

SourceMark VLMA Display

Product Manual for Operation, Maintenance, and Technical Instructions

SourceMark, LLC

- ***Caution: Federal law restricts this device to sale by or on the order of a licensed healthcare practitioner.***

Thanks for purchasing our products !

1. Please read the manual carefully before using the product and keep the manual properly for future use.
2. When using the product, please strictly follow the operating instructions and properly carry out maintenance, which will greatly reduce the occurrence of faults and prolong the service life of the product.
3. The paragraph marked with “cautions” should be carefully read and executed to avoid damage and injury to products, operators or patients.
4. If there is any problem during use, please contact the local dealer or the Company, and we will provide you with assistance.
5. The product shall be used with visualization devices manufactured by our company.
6. Commitment: We are committed to provide more detailed necessary technical data to users when processing failures if you need.
7. Due to the continuous improvement of products, the appearance or specifications of the products provided by our company may be different from this manual without prior notice.

Contents	Warnings
:	4
Safety Advice:	6
Cautions:	6
Contraindication	6
Part 1	7
1.1 Intended purpose	7
1.2 Performance index	7
2.1 Product structure	7
2.2 Model	7
2.3 Main structure description	7
2.4 System specification	8
2.5 Product software information	9
2.6 Product installation and placement	10
2.7 Charging description	10
2.8 Product connection description	10
2.9 Operation function description	12
Management interface introduction:	12
Part 3	14
3.1 Product cleaning and disinfection	14
3.2 Battery maintenance	14
3.3 Product maintenance	14
3.4 Scrap disposal	15
3.5 Environment conditions	15
3.6 Troubleshooting and repair methods	15
3.7 Other cautions	16
3.8 Date of manufacture	16
3.9 Warranty period	17
3.10 Date of compilation/revision	17
3.11 Mark index	17
3.12 Packing list	18
Part 4	19

4.1 Customer Service	19
Appendix: EMC Performance Indicators	20



Warning:

1. This product cannot be used in places where there are fire hazards.
2. This product cannot be used in situations where there is a mixture of inflammable anesthetizing gas and air or nitrous oxide, can not be used in oxygen-rich environment to avoid fire or medical accidents.
3. The product cannot be used in MRI environment.
4. The product cannot be used in defibrillation procedure.
5. Inside this product, there are special components, and users shall not disassemble or refit this product by themselves.
6. This product can only be charged with the charger provided by our company, and please charge the product in places where it's east to disconnect the charger.
7. The product is powered by the internal power supply or connecting to network power supply during use.
8. Before each use, please ensure that the product works properly and shows no signs of damage. Do not use the product if there are signs of damage.
9. When using the product, do not make the metal parts of the external product to come into contact with the metal parts of other active products that may result in accidental current flow through the patient's body.
10. The product is non-waterproof, please do not splash liquid into the interior of the product that will result in short-circuit damage to the product.
11. Do not prepare, check or use the product with wet hands.
12. Do not insert any foreign objects into the unit's vent grille that could result in electric shock.
13. The product can only be used with matched visualization devices from our company.
14. The product is recommended to undergo the electrical safety periodic inspection every three years.
15. The product works together with visualization devices whose light at the front-tip shall not directly shine on patients' or other persons' eyes.
16. Be careful to check whether the image on the screen is a live image or a recorded image and verify that the orientation of the image is as expected.
17. This product can only be cleaned, disinfected, or sterilized according to the approved procedures provided in this manual. The cleaning, disinfection, and sterilization methods listed are recommended by our company according to their efficacy or

compatibility with component materials.

18. The cleaning, disinfection, and sterilization products sold in different places are different, and the company cannot test products in every market. For more information, please contact our after-sales service department.



Safety Advice:

1. This product must be protected from any external adverse effects such as strong electromagnetic radiation or high temperature.
2. During transportation and use, this product shall be handled with care, and prevented from impact, violent vibration, and humidity.
3. This product can be repaired only by professionals authorized by our company.
4. This product can only be charged with the charger provided by our company.
5. Please prepare a standby product that can be used immediately in case of any product failure.
6. Please contact our after-sales service department in time if there is any problem with this product.
7. The product should be held steady during use to prevent drops from affecting the product.



Cautions:

1. Please charge the product for the first use. When out of service for a long time, this product should be charged once every 2-3 months.
2. The product shall be operated under the supervision of a trained specialist or a professional with sufficient experience and knowledge of the examination.
3. Recording has already begun, and later connected products will not be able to record.
4. SourceMark, LLC All Rights Reserved.

Contraindication:

None

Part 1

1.1 Intended purpose

This product can be used in conjunction with various visualization devices produced by our company to provide real-time image display.

1.2 Performance index

- 1) Type of product protection against electric shock: internal power supply/class I product;
- 2) Degree of product protection against electric shock: BF-type product;
- 3) Intermittent operation (3h on, 1h off) with matched visualization devices.
- 4) Waterproof level: Display IPX0 (The product is not waterproof);
- 5) Rated voltage and frequency of the product: 7.2V DC;
- 6) Input power of the product: 1.1A
- 7) Restricted altitude for use: $\leq 5000\text{m}$

Part 2

2.1 Product structure

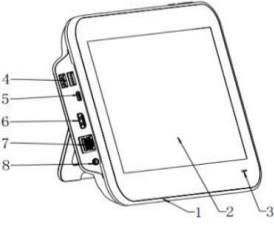
The product consists of image processor host, power cable, power adapter, HDMI signal cable, HD connection cable, and Options. Options: TAW Visual Stylet, TAW Trolley Stand.

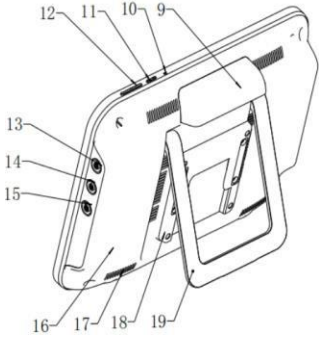
2.2 Model

- 1) Table 1 Model Description

Model	Function Description
UE-M10S	Real-time image, touch screen

2.3 Main structure description

	No.	Part	Function description
	1	Shell	Main body
	2	Touch Screen	Operation, display
	3	Indicator light	Indicate product on/ff and charging status
	4	USB interface	Data interaction

	5	TYPE-C interface	Data interaction/system updating
	6	HDMI interface	Image output of HDMI signal
	7	LAN interface	Support Network
	8	Charging interface	Product charging
	9	Handheld	Portable product
	10	Microphone hole	Supports sound collection
	11	Switch on/off button	Power on, power off, and screen lock
	12	Volume button	Adjust the volume
	13	Aviation plugs interface 1	product image signal input
	14	Aviation plugs interface 2	product image signal input
	15	Aviation plugs interface 3	product image signal input
	16	Label	Product information description
	17	Non-slip pad	Anti-slip
	18	Support frame	Supporting the product
	19	Back hanger	Expand to carry the trolley from SourceMark, LLC

Note:

Long press the switch on/off button for 10s, the product is forced to shut down during operation.

After resting the screen for 5S, short press the on/off button to restore the screen.

2.4 System specification

Built-in battery	Rechargeable lithium-ion battery
Battery specification	6700mAh/7.2V (48.24Wh)

Stand-by time	>300mins
Display screen	10.1-inch with touch function
Screen resolution	1920*1200
Screen type	TFT LCD
Angle of view	Full view
Storage	128G
Storage format	Image: JPG, Video: MP4
Power adapter input	100-240V~, 50/60Hz
Power adapter output	DC12V,4A

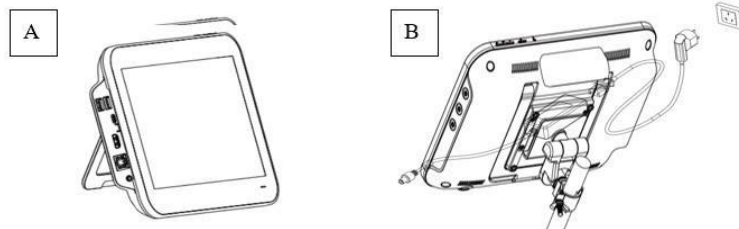
2.5 Product software information

Software Name:	UE Video
Software Model:	UAS-VP
Software type:	Embedded Software
Corresponding equipment model:	UE-M10S
Software safety classification:	Level A
Software operating environment:	Android 7
Hardware requirements:	Storage space:128 GB RAM: 4 GB
Software functions include:	Direct Inspection, File View, My Collection, Personal Center, Settings.
Software intended use:	UE Video is a mobile software developed based on Android system, which already includes the APP and system firmware. The software is mainly used with company's visualization products to realize single or multi-camera screen display, picture and video data saving and viewing functions.
Manufacturer:	Zhejiang UE Medical Corp.
Address:	No.8, Youyi Road, Baita Economic Development Zone,

Xianju, Zhejiang 317300, China


2.6 Product installation and placement

There are two options to place the product. As shown in Figure A below, the product can be supported on the table by pulling the support frame out at a certain angle. As shown in Figure B below, the product can be fixed on the matched airway trolley which is easy and fast to operate.



2.7 Charging description

Insert the AC plug of power cable to the plug board, and insert the DC plug on the other side into the charging hole of product. When charging, the charging indicator shows orange, and when the charging indicator shows green which indicates that charging is complete.

The charging indicator shows red  when the battery is low. If the battery is low, please charge it in time for the next use.



2.8 Product connection description

HDMI interface: The screen can be synchronously displayed to the external display product through the matching HDMI signal cable.

Aviation plug interface 1, 2(Blue): 10pin, used in conjunction with corresponding visualization devices from our company.

Aviation plug interface 3(green): 14pin, used in conjunction with corresponding

visualization devices from our company.

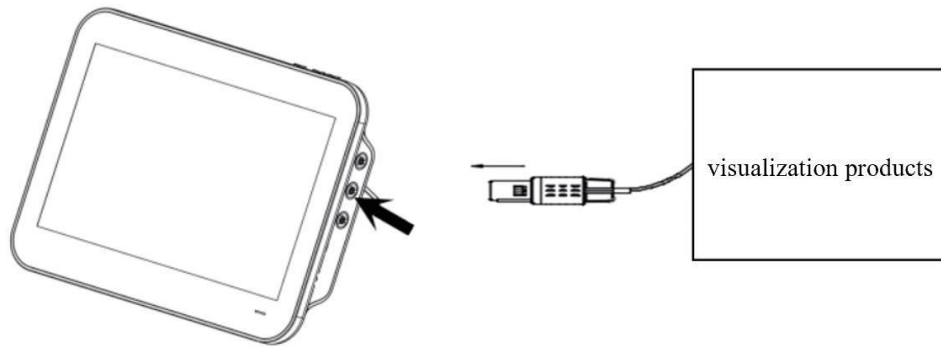
The list of connectable visualization devices is shown in the table below:

Interface name	Product name	Connection path
Aviation plug interface 1, 2(Blue)	SourceMark Video Laryngeal Mask Airway (MLMXXC)	Connection cable (FS-B3-11 or FS- B3-12)

Note: The HD connection cable (FS-B3-14) included with the product can be adapted to the blue interface。 For more information, please refer to the relevant product manual

The connection cable can realize the connection between the image processor host and the designated products of our company. After completing the product connection and logging in

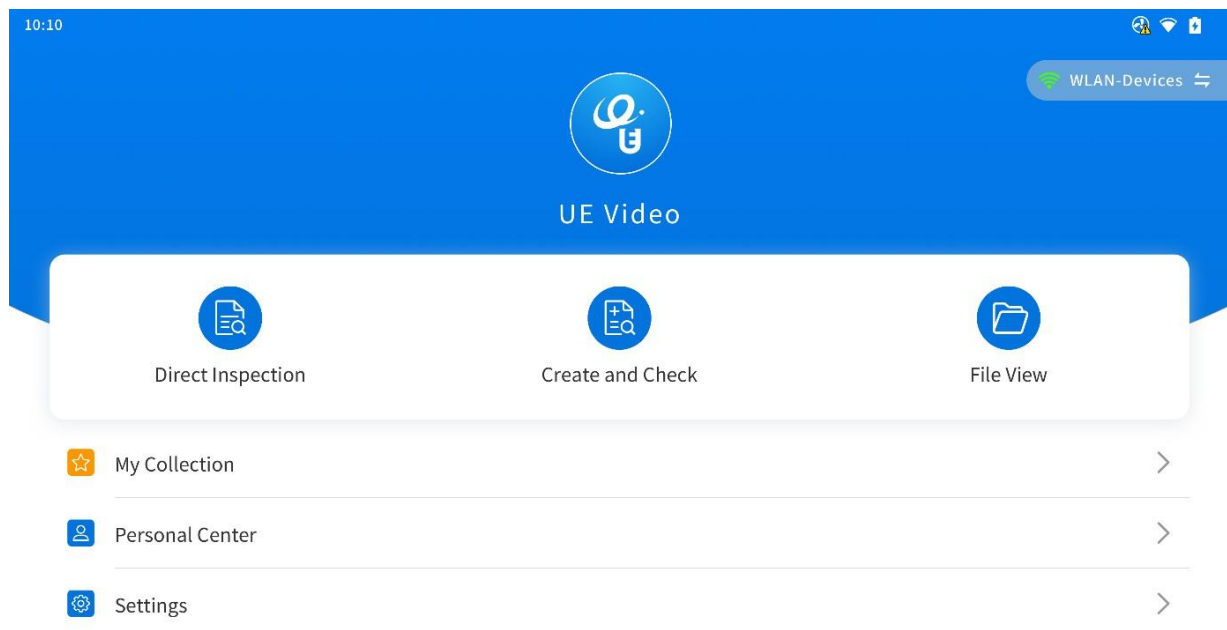
by pressing the switch on/ff button which can enter the system management and video inspection interface.











2.9 Operation function description

The software has user access restrictions, common users do not need to enter the password to switch on and off and operation, administrators need to enter the correct password before operation.

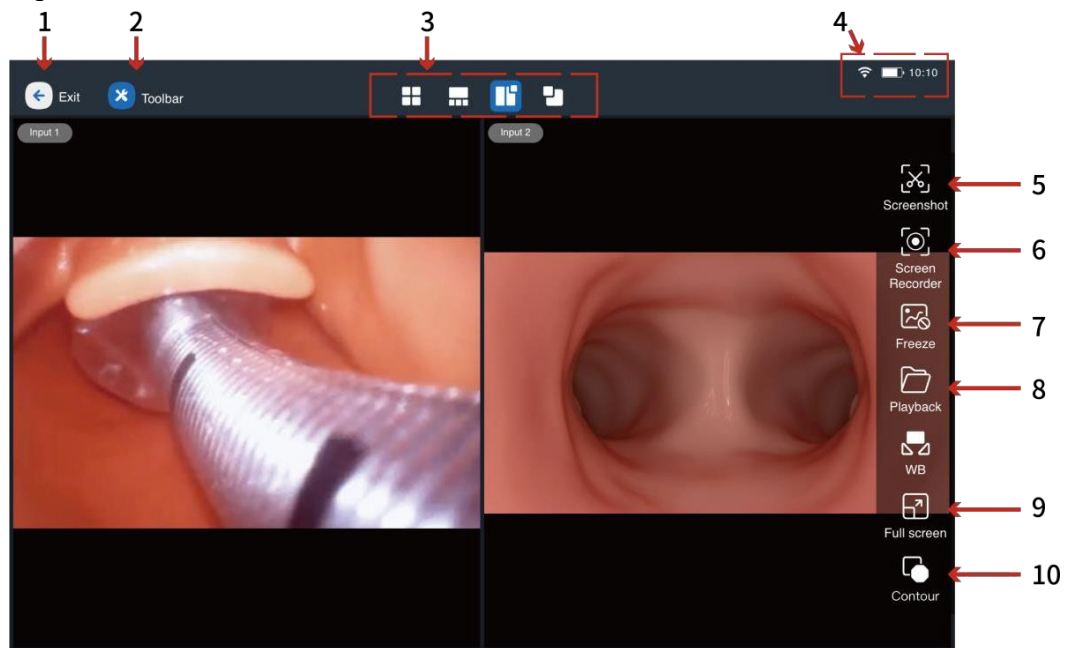
Management interface:



Management interface introduction:

Icon	Function	Function description
	Direct Inspection	Access to inspection interface directly
	Create and Check	Create a new inspection
	File View	Access to folder directory which can view, delete and export the files
	WLAN	No connection between the product and the endoscope
		Successful wireless connection between product and endoscope
	My Collection	Storage the documents marked as favorites
	Personal Center	/
	Settings	Time, date, language settings and storage, etc. can be set.

Direct inspection interface:



Inspection interface function introduction:

Mark	Function	Function description
1	Exit	Exit to the inspection interface and return to the menu interface
2	Hide/Show ribbon	Better view of the image
3	Image layout	Set the display method of multiple access products
4	System status bar	Real-time display of the product's power, networking status and time
5	Screenshot	Take a screenshot of the current screen.
6	Screen Recorder	Record/stop recording for the current screen.
7	Freeze	Freeze/unfreeze the current screen.
8	Playback	View saved images, videos within the current inspection program.
9	Full Screen	Set the image screen size.
10	Contour	Set the image window shape

Part 3

3.1 Product cleaning and disinfection

The product is routinely cleaned before leaving the factory. Different using environment require different levels of cleanliness, please determine the cleaning and disinfection method according to specific situation. The product is not water-proof, it can be disinfected by wiping with Clinelle Universal Range wipes, Cavi wipes, and Sani-Cloth. Before wiping, make sure the gauze is not dripping, so that the liquid does not enter the product and damage the machine.

3.2 Battery maintenance

Long time battery loss will result in reduced battery life. It is recommended to charge the product in time when the power is below 20% or less. When it is not used for a long time, it is recommended to charge it once every two months to replenish the power. The temperature during charging is recommended to be between 5°C and 45°C. Avoid exposure to excessive heat to avoid accidents.

The battery of product is not removable and can only be replaced by maintenance personnel using tools.

3.3 Product maintenance

The product needs to be switched on once a month to check whether the product and power adapter are intact. Switch on the product and check whether the system function and image display are intact

3.4 Scrap disposal

The company do not assure any consequences or legal responsibility for accidents caused by use out of the service life. The product cannot replace the battery. When the battery life is exhausted, contact the manufacturer to assess the product status. At the end of product life, dispose of batteries and product parts appropriately in accordance with electronic product disposal regulations.

3.5 Environment conditions

Working Environment	Temperature	5~+40°C
	Humidity	≤83%
	Atmospheric pressure	540hPa~1060hPa
Transportation and storage Environment	Temperature	-40°C~+55°C
	Humidity	≤93%
	Atmospheric pressure	500hPa~1060hPa

3.6 Troubleshooting and repair methods

1) Troubleshooting Guide

Fault phenomenon	Possible causes	Treatment method
The product is out of power.	The lithium battery is already in a low battery state after use and is not connected to the external power adapter.	Connect the power adapter for charging
	No power from the external power outlet.	Repair of power outlet.
The screen does not display visualization devices images.	The product power supply is not connected.	Power on the product.
	Endoscope cable is not connected properly.	Reconnect the endoscope cable

The image is too bright, too dark, has light spots	The endoscope LED is damaged.	Contact manufacturer for maintenance
Image color irregularities and no color	Endoscope cable is not connected properly	Reconnect the endoscope cables.
Still image	Image freeze switch is on	Cancel image freeze
	Unexpected product interruption	Reconnect the endoscope cable
The image has interference ripples.	Sources of interference near the workplace	Move away from the source of interference
Black screen	Touch the switch on/off button by mistake, the screen is locked.	Short press the switch on/off button after the screen is locked for 5S

2) Maintenance

[Attention]: ★The company will not be responsible for any injury or damage to the product caused by the maintenance of the product by non-SourceMark personnel.

- 1) If the parts and electronic components of the product are damaged, please be sure to use the parts provided by SourceMark, and we will not be responsible for any damage caused by using parts from other companies.
- 2) If the malfunction is not eliminated after overhauling according to the troubleshooting and repair methods table, please contact our company or agent.
- 3) When the product is sent back to the company for repair, it should be accompanied by a description of the malfunction and an after-sales warranty.

3.7 Other cautions

- 1) Please don't store the product in the high temperature, humidity and dusty environment.
- 2) Please stop using the product immediately if any abnormal occurs, cut off the net power supply and contact the after-sale service department or agent of our company in time.
- 3) If the product and its internal components are scrapped, the disposal shall be in accordance with the relevant national waste disposal regulations.

3.8 Date of manufacture

Date of manufacture: See product label for details.

Service life: 6 years


















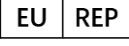


3.9 Warranty period









2-year warranty on the product.

3.10 Date of compilation/revision

Date of compilation(revision): March, 2025

3.11 Mark index

Mark	Meaning	Mark	Meaning
	Charging Port		Direct current
	Service Life		Manufacturer
	Caution		Date of manufacture, Country of manufacture
	Refer to instruction manual/booklet		WEEE information for the disposal or recycling of waste WEEE Check with your local Authority or retailer for recycling advice
	Battery Indicator		Low battery
	Switch on/off button		Signal input port category 1
	Signal input port category 2		Network port
	USB-A interface		Type-c interface
	HDMI output		Authorized representative in the European Community
	Unique Device Identifier		CE marking of conformity

	TYPE BF APPLIED PART	<table><tr><td>US</td><td>REP</td></tr></table>	US	REP	U.S. Agent
US	REP				
	Fragile, handle with care		Keep away from sunlight		
	Keep dry		Temperature limit		
	Humidity limitation		Atmospheric pressure limitation		
Rx only	Prescription Use Only		Fan failure		

3.12 Packing list

Packing list, warranty card, certificate, instruction manual, image processor host, power cable, power adapter, HDMI signal cable, HD connection cable (FS-B3-14).

Optional list as below:

Option name	Models and Specifications	Remarks
TAW Trolley Stand	TC201	Provides bedside hanging for SourceMark VLMA Display
Universal cable	FS-B3-17	Connect TAW Visual Stylet VS-10, VS-20, VS-40 to the SourceMark VLMA Display. Connect the video laryngeal masks and video tracheal tube to the SourceMark VLMA Display

Part 4

4.1 Customer Service

For additional information, contact your SalesMark, LLC Sales Representative or Customer Service.



Zhejiang UE Medical Corp.

No.8, Youyi Road, Baita Economic Development Zone, Xianju, Zhejiang 317300, China

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Fax: +86-576-87721129

Website: www.ueworld.com

E-mail: export@ueworld.com



Importer:

SourceMark, LLC

Franklin, TN 37069 USA.

Appendix: EMC Performance Indicators

Basic product performance. (Table 2)

Item	Specific description
Image Orientation	Ensure that there is no unacceptable risk if the image viewed by the operator has an unexpected image orientation.
Image observation	Ensure that there is no unacceptable risk if the operator observes real-time images rather than video recordings during endoscopic procedures.

For this equipment, special precautions on electromagnetic compatibility (EMC) shall be taken, and it must be installed and used according to the EMC information specified in this manual. Portable and mobile radio frequency communication equipment may affect this equipment.

The following cables must be used to meet the requirements of electromagnetic emission and anti-interference. (Table 3)

Cable name	Length
HDMI signal cable	2m
Adapter connection cable	1.5m
Power cable	1.2m
Universal Cable (FS-B3-17)	2.5 m

In addition to cables (transducers) sold as spare parts for internal components, the use of accessories and cables (transducers) other than those specified may result in increased emission or reduced immunity of the equipment or system.

The equipment or system shall not be close to or stacked with other equipment. If it must be close to or stacked, it shall be observed and verified that it can operate normally in the configuration it is used.

Guidance and Statement of the Manufacture - Electromagnetic emission. (Table 4)

Guidance and Statement of the Manufacture - Electromagnetic emission		
The display is expected to be used in the electromagnetic environment specified below, and the buyer or user shall guarantee that it is used in this electromagnetic environment.		
Launching experiment	Conformance	Electromagnetic environment - Guidelines
RF emission CISPR 11:2015+A1+A2	Group 1, class A	The display uses RF energy only for its internal functions. Therefore, its radio frequency emission is very low, and the possibility of interference to nearby electronic equipment is very small.

Guidance and Statement of the Manufacture - Electromagnetic Immunity. (Table5)

Guidance and Statement of the Manufacture - Electromagnetic Immunity			
The display is expected to be used in the electromagnetic environment specified below, and the buyer or user shall guarantee that it is used in this electromagnetic environment.			
Immunity Test	60601 Test Level	Conformity Level	Electromagnetic Environment – Guideline

IEC 61000-4-2:2008 Electrostatic Discharge	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	The ground shall be wood, concrete or tile, and if the ground is covered by the synthetic material, the relative humidity shall be 30% at least.
Radiated RF EM fields IEC 61000-4-3:2006+A1+A2	3V/m 80MHz-2.7GHz 80%AM at 1kHz	3V/m 80MHz-2.7GHz 80%AM at 1kHz	-
Proximity fields from RF wireless communications equipment IEC 61000-4-3:2006+A1+A2	IEC 61000-4-3 See the RF wireless communication equipment table in "Recommended minimum separation distances".	IEC 61000-4-3 See the RF wireless communication equipment table in "Recommended minimum separation distances".	-
IEC 61000-4-4:2012 Electrical Fast Transient Burst	±2kV for Power Supply Line ±1kV for Input/Output Line	±2kV for Power Supply Line Not Applicable	The network power supply shall be equipped with the quality used in the classic commercial or medical environment.
IEC 61000-4-5:2014 Surge	Line to line: ±0.5kV, ±1kV Line to earth: ±0.5kV, ±1kV, ±2kV	Line to line: ±0.5kV, ±1kV Not Applicable	The network power supply shall be equipped with the quality used in the classic commercial or medical environment.
IEC 61000-4-11:2004 Voltage dips and Voltage interruptions	0 % UT; 0,5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°	0 % UT; 0,5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°	The network power supply shall be equipped with the quality used in the classic commercial or medical environment.

	0 % UT; 1 cycle and 70 % UT; 25/30 cycles; Single phase: at 0° 0 % U _T ; 250/300 cycle	225°, 270° and 315° 0 % UT; 1 cycle and 70 % UT; 25/30 cycles; Single phase: at 0° 0 % U _T ; 250/300 cycle	or medical environment. If the continuous operation needs to be conducted by the user for the use of the device during the interruption period of the power supply, it is recommended to adopt the uninterruptible power supply or battery for the Flexible Videoscopes for single use the power supply.
IEC 61000-4-8:2009 Power Frequency Magnetic Field (50Hz/60Hz)	30A/m	30A/m	The power frequency magnetic field shall be equipped with the level characteristics of the power frequency magnetic field of the classic locations of the classic commercial or hospital environment.
IEC 61000-4-6:2013 Conducted disturbances induced by RF fields	Input a.c. power PORT, Input d.c. power PORT, PATIENT coupling PORT, Signal input/output parts PORT 3 V in 0.15 MHz - 80 MHz 6 V in ISM and/or amateur radio bands	Input a.c. power PORT, Signal input/output parts PORT 3 V in 0.15 MHz - 80 MHz 6 V in ISM and/or amateur radio bands	-

	between 0.15 MHz and 80 MHz 80 % AM at 1kHz	between 0.15 MHz and 80 MHz 80 % AM at 1kHz	
Note: U_T refers to the voltage of the AC network before the implementation and test of voltage.			

Guidelines and Statement of the Manufacture-Electromagnetic Immunity. (Table 6)

Recommended minimum separation distances

Nowadays, many RF wireless equipment's have being used in various healthcare locations where medical equipment and/or systems are used. When they are used in close proximity to medical equipment and/or systems, the medical equipment and/or systems' basic safety and essential performance may be affected. The flexible videoscope has been tested with the immunity test level in the below table and meet the related requirements of IEC 60601-1-2:2014. The customer and/or user should help keep a minimum distance between RF wireless communications equipment and this flexible videoscope as recommended below.

Test frequency (MHz)	Band (MHz)	Service	Modulation	Maximum power (W)	Distance (m)	Immunity test level (V/m)
385	380-390	TETRA 400	Pulse modulation 18Hz	1.8	0.3	27
450	430-470	GMRS 460 FRS 460	FM ± 5 kHz deviation 1 kHz sine	2	0.3	28
710	704-787	LTE Band 13, 17	Pulse modulation 217Hz	0.2	0.3	9
745						
780						
810	800-960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation 18Hz	2	0.3	28
870						
930						
1720	1700-1990	GSM 1800; CDMA 1900; GSM 1900;	Pulse modulation 217Hz	2	0.3	28
1845						

1970		DECT; LTE Band 1, 3, 4, 25; UMTS				
2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation 217Hz	2	0.3	28
5240	5100-5800	WLAN	Pulse	0.2	0.3	9
5500		802.11	modulation			
5785		a/n	217Hz			