

MX8 Musculoskeletal Ultrasound System

Performance Specifications

Application

Small Parts
Musculoskeletal
Nerve

Transducer Types

Curved Array
Linear Array

Imaging Modes

B-Mode
THI and PSH™ (Phase Shift Harmonic Imaging)
Color Doppler Imaging
Power Doppler Imaging/Directional PDI
Pulsed Wave Doppler
Strain Elastography
iScape™ View (Panoramic Imaging)

Standard Features

B-Mode
THI and PSH™
M-Mode
Color Doppler Imaging
Power Doppler Imaging and Directional PDI
Pulsed Wave Doppler
iBeam™ (Spatial Compound Imaging)
iClear™ (Speckle Suppression Imaging)
iTouch™ (Auto Image Optimization)
Zoom/iZoom (Full Screen Zoom)
FCI (Frequency Compound Imaging)
B Steer
ExFOV (Extended Field of View)
HR Flow™ (High Resolution Flow)
Raw Data Processing
iScanHelper
1 Active probe port
Hard Drive: 256 GB SSD or 1TB HDD
4-USB
HDMI
iStorage
MedTouch
MedSight
Net Storage
Built-in Battery
Power Adapter
Traveling Case

Optional Features

iScape™ View
Strain Elastography
iWorks™ (Auto Workflow Protocol)
iNeedle™ (Needle Visualization)
iVocal
McAfee
DVR Module
DICOM
Clinical Measurement Package
Mobile Trolley
ECG Module
Internal Wi-Fi
Ultrasound Gel
Dual-Probe Extend Module

U-Bank (2 batteries)
Barcode Reader
Footswitch
iVocal Material Package

Language Support

Software: English
Keyboard Input: English
Control Panel Overlay
User Manual

Physical Specification

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)

Monitor

15.6-inch High Resolution Color LED monitor
Resolution: 1920 × 1080
Automatic Brightness Adjustment
Screen Saver
Open Angle Adjustable: 0 – 180°
View Angle (right/left): ≥170°

Handle

Probe Port

1 port connect to a transducer

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, 6600 mAh (single battery)

Operating Environment

Ambient Temperature: 0 – 40° C
Relative Humidity: 20% – 85% (no condensation)
Atmospheric Pressure: 700 hPa – 1060 hPa

Storage & Transportation Environment

Ambient Temperature: -20 – 55° C
Relative Humidity: 20% – 95% (no condensation)
Atmospheric Pressure: 700 hPa – 1060 hPa

User Interface

Control panel

Power/Battery Indicator
Function Keys
Ergonomic Soft Key Operation
Backlit keys, ensuring accurate work in the dark room
Programmable keys, available for userdefined functions
Trackball, Speed Adjustment
Key Brightness Adjustment
Integrated speakers, audio volume adjustment



Touchscreen

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

System Boot-up

Boot-Up from
Complete Shut Down: less than 26 sec
Shut Down: less than 30 sec

Comments

Supports Text Input and Arrow
Adjustable text size and arrow size and direction
Supports Home Position
Covers Various Application
More than 800 comments items for versatile application
User Customizable

Bodymark

More than 232 bodymarks for versatile application

Screen Information* (presettable)

Common info:

Mindray Logo
Hospital Name
Exam Date
Exam Time
Acoustic Power
Mechanical Index
Tissue Thermal Index
ID, Last name, First Name, Middle initial, Gender, Age
Probe Model
ECG Icon (when ECG connected)
Operator
TGC Curve
Focus Position
Thumbnail
Imaging Parameters
Help Guidance
Dynamic Trackball Indices

**Not all items are listed in this part, detail info please refer to user manual.*

Performance Specifications

Imaging Parameters

Overview

Digital Beamformer
Up to 1032192 Channels
64-Beam Forming

B-mode

Frame Rate (max): 840 f/s
A.Power: depend on probe
TGC: 8 sliders
Depth: 30 Levels
Gain: 0 – 100, 1/step
Steer: 5 Levels (available on linear transducers)
FOV: On/off
FOV Size: random adjustable
FOV Position: random adjustable
Image Quality: Pen/Gen/Res/HPen/HGen/HRes/HGen-FFR/HRes-FFR (depends on transducer)
Persistence: 0 – 7, 1/step
Dyn Ra.: 30 – 350 (depends on transducer)
Gray Map: 1 – 8, 1/step
Tint Map: Off, 1 – 8, 1/step
ExFov: Off, 1 – 2 ((depends on transducer, extended FOV available on convex and linear transducers)
iClear: Off, 1 – 7, 1/step
iBeam: Off, 1 – 3, 1/step
Line Density: L, M, H, UH
L/R Flip: On/off
U/D Flip: On/off
Rotation: 0, 90°, 180°, 270°
iTouch: On/off
iTouch: -12 – 12, 3 db/step
LGC: 8 point
Dual Live: On/off
Auto Merge: On/off (available on linear transducers)
H Scale: On/off
Echo Boost: Off, 1 (available on phased transducers)
Smooth: 0 – 6, 1/step
TSI (Tissue Specific Imaging): General, Muscle, Fluid, Fat
Zoom Value: 0.8 – 10
HDScope: Off, 1 – 3, 1/step
V1:1: On/off (available on linear transducers)

iNeedle:
B/iNeedle (on/off)
Needle Dir.: Auto, Left, Right

eSpacial Navi (option)

Needle Guidance
Available on Transducer L11-3VN5
Display Favorite
Only: On/off
Auto Optimize: On/off
Calibration: On/off

Target Box In-Plane: On/off
Position In-Plane: On/off
Trajectory In-Plane: On/off
Alignment In-Plane: On/off
Target Box Out-Plane: On/off
Position Out-Plane: On/off
Trajectory Out-Plane: On/off
Alignment Out-Plane: On/off

THI and PSH

Available on all types of transducer
Patent PSH™ technology, obtains purer harmonic, better contrast resolution, higher SNR, exceptional high frequency harmonic
iClear™ available
Image quality: depends on transducers

Color Doppler Imaging

Frame Rate (max): 331 f/s
PRF: 0.1 kHz – 14.3 kHz
Velocity: 1.0 cm/s – 148.9 cm/s
HR Flow™: High Resolution Flow provides better image quality and flow sensitivity
A.power: same as B
Gain: 0 – 100, 2/step
Baseline: -8 – 8, 1/step
Scale: 30 levels
Quick Steer (available on linear transducers)
Steer (available on linear transducers)
ROI Size/Position: adjustable
ROI Center Depth: adjustable
Img Quality: Color/3 levels; HRFlow/1 level
Persistence: 0 – 6, 1/step
Smooth: 0 – 6, 1/step
Color Map: V0 – V10; VV0 – VV9
Flow State: L, M, H
Priority: 0% – 100%, 1%/step
WF: 8 Levels
Line Density: L, M, H, UH
Dual Live: On/off
Invert: On/off
Auto Invert: On/off (available on linear transducers)
B/C Align: On/off
Velocity tag: On/off
Packet Size: 0 – 3, 1/step
iTouch: On/off
Smart Track: On/off

Power Doppler Imaging

PRF: 0.1 kHz – 14.3 kHz
HR Flow™: High Resolution Flow provides better image quality and sensitivity
A.power: same as B
Gain: 0 – 100, 2/step
Quick Steer (available on linear transducers)
Steer (available on linear transducers)
Scale: 30 steps
ROI Size/Position: adjustable

ROI Center Depth: adjustable
Img Quality: Power/3 levels; HRFlow/1 level
Persistence: 0 – 6, 1/step
Smooth: 0 – 6, 1/step
Dynamic Range: 10 – 70, 5/step
Flow State: L, M, H
Color Map: P0 – P3; dP0 – dP3
Priority: 0% – 100%, 1/step
WF: 8 levels
Line Density: L, M, H, UH
Dual Live: On/off
Invert: On/off
B/C Align: same as Color
Packet Size: 0 – 3, 1/step
iTouch: On/off
Smart Track: On/off
Auto Invert: On/off

PW Mode

PW Velocity: 11 cm/s – 770.0 cm/s
PW PRF: 0.7 kHz – 20 kHz
A.Power: same as B
Gain: 0 – 100, 2/step
Baseline: 9 levels
Quick Steer (available on linear transducers)
Steer (available on linear transducers)
Scale: 30 levels
Audio: 0% – 100%, 2%/step
Angle: -89 – 89, 1/step
SVD: random adjustable
Image Quality: 3 levels
Speed: 25 mm/s, 35 mm/s, 50 mm/s, 65 mm/s, 100 mm/s, 200 mm/s
SV: 0.5 – 30 mm (PW only)
SV Position: random adjustable
Dynamic Range: 24 – 72, 2/step
Gray Map: 1 – 10, 1/step
Tint Map: Off, 1 – 8, 1/step
Display Format: V2:3, V3:2, H2:3, V3:1, FULL
Invert: On/off
Auto Invert: On/off (available on linear transducers)

WF (depend on probe)

Quick Angle: -60°, 0°, 60°
Duplex/Triplex: On/off
HPRF: On/off
iTouch: On/off
T/F Res: 0 – 6, 1/step
Auto Calculate: On/off
Auto Calc Cycle: 1 – 5, 1/step
Trace Sensitivity: 0 – 5, 1/step
Auto Calc Parameter
Trace Smooth: Off, 1 – 4, 1/step
Trace Area: Above, Below, All
Auto Calc Loop

iScape™ View

Panoramic Imaging
Available on all Transducers

Performance Specifications

Imaging Parameters (continued)

Acquisition Method: B mode, Power mode and Color mode

Imaging Length: 292.80 cm

Tint Map: off; 8 types

Rotation: 0° – 355°

Strain Elastography

Available Probes:

L16-4Hs

L12-3RCs

L13-3Ns

L14-6Ns

L15-3RCs

L24-6RCs

L24-6Hs

L20-5s

Support strain ratio measurement

Unique shell analysis function

Stress compensation technology reduces deeper tissue artifacts, obtains more uniform stress throughout whole field

Stress Indicator: supports frame by frame stress indication

Opacity: 0 – 5, 1/step

Map: E1 – E6

Smooth: 0 – 5, 1/step

ROI: random adjustable

ROI Center Depth: random adjustable

Invert: on/off

Depth: Linear: 1.5 – 5 cm

Display Format: V1:1, H1:1, FULL

Strain Scale: 0 – 5, 1/step

Map Position: 0% – 100%, 5%/step

Dyn Ra: 0 – 5, 1/step

Strain Mode: 0 – 1, 1/step

E Sensitivity: 0 – 5, 1/step

Image Quality: three levels of fundamental frequency, three levels of harmonic frequency

iBeam™

Spatial Compound Imaging

3 Angles Maximum

Available on convex and linear transducers

iTouch™

Auto Image Optimization

B-mode: gain, TGC

Color: gain

Power: gain

PW: gain, scale, PRF, WF

Contrast imaging: gain, TGC

B steer

Only for linear transducers

ExFov

Extended Field of View

Available for all convex and linear transducers

Zoom

Zoom: Spot zoom (write zoom) up to 10x, Pan zoom (read zoom) 0.8x – 10x

iZoom: convertible 3 steps ;normal image, zoom standard area, zoom only image area

QSave

Quick save image parameter setting after image adjustment done

Support Save, Create, Restore

iNeedle™

Needle Visualization Enhancement

Best Angle Indicator

Available on linear and curved transducers

Smart Track

Continuously track the flow and detect the best color box position and angle in real time scanning.

The Linear probes in carotid, Upper Ext A, Upper Ext V, Lower Ext A, Lower Ext V, EM Vascular exam modes support the Smart Track function.

Cine Review and Post Processing

Cine review

Available in all modes

Frame by frame manual cineloop review or auto playback with variable speed

Independent cine review in 2D Dual and Quad mode one by one

Maximum cine memory is up to 25492 frames or 263.3 s (depend on the mode)

Retrospective storage (online setting available, 1 – 120 s, or 1 – 120 cycles, presettable) and prospective storage (1 – 480 s, or 1 – 390 cycles, pre-settable)

Frame Compare: compare different frames for one cine in dual format

Cine Compare: compare two or more than two cines in dual or quad format

Jump to First and

Jump to Last: one keystroke review the first or last frame

Start Point and

End Point: selectable

Raw data processing

B-mode:

TGC

Gain

Dynamic range

Gray map

Tint map

iClear

L/R Flip

U/D Flip

Rotation

LGC

Dual Live

Auto Merge

H Scale

Echo Boost

Smooth

Zoom Value

V1:1

B/iNeedle

M-mode:

Gain

Speed

Dynamic Range

Gray Map

Tint Map

Display format

Edge Enhance

Color:

Gain

Baseline

Smooth

Color map

Dual Live

Invert

Priority

Velocity tag

PW:

Gain

Baseline

Audio

Angle

Speed

Dynamic range

Gray map

Tint Map

Display format

Invert

WF

Quick Angle

T/F Res

Measurement/Analysis and Report

Report

Specific report template by application

Editable value in report

Images selectable

Anatomy information

User-defined report template

Selecting report modules

Adding/removing measurement items from the report

Changing report layout

Load/save comment

Viewing history reports

Preview and printing reports

Able to Export as PDF file

Set the calculation method for the final value in batch

Exam Storage and Management

Exam storage

SSD:

256 GB, more than 157 GB internal hard drive reserved for patient data storage

Capable of storage up to approximately 173242 single frames (FRM format)

HDD:

1 TB, more than 866 GB internal hard drive reserved for patient data storage

Capable of storage up to approximately 3290097 single frames (FRM format)

Storage Area:

Pre-Settable: image area, standard area, full-screen

Image Area: 1430×810

Standard Area: 1920×920

Full-Screen: 1920×1080

Performance Specifications

Exam Storage and Management (continued)

Exam management

- iStation™ workstation dedicated for patient exam management
- Patient exam query/retrieve
- Support review of current and past exam
- New exam, Active exam, Continue exam functions, End exam are available
- Support measurements and calculations on archived exam and images
- Export image as BMP/JPG/TIFF/DCM/FRM format (FRM: system format)
- Export cine as DCM/AVI/CIN/MP4 format (CIN: system format)
- Support backup/send to USB devices, DVD-RW media

iWorks™

- Auto Workflow Protocol
- Templates are user configurable
- Functions: pause, stop, replace, repeat, skip, insert single step, return and continue, steps in thumbnail
- iWorks Setup Mode: B/Dual/B+Color/ B+PW/ B+Color+PW/B+CW/ B+Color+CW/ B+M
- iWorks Setup Annotation: support up to 2 annotations, location and font size are configurable
- iWorks Setup Bodymark: select existing library, and probe indicator is pre-settable
- iWorks Setup Measurement: select existing measurement library
- Template import and export are available

Connectivity

Ethernet Network Connection

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

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

iStorage

Direct network storage tool between ultrasound system and personal computer

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
Needs to be installed on mobile terminal

Transfer images or clips from 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

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
Support Android and iOS powered smart devices

- Android 4.0 and Above
- iOS 7.0 and Above
- DICOM not Necessary

Net Storage

Support sending images or exams to the shared directory of your PC server

iStorage

Data transfer

Security

- Anti-Virus: McAfee and Windows Defender
- VPN

Probes

Curved array

SC10-2RCs

- Application: Abdominal, Musculo-skeletal (Conventional), Musculo-skeletal (Superficial), Urology, Peripheral vessel

- Bandwidth:
 - Adult ABD: 1.8 – 8.2 MHz
 - Carotid: 1.8 – 10.0 MHz
- Depth: 4.0 – 40.0 cm
- Number of Elements: 192
- FOV (max): 64°
- Extended FOV: 76°
- Convex Radius: 43 mm
- Physical Footprint: 66 mm×24.9 mm
- Footprint: 48.8 mm×12.1 mm
- B-mode Frequencies:
 - Adult ABD: 1.8~5.4, 2.3~6.8, 2.8~8.2 MHz
 - Carotid: 1.8~5.5, 2.3~6.9, 2.8~10.0 MHz
- Harmonic Frequencies: 4.8, 5.4, 6.5 MHz
- Color Frequencies: 3.0, 3.5, 4.0, 3.5 (HR Flow) MHz
- PW Frequencies: 3.0, 3.5, 3.8 MHz
- Biopsy Guide: NGB-058 available, multi-angle, reusable

SC5-1Ns

- Application: Nerve, Musculoskeletal, Small Parts
- Bandwidth: 1.2 – 6.0 MHz
- Depth: 4.0 – 40.0 cm
- Number of Elements: 128

- FOV (max): 61°
- Extended FOV: 73°
- Convex Radius: 60 mm
- Physical Footprint: 76.7×28 mm
- Footprint: 68×18 mm
- B-mode Frequencies: 1.2 – 3.8, 1.7 – 5.2, 2.0 – 6.0 MHz
- Harmonic Frequencies: 4.0, 5.0, 6.0 MHz
- Color Frequencies: 2.0, 2.5, 3.0, 3.5 (HR Flow) MHz
- PW Frequencies: 2.0, 2.5, 3.0 MHz
- Biopsy Guide: NGB-022, available, multi-angle, reusable; LPUBKG60, disposable

Linear array

L11-3VNs

- Application: Small Parts, Vascular, Musculoskeletal
- Bandwidth: 3.0 – 11 MHz
- Number of Elements: 192
- Field of View (max): 3.82 cm
- Extended Angle: 40°
- Steered Angle: ±10°, 20 (B); ±10°, 20°, 30° (C, PW)
- Physical Footprint: 56.5×24 mm
- Footprint: 43.5×10.5 mm
- B-mode Frequencies: 3.0 – 8.3, 4.4 – 9.2, 5.6 – 11.0 MHz
- Harmonic Frequencies: 7.0, 8.0, 9.0 MHz
- Color Frequencies: 4.4, 5.0, 7.1 MHz
- PW Frequencies: 4.4, 5.0, 7.1 MHz
- Doppler Frequencies: 6.0, 7.5, 9.0 MHz (Ocular)
- Biopsy Guide: Not Available

L12-3RCs

- Application: Small Parts, Musculoskeletal
- Bandwidth: 3.0 – 12.8 MHz
- Depth: 1.5 – 35.0 cm
- Number of Elements: 192
- Field of View (max): 3.80 cm
- Steered Angle: ±12°, ±6°, 0 (B steer); -30° – 30° (Color/PW steer)
- Physical Footprint: 55.6×22 mm
- Footprint: 43.5×8.2 mm
- B-mode Frequencies: 3.0 – 8.3, 4.4 – 10.2, 5.6 – 12.8 MHz
- Harmonic Frequencies: 8.0, 10.0, 12.0 MHz
- Color Frequencies: 4.4, 5.0, 7.2, 7.2 (HR Flow) MHz
- Doppler Frequencies: 4.2, 5.0, 7.2 MHz
- Biopsy Guide: NGB-043 available, multi-angle, reusable; NGB-044 available, multi-depth, reusable

L13-3Ns

- Application: Small Parts, Musculoskeletal, Nerve
- Bandwidth: 3.0 – 13.0 MHz
- Depth: 1.5 – 35.0 cm
- Number of Elements: 192
- Field of View (max): 3.82 cm
- Steered Angle: ±12°, ±6°, 0 (B steer); -30° – 30° (Color/PW steer)

Performance Specifications

Probes (continued)

Physical Footprint:	56.8×21.2 mm
Footprint:	43.5×8.2 mm
B-mode Frequencies:	3.0 – 9.3, 5.4 – 11.2, 6.6 – 13.0 MHz
Harmonic Frequencies:	9.0, 10.0, 11.0 MHz
Color Frequencies:	4.2, 5.0, 6.2, 7.3 (HR Flow) MHz
PW Frequencies:	4.2, 5.0, 6.2 MHz
Biopsy Guide:	NGB-053, available, multi-angle, reusable

L14-6Ns

Application:	Small Parts, Musculoskeletal, Nerve
Bandwidth:	3.5 – 16.0 MHz
Depth:	1.5 – 35.0 cm
Number of Elements:	192
Field of View (max):	3.80 cm
Steered Angle:	±12°, ±6°, 0 (B steer); -30° – 30° (Color/PW steer)
Physical Footprint:	45.7×10.9 mm
Footprint:	44.2×8.5 mm
B-mode Frequencies:	3.5 – 9.3, 5.4 – 11.2, 6.6 – 16.0 MHz
Harmonic Frequencies:	10.0, 11.0, 12.0 MHz
Color Frequencies:	5.0, 6.2, 7.3, 8.0 (HR Flow) MHz
PW Frequencies:	5.0, 6.2, 7.3 MHz
Biopsy Guide:	NGB-007, available, multi-angle, reusable

L15-3RCs

Application:	Abdomen, Pediatric, Small Organ (Small organ-breast, thyroid, testes), Musculo-skeletal (Conventional), Musculo-skeletal (Superficial), Thoracic/Pleural (For detection of fluid and pleural motion/ sliding.), Peripheral vessel
Bandwidth:	3.0 – 15.0 MHz
Depth:	1.5 – 35.0 cm
Number of Elements:	192
Field of View (max):	3.82 cm
Steered Angle:	±12°, ±6°, 0 (B steer); -30° – 30° (Color/PW steer)
Physical Footprint:	61 mm×24.4 mm
Footprint:	43.35 mm×8.05 mm
B-mode Frequencies:	3.0~9.0, 5.0~12.0, 8.0~15.0 MHz
Harmonic Frequencies:	10.0, 11.0, 12.0 MHz
Color Frequencies:	5, 6.2, 7.3, 7.3 (HR Flow) MHz
PW Frequencies:	5, 6.2, 7.3 MHz
Biopsy Guide:	NGB-043, NGB-044 available, multi-angle, reusable

L20-5s

Application:	Small Parts, Musculoskeletal, Nerve
Bandwidth:	6.0 – 23.0 MHz

Depth:	1.5 – 35.0 cm
Number of Elements:	192
Field of View (max):	2.86 cm
Steered Angle:	±12°, ±6°, 0 (B steer); -20° – 20° (Color/PW steer)
Physical Footprint:	42.23×22.10 mm
Footprint:	31.5×4.5 mm
B-mode Frequencies:	6.0 – 13.0, 9.0 – 16.6, 12.5 – 23.0 MHz

Harmonic Frequencies:	14.0, 16.0, 18.0 MHz
Color Frequencies:	8.9, 11.4, 13.3, 13.0 (HR Flow) MHz
PW Frequencies:	8.9, 10.0, 13.3 MHz
Biopsy Guide:	not available

L24-6RCs

Application:	Pediatric, Small organ (breast, thyroid, testes), Musculo-skeletal (Conventional), Musculo-skeletal (Superficial), Peripheral vessel
Bandwidth:	6.0 – 24.0 MHz
Depth:	0.5 – 7.0 cm
Number of Elements:	192
Field of View (max):	2.87 cm
Steered Angle:	±12°, ±6°, 0 (B steer); -20° – 20° (Color steer); -30° – 30° (PW steer)
Physical Footprint:	50 mm×24 mm
Footprint:	32.4 mm×6.4 mm
B-mode Frequencies:	6.0~13.0, 9.0~16.6, 12.5~24.0 MHz
Harmonic Frequencies:	14.0, 16.0, 18.0 MHz
Color Frequencies:	9.0, 11.0, 13.0 MHz
PW Frequencies:	8.3, 10.0, 12.5 MHz
Biopsy Guide:	not available

L9-3s

Application:	Small Parts, Musculoskeletal, Nerve
Bandwidth:	2.5-9.0 MHz
Depth:	1.5-35.0 cm
Number of Elements:	192
Field of View (max):	4.38 cm
Steered Angle:	±12°, ±6°, 0 (B steer); -10° – 10° (Color/PW steer)
Physical Footprint:	62×22 mm
Footprint:	48×11 mm
B-mode Frequencies:	2.5-7.0, 3.4-8.2, 3.6-9.0 MHz
Harmonic Frequencies:	5.0, 6.0, 7.0 MHz
Color Frequencies:	3.0, 3.6, 5.0, 7.3 (HR Flow) MHz
PW Frequencies:	3.0, 3.6, 5.0 MHz
Biopsy Guide:	NGB-034, available, multi-angle, reusable

L16-4Hs

Application:	Musculoskeletal, Nerve, Small Parts
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Bandwidth:	4.0-12.8 MHz
Depth:	1.5-35.0 cm
Number of Elements:	128
Field of View (max):	2.53 cm
Steered Angle:	±12°, ±6°, 0 (B steer); -30° – 30° (Color/PW steer)
Physical Footprint:	11.5×38 mm (slant width)/34.8mm (straight width)
Footprint:	28.7×5.5 mm
B-mode Frequencies:	4.0-9.3, 5.4-11.2, 6.6-12.8 MHz
Harmonic Frequencies:	10.0, 11.0, 12.0 MHz
Color Frequencies:	5.0, 6.2, 7.3, 8.0 (HR Flow) MHz
PW Frequencies:	5.0, 6.2, 7.3 MHz
Biopsy Guide:	not available

L24-6Hs

Application:	Abdomen, Intraoperative (includes abdominal, thoracic, and vascular etc), Pediatric, Small organ (breast, thyroid, testes), Musculo-skeletal (Conventional), Musculo-skeletal (Superficial), Peripheral vessel
Bandwidth:	6.0 – 24.0 MHz
Depth:	0.5 – 7.0 cm
Number of Elements:	192
Field of View (max):	2.87 cm
Steered Angle:	±12°, ±6°, 0 (B steer); -20° – 20° (Color steer); -30° – 30° (PW steer)
Physical Footprint:	3 7.7 mm×12.5 mm
Footprint:	32.4 mm×6.4 mm
B-mode Frequencies:	6.0~13.0, 9.0~16.6, 12.5~24.0 MHz
Harmonic Frequencies:	14.0, 16.0, 18.0 MHz
Color Frequencies:	9.0, 11.0, 13.0 MHz
PW Frequencies:	8.3, 10.0, 12.5 MHz
Biopsy Guide:	not available

Peripheral Devices and Accessories

Black/white digital video printer
MITSUBISHI P95DW-N

Black/white analog video printer
SONY UP-X898MD

Color digital video printer
SONY UP-D25MD

Footswitch

USB Port:	971-SWNOM (2-pedal/3-pedal)
USB Port:	FS-81-SP (1-pedal)
Support User-definable functions (Freeze, Save, Print)	

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

MX8 Musculoskeletal Ultrasound System

Performance Specifications

Peripheral Devices and Accessories (continued)

Built-in Battery for Main Unit

- Replaceable and rechargeable lithium battery
- Empty battery recharged to full in 4h
- Continuous work time: about 1.5 hour in B mode

Mobile Trolley

MT3

- Power Supply Module
- Dimensions (W×D): about 519 mm × 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 (W×D): about 515 mm × 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 Holders
- Probe Extend Module
- Printer Bracket

Barcode reader

- 1-D barcode reader: SYMBOL LS2208
- 2-D barcode reader: SYMBOL DS4308

U-Bank

- U-Bank with 2 Batteries Weight: 1.95 kg

Footswitch

- USB Port: FS-81-SP-2(single pedal), 971-SWNOM (2/3-pedal)
- Support User-definable functions (Freeze, Save, Print)

Built-in Wireless adapter

- Encryption: WPA, WPA2
- Max Transfer Speed: 300 Mbps
- Protocols: IEEE 802.11 ac/a/b/g/n
- Frequency: 2.4G/5G

System Inputs and Outputs

I/O Port

- USB 3.0: 4 ports
- Ethernet: 1 port
- HDMI: 1 port
- S-Video: 1 port

Probe Extend module

- Probe Port: 2

Safety and Conformance

Quality standards

- ISO 9001
- ISO 13485

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 IEC 60601-2-37
- EN 62304 and IEC 62304
- EN 62366 and IEC 62366
- EN ISO 17664 and ISO 17664

NOTICE:

Not all features or specifications described in this document may be available in all probes and/or modes. Mindray reserves the right to make changes in specifications and features shown herein, or discontinue the product at any time without notice or obligation.

Contact Mindray Representative for the most current information.