

# **MX7**

## **Portable Color Doppler Ultrasound System**

### **Specification**

## 1 System Overview

As the first portable ultrasound system using ZONE Sonography®, MX7 is based on the innovative ZST+ platform, breaking through the technical limitations of conventional ultrasound beamforming in imaging spatial and temporal resolution, and embarking on a new journey for Mindray portable ultrasound system.

Thanks to the powerful computing and processing capabilities of the ZST+ platform, the MX7 has built-in diversified intelligent application tools, which can meet the clinical requirements of the whole body examination, covering multiple clinical applications such as the abdomen, superficial, cardiac, vascular and obstetrics fields.

## 2 Physical Specification

### 2.1 Dimensions and Weight

- Width: 364±5 mm
- Depth: 322±5 mm
- Height: 44±3 mm
- Weight:
  - About 3.0 kg (without battery)
  - About 3.5 kg (with battery)

### 2.2 Electrical Power

- AC adapter Input:
  - Voltage: 100-240 V AC
  - Frequency: 50/60 Hz
  - Power input: 2.0-1.0 A
- Battery: Lithium-Ion Battery Pack 14.4 V DC, 6600 mAh (single battery)

### 2.3 Operating Environment

- Ambient temperature: 0°C-40°C
- Relative humidity: 20%-85% (no condensation)
- Atmospheric pressure: 700-1060 hPa

### 2.4 Storage & Transportation Environment

- Ambient temperature: -20°C-55°C
- Relative humidity: 20%-95% (no condensation)
- Atmospheric pressure: 700-1060 hPa

## 3 Technical Specifications

### 3.1 Monitor

- 15.6-inch high resolution color LED monitor
- Resolution: 1920 x 1080
- Automatic brightness adjustment
- Screen saver

- Open angle adjustable: 0-180°

- View angle (right/left): ≥170°

### 3.2 Touch Screen

- 12.3-inch high sensitivity anti-glare color touch screen
- Resolution: 1920 x 720
- Digital brightness and contrast adjustment through preset
- Viewing angle: ≥ 170 degrees
- Support touch screen gestures
- Support either hand writing or with gloves on

### 3.3 Control Panel

- Power/Battery Indicator
- Function keys
- Ergonomic soft key operation
- Backlit keys, ensuring accurate work in the dark room
- Programmable keys, available for user-defined functions
- Key brightness adjustment
- Integrated speakers, audio volume adjustment

### 3.4 Probe port

- 1 port connect to a transducer

### 3.5 System Boot-up

- Boot-up from complete shut-down: less than 26 sec
- Shut-down: less than 30 sec

### 3.6 Other specifications

- Preset condition: Presets optimal image inspection conditions for inspecting different exam mode.
- Built-in battery for main unit (Replaceable and rechargeable lithium battery)
  - Empty battery recharged to full in 4 h
  - Continuous work time: about 1.5 h in B mode
- U-Bank (2 or 4 batteries)
- Anti-virus software: McAfee, Windows Defender
- Multilingual support
  - Software: Chinese, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Icelandic, Italian, Lithuanian, Norwegian, Polish, Portuguese, Russian, Serbian, Spanish, Swedish, Turkish
  - Keyboard input: English, Chinese,

French, Italian, Portuguese,  
Russian, Spanish, Polish,  
German, Czech, Turkish, Finnish,  
Icelandic, Danish, Norwegian,  
Swedish, Hungarian, Serbian

- Control panel overlay
- User manual
- Built-in DVR
  - Built-in digital video recorder, save space and is a useful tool for education and memory
  - Max. storage length each time: 60 min

## 4 Technical Parameters

### 4.1 Platform technology

- Innovative ZST+ platform: Premium and innovative ultrasound platform, evolving with powerful processing architecture and enhanced channel data processing based on ZONE Sonography®
- Digital beamformer
- Digital Dynamic Pixel Focusing (DPF)
- Up to 1,032,192 channels
- 64-beam forming

### 4.2 Transducer Specifications

- Supported transducer types: convex, linear, and phased array

### 4.3 Advanced Imaging Technics

- iBeam, compounding processing technology, permits use of multiple scanned angles to form a single image, resulting in enhanced contrast resolution and improved visualization.
  - Up to three angles
  - Available on the linear and convex transducers
- iClear, available in 2D imaging or contrast imaging mode
- Tissue-specific imaging: Allows for the combination of multiple imaging conditions (routine, liquidity, and fattiness) based on different tissue characteristics.
- iTouch, Auto Image Optimization, instant auto image optimization in B, Color and PW modes by one click.
  - B-mode: gain, TGC
  - Color: gain
  - Power: gain
  - PW: gain, scale, PRF, WF
  - Contrast imaging: gain, TGC
- Smart Track: Continuously track the

flow and detect the best color box position and angle in real time scanning, saving manual adjustment time and improving scanning efficiency.

- Automatic adjustment of the angle and position of the sampling frame
- HD Scope: By processing channel data multiply and retrospectively, HD Scope can improve the detail information and image contrast on specific area maximally.
- Echo Boost
- iNeedle: Needle visualization enhancement, enhancing the visualization of needle shaft on the image dynamically
  - Needle visualization enhancement
  - Best angle indicator
  - Available on the linear and convex transducers
  - B/iNeedle (on/off)
  - Needle direction: Auto, Left, and Right
- Zoom: Spot zoom and Pan zoom,  $\geq 10X$
- iZoom: one-click real-time full screen zoom,  $\geq 2$  zoom modes
- QSave: Quick saving of image parameter setting after image adjustment; Supports Save, Create, Restore
- Dual B image merge by linear array transducer

### 4.4

#### B-mode

- Fundamental wave frequency conversion, THI (Tissue Harmonic Imaging), and PSH (Phase Shift Harmonic Imaging), harmonic wave frequency conversion
- FCI (Frequency Compound Imaging)
- Scan scope, location, and density adjustable
- Linear transducers steer, deflection angle up to 12 degrees
- ExFov depends on transducers, Available on the convex and linear transducers
- Maximum display depth: 40.0 cm
- Maximum detection depth of convex array transducer:  $\geq 28$  cm
- Dynamic range visible and adjustable: 30-350 dB
- Gain: 0-100, 1/step, B/M/D adjustable separately
- TGC/LGC: 8 sliders
- Frame rate (max): 610 f/s

- 4.5 M-mode and Color M-mode
- Separate and adjustable gain in B mode and M mode
  - Anatomical M-mode and color anatomical M-mode
  - Color M-mode: Available on the linear and convex transducers
  - Free Xros CM, angle adjustable
- 4.6 Color/Power Mode
- Display of speed, speed variance, energy, and direction energy
  - Display mode: B/C, B/C/M, B/POWER, and B/C/PW
  - Steer:  $\geq \pm 30$  degrees, sampling frame automatically adjusted by the blood flow direction of transducer
  - Speed marking function, marking the boundary of different blood flow speeds and observing blood flow distribution and speed gradient
  - Max. frame rate: 260 f/s
  - Support HR Flow
- 4.7 PW/CW Mode
- Including pulse Doppler, pulse repetition frequency, and continuous wave Doppler
  - Display modes: B, PW, B/PW, B/C/PW, B/CW, and B/C/CW
  - Max. velocity in PW mode: 770.0 cm/s
  - Max. velocity in CW mode: 3850.0 cm/s
  - Min. velocity:  $\leq 25$  mm/s
  - Sample volume size: 0.5-30 mm
  - Steered angle:  $\geq \pm 30$  degrees (linear array transducer), fast angle correction
  - Automated spectrum measurement
- 4.8 iScape View: This panoramic imaging technology can provide a larger image diagnosis view than traditional imaging technology.
- Available on all transducers
  - Acquisition method: B mode, Power mode, and Color mode
  - Max. imaging length: 292.80 cm
  - Tint map: off; 10 types
  - Rotation:  $0^\circ - 355^\circ$
- 4.9 UWN+ Contrast Imaging: Provides exceptional contrast agent detecting capability, not only extracts second harmonic, but also non-linear fundamental signals.
- Available transducers:
    - C5-1s
    - C5-2s
    - V11-3s
    - L12-3RCs
    - L12-4s
    - L13-3s
    - L13-3Ns
    - L14-6Ns
    - L20-5s
    - P4-2s
  - LVO (Left Ventricular Opacification), available on P4-2s
  - Low MI contrast available
  - Micro Flow Enhancement (MFE) available
  - Dual timers
  - Retrospective storage and prospective storage
  - Mixed mode available
  - Position swap of contrast image and tissue image
- 4.10 Strain elastography: Natural touch elastography, it provides qualitative tissue stiffness evaluation
- Available transducers:
    - V11-3s
    - L12-3RCs
    - L13-3s
    - L14-6Ns
    - L20-5s
    - L13-3Ns
    - L12-4s
    - L16-4Hs
  - Elastic imaging spectrum options:  $\geq 5$
  - Stress indicator: supports frame by frame stress indication
  - Unique shell analysis function
  - Stress compensation technology reduces deeper tissue artifacts, obtains more uniform stress throughout whole field.
  - Have quantitative analysis software of tissue hardness and support multiple ratio analysis and histogram analysis.
  - Quantitative analysis of tissue elasticity around the tumor
  - Quantitative measurement mapping analysis: simultaneous measurement of elastic graphs during tissue chart measurement
- 4.11 Stress Echo: Embedded with series stress

	echo protocol for cardiac function evaluation.		chamber heart and two-chamber heart planes and the myocardial boundary and performs automatic tracing, without the need for manual plane selection and manual tracing.
	<ul style="list-style-type: none"> <li>• Available on the phased array transducers</li> <li>• 14 or more factory protocols</li> <li>• User-defined protocols</li> <li>• ECG triggered acquisition, display, selection, comparison, evaluation and archiving of multiple cardiac loops during various stages of a stress echo examination</li> <li>• ASE16 and ASE17 as the standards for wall motion scoring</li> <li>• LV volume measurement in all phases of cardiac cycle</li> </ul>		<ul style="list-style-type: none"> <li>• Adjust Frame</li> <li>• Diastole FR</li> <li>• Systole FR</li> </ul>
4.12	Tissue Doppler Imaging: provides the TVI, TEI, TVD, and TVM imaging functions.	4.16	RIMT: RF-Data based Intima-Media Thickness, provides precise IMT thickness measurement in real time.
	<ul style="list-style-type: none"> <li>• Imaging modes: color speed mode, energy mode, spectrum mode, and M mode</li> </ul>		<ul style="list-style-type: none"> <li>• Available in single/dual B carotid exam mode</li> <li>• Left and right adjustable</li> <li>• Calculation of 6 IMT values, IMT average value, SD and ROI W</li> </ul>
4.13	Tissue Tracking QA: Analyzes speckle images of 2D wall motions by using the speckle tracking technology and provides the cardiac tissue tracking function for high-efficient myocardial movement evaluation without angle-dependent.	<b>5</b>	<b>Cine Review and Raw Data Processing</b>
	<ul style="list-style-type: none"> <li>• Supported transducer types: <ul style="list-style-type: none"> <li>– P4-2s</li> <li>– P8-2s</li> <li>– P10-4s</li> </ul> </li> <li>• Track myocardial movement in 2D mode and support tracking the trajectory of endocardium, epicardium, and myocardium.</li> <li>• Tissue quantitative chart and curve analysis</li> <li>• Support Bull's Eye and data export</li> </ul>	5.1	Cine review
			<ul style="list-style-type: none"> <li>• Available in all modes</li> <li>• Frame by frame manual cine loop review or auto playback with variable speed</li> <li>• Independent cine review in 2D Dual and Quad mode one by one</li> <li>• Maximum cine memory is up to 25492 frames or 263.3s (depending on the mode)</li> <li>• Retrospective storage (1–120s, or 1–120 cycles, presettable) and prospective storage (1–480s, or 1–390 cycles, presettable)</li> <li>• Frame compare: compare different frames for one cine in dual format</li> <li>• Cine compare: compare two or more than two cines in dual or quad format</li> <li>• Jump to first and jump to last: one keystroke review the first or last frame</li> <li>• Start point and end point: selectable</li> </ul>
4.14	Smart 3D: A freehand 3D image acquisition tool, enables to acquire 3D volume images by freehand scanning with 2D transducer.	5.2	Raw Data Processing
	<ul style="list-style-type: none"> <li>• Acquisition method: Rocked, Linear</li> <li>• Ref. Image: switch VR or A/B/C plane</li> <li>• Display formats: Quad, Dual, Single, MPR only, A4:1</li> <li>• Inverse view and inverse imaging</li> <li>• Sync: synchronize VR with selected plane</li> <li>• Support render modes</li> <li>• Support the edit operation</li> </ul>		<ul style="list-style-type: none"> <li>• Support parameter adjustment for frozen static and dynamic images</li> </ul>
		<b>6</b>	<b>Measurement/Analysis, Comment, and Report*</b>
4.15	AutoEF: Automatically identifies the left ventricular membrane and calculates the ejection fraction, and quantitatively analyzes the left ventricular function.	6.1	Generic measurements
	<ul style="list-style-type: none"> <li>• Automatically recognizes the four-</li> </ul>		<ul style="list-style-type: none"> <li>• B mode: distance, angle, depth, area, volume, and angle</li> <li>• M mode: slope, HR, distance, time, and velocity</li> <li>• Doppler mode: PS/ED, Velocity, HR, Time, Acceleration, and Ratio(Vel)</li> </ul>
		6.2	Automated Measurement and Analysis
			<ul style="list-style-type: none"> <li>• Automated spectrum measurement</li> </ul>

	<ul style="list-style-type: none"> <li>- PI, RI, TAMAX, TAMEAN, and blood flow</li> <li>- Professional factory settings for each application</li> <li>• Smart OB: Auto measurement for OB, a special tool for easy OB scan, and greatly reduce time and increase productivity <ul style="list-style-type: none"> <li>- Support BPD, HC, OFD, FL, and AC</li> <li>- Measurement result can be modified by user</li> </ul> </li> <li>• Smart NT: Automatically detects and measures nuchal translucency for easy and accurate NT diagnosis.</li> <li>• CPP: Measures the pixel proportion of blood flow signal in the region of interest</li> <li>• Auto GA: Automatic gastric antrum area calculation, automatically identify the boundary of gastric antrum and calculate its area, helping to reduce the risk of pulmonary aspiration in surgery</li> <li>• Smart FHR OB1: Automatically measure and display Fetal Heart Rate for first trimester on real time.</li> <li>• Smart Bladder: Automatically detect and calculate bladder volume.</li> <li>• Auto DFR: Automatically detect diastolic parameters of PW and TDI PW, to calculate a series diastolic function index E, A, E/A, e', E/e' automatically.</li> </ul>	
6.3	<b>Measurement Software Packages for Applications</b> <ul style="list-style-type: none"> <li>• Abdomen application measurement package</li> <li>• Gynecology application measurement package</li> <li>• Obstetrics application measurement package</li> <li>• Cardiology application measurement package</li> <li>• Urology application measurement package</li> <li>• Vascular application measurement package</li> <li>• Small Parts application measurement package</li> <li>• Emergency application measurement package</li> <li>• Pediatrics application measurement package</li> </ul>	
6.4	<b>Comment and Bodymark</b>	
		<ul style="list-style-type: none"> <li>• Support comment by text input and arrow</li> <li>• Text, arrow size, and arrow direction adjustable</li> <li>• More than 232 bodymarks are available for various applications</li> <li>• Users can customize bodymarks and comments</li> </ul>
	6.5	<b>Report</b> <ul style="list-style-type: none"> <li>• Specific report template by application</li> <li>• Editable value in report</li> <li>• Images selectable</li> <li>• Predefined hospital information</li> <li>• Able to export as PDF file</li> <li>• Set the calculation method for the final value in batch</li> </ul>
	6.6	<b>iWorks (Auto Workflow Protocol)</b> <ul style="list-style-type: none"> <li>• Automatically make comments, marks on the bodymark, and switch the imaging mode according to the protocol in the inspection process.</li> <li>• Templates are user configurable</li> <li>• Allows users to directly record user operations and form protocols, and export or import the protocols to other devices.</li> </ul>
	<b>7</b>	<b>Exam Storage and Management</b>
	7.1	<b>Patient data management</b> <ul style="list-style-type: none"> <li>• iStation™ workstation dedicated for patient exam management</li> <li>• Exam image management</li> <li>• Exam report and report template management</li> <li>• Patient exam record management <ul style="list-style-type: none"> <li>- Patient exam query/retrieve</li> <li>- Support review of current and past exam</li> <li>- New exam, Activate exam, Continue exam functions, End exam are available</li> <li>- Support measurements and calculations on archived exam and images</li> </ul> </li> </ul>
	7.2	<b>Exam Storage</b> <ul style="list-style-type: none"> <li>• Digital storage of single frame and cine 2D, color and Doppler</li> <li>• Export image as BMP/JPG/TIFF/DCM/FRM format (FRM: system format)</li> <li>• Export cine as DCM/AVI/CIN/MP4 format (CIN: system format)</li> <li>• Back-end storage, image data export and backup without affecting real-</li> </ul>



time inspection operations

- Support backup/send to USB devices, DVD-RW media
- DICOM 3.0
- Network storage (iStorage)
- Storage in local hard disk: 1 TB hard drive and 256 GB SSD (Solid State Drive)
- Printing service

## 8 Connectivity

### 8.1 Ethernet Network Connection

- Cable connection
- Wireless connection: Internal Wi-Fi (including EAP Network)

### 8.2 DICOM 3.0

- DICOM Basic
  - Verify (SCU, SCP)
  - Print
  - Store
  - Storage Commitment
  - Media Exchange
- DICOM Worklist
- DICOM Query/Retrieve
- DICOM Modality Performed Procedure Step - MPPS
- DICOM OB/GYN structure report
- DICOM Cardiac structure report
- DICOM Vascular structure report
- DICOM Breast structure report
- DICOM Abdominal structure report

### 8.3 iStorage

Direct network storage tool between ultrasound system and personal computer

### 8.4 MedSight

- An interactive app that lets you transfer clinical images straight from Mindray Ultrasound system to a smart device, such as mobile phone or tablet PC
- Transfer images or clips from the system to mobile terminal through WiFi
- Support both iOS (7.0 and above) and Android (4.0 and above) system
  - For iOS powered smart device: DICOM is mandatory
  - For Android powered smart device: DICOM not necessary

### 8.5 MedTouch

- Connect Ultrasound machine to smart devices based on Android and iOS system, such as tablet PC or mobile phone.

Remote control of Ultrasound machine and tutorial software iScanHelper study on smart devices

- It can connect to a remotely-controlled ultrasound device to adjust the following parameters for the ultrasound device: Gain, Depth, Freeze/Unfreeze, Image Storage, Zoom, One-key Image Optimization, and Mode (B, Color, and Dual Live)
- Support Android and iOS powered smart devices.
  - Android 4.0 and above
  - iOS 7.0 and above
  - DICOM not necessary

### 8.6 u-Link

- The u-Link can be used to connect to software that supports the u-Link protocol (such as the MiCo+ Remote Imaging System)

## 9 Transducers

### 9.1 Convex array

- C5-1s
  - Application: Abdomen, Gynecology, Obstetrics, Vascular Nerve, Musculo-skeletal, Urology, Thoracic/Pleural, Small Parts
  - Bandwidth: 1.2-6.0 MHz
  - Number of elements: 128
  - FOV (max): 61 degrees
  - Metal Biopsy Guide: NGB-022, multi angle, reusable
  - Disposable Biopsy Guide: LPUBKG60
- C5-2s
  - Application: Abdomen, Gynecology, Obstetrics, Vascular Nerve, Musculo-skeletal, Pediatrics, Thoracic/Pleural, Urology, Small Parts
  - Bandwidth: 1.2-6.0 MHz
  - Number of elements: 128
  - FOV (max): 75 degrees
  - Metal Biopsy Guide: NGB-015, multi-angle, reusable
- C11-3s
  - Application: Abdominal, Cardiac, Pediatric, Vascular
  - Bandwidth: 2.6-12.8 MHz
  - Number of elements: 128
  - FOV (max): 102 degrees
  - Metal Biopsy Guide: NGB-018, multi-angle, reusable

- V11-3s
  - Application: Gynecology, Urology, Obstetrics
  - Bandwidth: 3.0-11.0 MHz
  - Number of elements: 128
  - FOV (max): 140 degrees
  - Metal Biopsy Guide: NGB-004, single angle, reusable; NGB-045, single angle, reusable

## 9.2 Linear Array

- L12-3RCs
  - Application: Abdomen, Pediatric, Small Parts, Musculo-skeletal, Vascular, Thoracic/Pleural
  - Bandwidth: 3.0-12.8 MHz
  - Number of elements: 192
  - FOV (max): 3.80 cm
  - Metal Biopsy Guide: NGB-043, multi angle, reusable; NGB-044, multi angle, reusable
- L13-3s
  - Application: Abdomen, Pediatric, Small Parts, Musculo-skeletal, Vascular, Nerve, Ophthalmic, Thoracic/Pleural
  - Bandwidth: 3.2-12.3 MHz
  - Number of elements: 128
  - FOV (max): 3.79 cm
  - Metal Biopsy Guide: NGB-007, multi-angle, reusable
- L13-3Ns
  - Application: Abdomen, Pediatric, Small Parts, Musculo-skeletal, Vascular, Nerve, Ophthalmic, Thoracic/Pleural
  - Bandwidth: 3.0-13.0 MHz
  - Number of elements: 192
  - FOV (max): 3.82 cm
  - Metal Biopsy Guide: NGB-053, multi-angle, reusable
- L14-6Ns
  - Application: Abdomen, Pediatric, Small Parts, Musculo-skeletal, Vascular, Nerve, Ophthalmic, Thoracic/Pleural
  - Bandwidth: 3.5-16.0 MHz
  - Number of elements: 192
  - FOV (max): 3.80 cm
  - Metal Biopsy Guide: NGB-007, multi-angle, reusable
- L20-5s

- Application: Abdomen, Small Parts, Musculo-skeletal, Vascular, Nerve, Ophthalmic
- Bandwidth: 6.0-23.0 MHz
- Number of elements: 192
- FOV (max): 2.86 cm
- Biopsy Guide: not available

## ● L12-4s

- Application: Abdomen, Pediatric, Small Parts, Musculo-skeletal, Vascular, Nerve, Thoracic/Pleural
- Bandwidth: 4.0-12.8 MHz
- Number of elements: 192
- FOV (max): 3.79 cm
- Metal Biopsy Guide: NGB-007, multi-angle, reusable

## ● L9-3s

- Application: Abdomen, Obstetrics, Pediatric, Small Parts, Musculo-skeletal, Vascular, Nerve
- Bandwidth: 2.5-9.0 MHz
- Number of elements: 192
- FOV (max): 4.38 cm
- Metal Biopsy Guide: NGB-034, multi-angle, reusable

## ● L16-4Hs

- Application: Musculo-skeletal, Nerve, Small Parts, Vascular, Pediatric, Intraoperative
- Bandwidth: 4.0-12.8 MHz
- Number of elements: 128
- FOV (max): 2.53 cm
- Biopsy Guide: not available

## 9.3

## Phased Array Transducer

### ● P4-2s

- Application: Abdomen, Gynecology, Obstetrics, Cardiac, Pediatric, Vascular, Thoracic/Pleural, Cephalic
- Bandwidth: 1.0-5.0 MHz
- Number of elements: 64
- FOV (max): 90 degrees
- Metal Biopsy Guide: NGB-011, multi-angle, reusable

### ● P8-2s

- Application: Abdomen, Pediatric, Cardiac, Cephalic
- Bandwidth: 2.3-8.0 MHz
- Number of elements: 96
- FOV (max): 90 degrees



- Biopsy Guide: not available
- P10-4s
  - Application: Abdomen, Pediatric, Cardiac, Nerve, Cephalic
  - Bandwidth: 3.0-11.4 MHz
  - Number of elements: 128
  - FOV (max): 90 degrees
  - Biopsy Guide: not available
- P7-3Ts
  - Application: Cardiac
  - Bandwidth: 2.3-7.2 MHz
  - Number of elements: 64
  - FOV (max): 90 degrees
  - Biopsy Guide: not available
- P8-3Ts
  - Application: Cardiac
  - Bandwidth: 2.3-7.2 MHz
  - Number of elements: 48
  - FOV (max): 90 degrees
  - Biopsy Guide: not available

#### 9.4 Pencil

- CW2s
  - Application: Cardiac, Cephalic, Pediatric
  - Number of elements: 2
  - Biopsy Guide: not available

## 10 Peripheral Devices and Accessories

- 10.1 Black/white digital video printer
- 10.2 Black/white analog video printer
- 10.3 Color digital video printer
- 10.4 Footswitch
  - USB port: 971-SWNOM (2-pedal/3-pedal)
  - Support user-definable functions (Freeze, Save, and Print)
- 10.5 Built-in DVR
  - Built-in digital video recorder, save space and is a useful tool for education and memory
  - Max storage length each time: 60 min
- 10.6 Mobile Trolley
  - MT3
    - Power supply module
    - Dimensions (WxD): about 519 mm x 578 mm
    - Platform height: 887-1207 mm, adjustable

- Weight:
  - ◆ Without retractable cable and probe extend module: about 28.8 kg
  - ◆ With retractable cable and without probe extend module: about 32.5 kg
  - ◆ Without retractable cable and with probe extend module: about 30.9 kg
  - ◆ With retractable cable and probe extend module: about 34.6 kg
- Probe holders
- Auxiliary output cable
- Probe extend module
- Cover grounding cable
- Printer bracket
- MT2
  - Dimensions (WxD): about 515 mm x 505 mm
  - Platform height: 885 mm, 973 mm; 2 levels
  - Weight:
    - ◆ Without printer bracket and probe extend module: about 15 kg
    - ◆ With printer bracket and probe extend module: about 18.8 kg
  - Probe holder
  - Probe extend module
  - Printer bracket

#### 10.7 U-Bank

- Weight: 1.95 kg (2 batteries), 2.87 kg (4 batteries)

#### 10.8 ECG

#### 10.9 Barcode reader

#### 10.10 Built-in wireless adapter

## 11 System Inputs and Outputs

#### 11.1 Video Output

- S-Video: 1 port
- HDMI: 1 port

#### 11.2 Physio Input

- Support the ECG signal
- ECG: 1 port

#### 11.3 Probe Extend module

- Probe port: 2

#### 11.4 Other Input/Output

- USB port: 4 USB 3.0 ports

- Ethernet: 1 port

## **12 Safety and Conformance**

### **12.1 Quality Standards**

- ISO 9001
- ISO 13485

### **12.2 Design Standards**

- EN 60601-1 and IEC 60601-1
- EN 60601-1-2 and IEC 60601-1-2
- EN 60601-1-6 and IEC 60601-1-6
- EN 60601-2-37 and IEC60601-2-37
- EN 62304 and IEC 62304
- EN 62366 and IEC 62366
- EN ISO 17664 and ISO 17664

### **12.3 CE Declaration**

The system is fully in conformance with the Council Directive 93/42/EEC Concerning Medical Devices, as amended by 2007/47/EC. The number adjacent to the CE marking (0123) is the number of the EU-notified body that certified meeting the requirements of Annex II of the Directive.