/问题分析: 901-23072-A01 X-2600 Series Video System Center Technical Specifications
901-21945-A01 EG-X20 Technical Specifications
901-21946-A01 EC-X20 Series Technical Specifications

发起人: 临床与产品规划部, 郭育兰 (107622)

发放日期: 2024-05-24 14:39:35

组织: 深圳开立

第二页

所属部门: 临床与产品规划部

产品线:

受影响物件

物件编号	所属项目	物件描述	旧版本	新版本	旧的生命周期阶段	生命周期阶段	发放方式	纸质档发放范围	电子档发放范围	发放范围备注	生效日期	物件类型	是否培训	培训记录表单号
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901-21946	PJ200106-EUM 精卫镜体	901-21946[A01 EC-X20 Series Technical Specifications 产品技术规格书/Technical Specifications		A01		发行	电子档		51-市场管理部		2024-05-24 14:39:35	901-设计及技术说明	否	
901-23072	PJ191101-EUS 精卫	901-23072[A01 X-2600 Series Video System Center Technical Specifications 产品技术规格书		A01		发行	电子档		51-市场管理部		2024-05-24 14:39:35	901-设计及技术说明	否	

工作流

状态代码	workflow状态	审阅者	操作	签署注解	签署持续时间	审阅者工作职能	本地客户端时间	用户操作时间	必需	签署用户	状态变更者	workflow
当前流程	发布											[Sono]文档发布/变更流程 V1
流程已前移	文控处理						2024-05-24 06:39:35	2024-05-24 14:39:35			项目管理办公室, 李赞 (103026)	[Sono]文档发布/变更流程 V1
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流程已前移	培训实施						2024-05-24 06:20:42	2024-05-24 14:20:42			内窥镜产品发展规划部, 廖征 (101561)	[Sono]文档发布/变更流程 V1
流程已前移	批准						2024-05-24 06:20:42	2024-05-24 14:20:42			内窥镜产品发展规划部, 廖征 (101561)	[Sono]文档发布/变更流程 V1
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流程已前移	审核						2024-05-24 01:48:22	2024-05-23 18:48:22			技术法规部, 胡素敏 (107960)	[Sono]文档发布/变更流程 V1
流程已前移	审核	内窥镜产品发展规划部, 苏慧洁 (105111)	已批准		0		2024-05-23 09:36:10	2024-05-23 17:36:10	是	内窥镜产品发展规划部, 苏慧洁		[Sono]文档发布/变更流程 V1
流程已前移	审核	内窥镜硬件部, 刘学民 (105640)	已批准		0		2024-05-24 01:05:42	2024-05-24 09:05:42	是	内窥镜硬件部, 刘学民 (105640)		[Sono]文档发布/变更流程 V1
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