

DC-70 with X-Insight

Diagnostic Ultrasound System
Datasheet



X-Insight

Release 4.2.1

mindray

Mindray Confidential

DC-70 X-Insight

Diagnostic Ultrasound System

Performance Specifications



Built-in battery
Gel warmer
DVR Module
McAfee
V-Mapping
Built in Wireless A dapter
Built in DVD Recorder

Language Support

Software: Software: English, Spanish, French
Keyboard input: English
User manual: English

Physical Specifications

Dimension and Weight

Depth: 1020±20mm;
Width: 550±10mm;
Height: 1000±20mm
Weight: 105kg±4kg (net weight, standard configuration but not including the probe)

Monitor

21.5 inch high resolution color LED monitor
Resolution: 1920 × 1080
Viewing angle: 89°
left/right up/down
Digital on screen display of brightness and contrast controls
Independent tilt up of 110 degrees from horizontal and swivel left/right of 90 to 90 degrees
Frame rate (Hz): 60Hz

Audio speakers

Stereo audio speakers
Audio data range: 250 Hz ~15kHz

Multi directional articulating monitor arm for better user friendly experience

Dual wing floating arm
Rotate angle: 90 degrees to the left and 150 degrees to the right along with the support arm
Up: 150 mm
Front/back: 300mm

Wheels

Diameter: 125 mm
Castors (4 ea): total lock and break

System Overview

Application

Abdomen General
Obstetrics
Gynecology
Cardiology
Small parts
Urology
Vascular
Pediatrics
Emergency &Critical
Nerve

Transducer Types

Curved array transducer
Linear array transducer
Phased array transducer
Endocavity array transducer
4D Volume transducer
Pencil transducer

Imaging Modes

B Mode
THI and PSH™ Phase Shift Harmonic Imaging
M Mode /Color M mode
Free Xros M™ (Anatomical M mode)
Free Xros CM™ (Curved Anatomical M mode)
Color Doppler Imaging
Power Doppler Imaging /Directional PDI
Pulsed Wave Doppler
Continuous Wave Doppler
TDI Tissue Doppler Imaging
TDI QA
Smart 3D™ (Freehand 3D)
4D
Stress Echo
Tissue Tracking with Quantitative
Natural Touch Elastography Imaging
UWN Contrast Imaging
Quantification Analysis
iScape™ View (Panoramic Imaging)

Standard Features

B Mode
THI and PSH™
M Mode
Color 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)
X Engine
Echo Boost™
Zoom/ iZoom (Full Screen Zoom)

FCI (Frequency Compound Imaging)
B steer
ExFOV (Extended Field of View)
HR Flow™ (High Resolution)
Raw data processing
4 active universal probe ports, 1 more for pencil probe only
1TB hard drive, 5 type A USB ports, 1 more dedicated type B USB port for printer
Touch gestures
iStorage
MedSight
MedTouch
iScanHelper
iCompare
Smart Track

Optional Features

Continuous Wave Doppler
ECG
ECG cable
DC IN cable
Free Xros M™
Free Xros CM™
iScape™ View (Panoramic imaging)
Smart 3D™
Real time 4D
iPage (Multi Slice Imaging)
SCV (Slice Contrast View)
STIC (Spatio Temporal Image Correlation)
Color 3D
Niche/3 Slice
iLive
IVF
Smart Planes CNS
Smart Face
Smart FLC
Smart V™ (Smart Volume)
IMT
Natural Touch Elastography Imaging
UWN Contrast Imaging
Quantification Analysis
Auto EF
TDI (Include TVI, TVD, TVM, TEI)
TDI QA (TDI Quantitative Analysis, including strain/strain rate)
LVO (Left Ventricular Opacification)
Stress Echo
Tissue Tracking with Quantitative Analysis
Smart Pelvic
DICOM
Clinical Measurement Package
Smart OB™ (Auto OB measurement)
Smart NT™ (Auto NT measurement)
iWorks™ (Auto Workflow Protocol)
iNeedle™ (Needle Visualization Enhancement)
Glazing Flow

DC-70 X-Insight Diagnostic Ultrasound System

Performance Specifications

Probe port and holder

Probe ports: 4 active ports, 1 more for pencil probe only

Detachable probe holder: 7 as standard, including one dedicated holder for endocavity probe (left side holder as default, possible to select it as the right side holder before order); one more dedicated endocavity probe holder as optional

Electrical power

Voltage: 100-127V~, or 220-240V~
 Frequency: 50/60 Hz
 Power consumption: 630 VA
 A/D converter velocity (MHz): 40 (receiving)

Operating Environment

Ambient temperature: 0-40°C
 Relative humidity: 30%-85% (no condensation)
 Atmospheric pressure: 700hPa 1060hPa

Storage & Transportation Environment

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

User Interface

Control Panel

User centric control panel with home based layout favors easy access to keys
 Backlit keys ensure accurate work in the dark room
 5 Programmable keys available for user defined functions (<P>, <F3 F6>)
 8 segment TGC control
 Full sized, backlit QWERTY keyboard for text input, function keys and system programming
 Adjustable key volume and trackball speed meet different needs
 Dedicated palm rest design to help reduce user repetitive stress injury
 Independent rotation and up/down of control panel facilitates optimal positioning
 Rotate: 45 degrees (from center)
 Down/up: 140 mm (pull 50mm range)

Touch Screen

13.3 inch multitouch LED touch screen
 Resolution: 1920 × 1080

Touch screen panel angle adjustable for easy visualization: 30 degrees in rotation
 Digital brightness and contrast adjustment through preset
 Viewing angle: 89 degrees left/right up/down
 Support touch screen gestures
 Support thin latex

Supported Touch gestures

Image mapping on touch screen: swipe down from the top edge to project image from monitor to touch screen. Swipe up from the bottom edge to remove projected image and show regular parameter interface.

Page up and down: swipe horizontally on regular imaging parameter interface to change different pages; or swipe horizontally on projected images / cine loops to review them one by one

Menu display: swipe from left edge to right to show the hidden menu on projected image

Image parameter adjustment
 Measurement on projected image on touch screen
 Zoom in/out the projected image on touch screen
 Rotate or erase on projected 3D/4D image on touch screen
 8 user defined gestures using two fingers for more functions, such as freeze, save, print, activate specific imaging modes, measurements, and some other special functions

System boot-up

Boot up from complete shut down in less than 90 sec
 Shut down in less than 30 sec

Comments

Supports text input and arrow
 Support freehand marking on touch screen
 Adjustable text size and arrow size
 Supports home position
 Covers various application
 User customizable
 Supports adding voice comment

Bodymark

More than 227 bodymarks for versatile application
 User customizable

Numbers of exam mode presets:

43 system exam modes (unlimited number for user defined ones)

defined ones)

Screen information

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

Imaging Parameters

Overview

Echo enriched Beamforming
 Up to 248832 channels
 12 beamforming

B-Mode

Display formats: Single (B), Dual (B+B), Quad (4B)
 iClear™: Off; 7 steps
 iBeam™: Off, 1 5 ; or off, 1-3 (depends on probes, and not available on phased probes)
 iTouch™: On/off, 12~12, 3bd/step
 Dual Live: side by side live display
 Image quality: Pen/Gen/Res ; HPen /HGen/ HRes/HPen Gen (depend on probe)
 B steer: 5 levels, available on linear transducers
 ExFOV: off, 1, 2 , available on convex, linear, and volume transducers
 Depth: 30 levels (1.5-40cm; all depend on transducer)
 Frame rate (max): 1388 f/s
 Acoustic output power: 3.2%-100%; 101 levels
 TGC: 8 pods on control panel
 LGC: 8 segments on touch screen
 Dynamic range: 30-240 (depends on probes)
 Gain: 0-100, 1 /step
 Focus number: 1-4 (depend on probes)
 Focus position: 16 levels

Performance Specifications

FOV:	continuously adjustable
Line density:	L, M, H, UH
Persistence:	0-7, 1/ step s
Horizontal Scale:	on/off
L/R flip and U/D flip:	on/off
Rotation:	0, 90, 180, 270
TSI:	general/muscle/fluid/fat
Gray Map:	8 types
Tint map:	off; 8 types
Echo Boost:	on, off
Auto Merge:	on, off
Dehaze:	0-30

THI and PSH™

Patent PSH™ technology, obtains purer harmonic, better contrast resolution, higher SNR, exceptional high frequency harmonic

iClear™ available

Image quality: HPen/HGen/HRes/HPen-Gen (depends on probe)

M-mode

Display formats: V2:3, V3:2, H2:3, V3:1, FULL (V: vertical, H: horizontal)

Color M mode available

Gain: 0-100, 1 /step

M sweep speeds: 6 levels, 145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s

M soften: 0-4, 1/ step s

Tint map: off; 8 types

Gray Map: 8 types

Edge enhance: 0-3, 1/ step s

Time Mark: on/off

Free Xros M™ (option)

Display formats: V2:3, V3:2, H2:3, V3:1 (V: vertical, H: horizontal)

Color Free Xros M available

Up to 3 lines

Display all lines

Sweep speeds: 6 levels; 145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s

M Tint map: off; 8 types

Gray Map: 8 types

Free Xros CM™ (option)

Only available in TDI mode

Display formats: V2:3, V3:2, H2:3, V3:1 (V: vertical, H: horizontal)

Sweep speeds: 6 levels; 145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s

Tint map: off; 8 types

Gray Map: 8 types

Edit, undo, delete function for curved line

Color Doppler Imaging

Dual live

HR Flow™:	High Resolution Flow provides better image quality and flow sensitivity
Image quality:	Pen, Gen, Res
Steer:	7 levels
Max frame rate:	337 f/s
Gain:	0-100, 2/step
ROI size/position:	adjustable
Scale:	30 steps, 1cm/s to 149.9cm/s
Baseline:	-8-8, 1/step
Wall filter:	8 steps
PRF:	0.1kHz to 14.3kHz
Packet size:	0-3, 1/step
Flow state:	L, M, H
Smooth:	0-6, 1/step
B/C align:	on/off
Priority:	0-100%, 1%/step
Color map:	21 types
Invert:	on/off
Persistence:	0-6, 1/step
Velocity tag:	on/off
Line density:	L, M, H, UH
Auto Invert:	on/off
iTouch™:	on/off
B Display:	on/off
Smart Track:	on/off
Glazing flow:	Low, Mid, High

Power Doppler Imaging

Dual live

HR Flow™: High Resolution Flow provides better image quality and sensitivity

Support Directional Power Doppler

Image quality: 3 levels

Dynamic range: 10-70, 5 /step

Gain: 0-100, 2 /step

ROI size/position: adjustable

Scale: 30 steps

Wall filter: 8 steps

PRF: 0.1-14.3kHz

Packet size: 0-3, step

Flow state: L, M H

Smooth: 0-6, 1/ step

B/C align

Priority: 0-100%, 1%/step

Color map: 4 types

Directional color map: 4 types

Persistence: 6 step s

Line density: L, M, H, UH

Steer: 7 levels (linear)

Invert: on/off

iTouch™ on/off

B Display: on/off

Smart Track: on/off

Glazing flow: Low, Mid, High

PW/CW-Mode

Display formats:	V2:3, V3:2, H2:3, V3:1, FULL (V: vertical, H: h horizontal)
Image quality:	3 levels
Sample volume size:	0.5-20 mm (PW only)
Sample gate depth:	adjustable
PW Scale:	30 steps, 2.00 cm/s to 9.00 cm/s
CW Scale:	30 steps, 1.9 cm/s to 3750 m/s
Baseline:	-4-4, 1/ step
PW Steer:	7 levels (linear transducer)
Volume:	0-100%, 2 %/step
PW PRF:	0.7 k Hz to 24 kHz
CW PRF:	0.3kHz to 100 kHz
Gain:	0-100, 2 /step
Dynamic range:	24-72, 2 /step
Sweep speed:	6 step s; 145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s
Wall filter:	10 steps
Invert:	on/off
Auto invert:	on/off
Angle correction:	89 degrees, 1 /step
Quick angle:	-60, 0, 60 degrees
Gray map:	10 types
Tint map:	Off 8 types
Time/frequency resolution:	0-4, 1/ step
Auto calc:	on/off
Auto calc cycle:	1-5
Trace area:	above, below, all
Duplex/Triplex:	On/off
HPRF:	On/off
Auto calc Parameter:	On/off
Trace Sensitivity:	0-5, step
Trace Smooth:	off, 0-4, step
Time Mark	

Tissue Velocity/Energy Imaging (included in TDI option)

Available on phased array transducer

Dual live: side by side displays B and B+TVI

Max frame rate: 1877 f/s

PRF: 0.4 k Hz to 15.4 kHz

Gain: 0-100, 2/step

Dynamic range: 10-70, 5 /step (TEI only)

ROI size/position: adjustable

Scale: 30 steps, 5 cm/s to 149.9 cm/s (TVI)

Baseline: -8-8, 1/step (TVI)

Wall filter: 8 steps

Packet size: 0-3, 1/ step

Tissue state: L, M, H

Smooth: 0-6, 1/ step

B/C align

Priority: 0-100%, 1%/step

TVI maps: 10 types

TEI maps: 8 types

Invert: on/off (TVI only)

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Performance Specifications

Persistence:	0-6, 1/ step				
Velocity tag (TVI only):	On/off				
Line density:	L, M, H, UH				
Image quality:	2 levels				
Tissue Velocity Doppler (included in TDI option)					
Available on phased array transducer					
Display formats:	V2:3, V3:2, H2:3, V3:1, FULL (V: vertical, H: horizontal)				
Sample volume size:	0.5-20 mm				
Sample gate depth:	adjustable				
Scale:	30 steps 4. 2 cm /s 720 cm/s				
Baseline:	-4-4 , 1/ step				
Volume:	0-100%, 2%/step				
PRF:	0.7 kHz to 24 kHz				
Gain:	0-100, 2 /step				
Dynamic range:	24-72, 2 /step				
Sweep speed:	6 steps				
Wall filter:	10 steps				
Invert:	on/off				
Auto invert					
Angle correction:	-89-89 degrees, 1 /step				
Quick angle:	-60, 0, 60 degrees				
Gray map:	10 types				
Tint map:	Off 8 types				
Time/frequency resolution:	0-4, 1/ step				
Image quality:	2 levels				
Duplex/Triplex:	On/off				
iTouch :	On/off				
Tissue Velocity Motion (included in TDI option)					
Available on phased array transducer only					
Display formats:	V2:3, V3:2, H2:3, V3:1, FULL (V: vertical, H: horizontal)				
Image quality:	2 levels				
Gain:	0-100, 2/step				
M sweep speeds:	6 levels 145mm/s, 75mm/s, 50mm/s, 35mm/s, 25mm/s, 20mm/s				
Color maps:	TVV1 TVV10, 10 types				
Baseline:	-8-8, 1/step				
Priority:	0-100%, 1%/step				
Tissue state:	L, M, H				
Smooth:	0 6, 1/step				
Packet size:	0-3, 1/step				
Persistence:	0-6, 1/step				
Velocity tag:	on/off				
Wall Filter:	8 steps				
Invert:	on/off				
Smart 3D™ (option)					
Smart 3D					
Acquisition Method:	Wobble, Linear				
3D iClear:	Off, 1 7				
VR Refine:	Off, 1 7, 1/step				
VR:	on/off, select volume rendered				
		image			
MPR:	on/off, select A, B and C plane				
Display formats:	MPR Display formats: MPR only/asymmetric				
VOI:	on/off				
Reset:	all, orientation, reset curve				
Active quadrant:	A, B, C, VR				
VR orientation:	0, 90, 180, 270				
Inversion:	on/off				
Accept VOI:	on/off				
Flip VOI:	on/off				
Accept VOI:	on/off				
Flip:	flip VR				
Sync:	synchronize VR with selected plane				
Render modes:	Surface, Min, Max, iLive, X-ray				
iLive:	Classic, Int Point, Ext Point, Parallel, Torch, 3-Light, User 1-2				
View direction:	down/up, left/right, front/back				
Threshold:	0-100%, 1/step (only on VR)				
Opacity:	0-100%, 5%/step (only on VR)				
Smooth:	20 steps				
Brightness:	0-100%, 2%/step				
Contrast:	0-100%, 2%/step				
Tint:	off; 8 types				
Depth VR:	Off/Black/Cyan/Blue/Rose				
Free View:	-45°~45°				
VR fusion:	Set the main render mode and sub render mode and the mix ratio of the two render modes				
Accept VOI:	on/off				
Flip:	flip VR				
Sync:	synchronize VR with selected plane				
Render modes:	Surface, Min, Max, iLive, X-ray				
iLive:	Classic, Int Point, Ext Point, Parallel, Torch, 3-Light, User 1-2				
View direction:	down/up, left/right, front/back				
Threshold:	0-100%, 1/step (only on VR)				
Opacity:	0-100%, 5%/step (only on VR)				
Smooth:	20 steps				
Brightness:	0-100%, 2%/step				
Contrast:	0-100%, 2%/step				
Tint:	off; 8 types				
Depth VR:	Off/Black/Cyan/Blue/Rose				
Free View:	-45°~45°				
VR fusion:	Set the main render mode and sub render mode and the mix ratio of the two render modes				
Color 3D					
Supports Color and Power mode					
Available in both Smart 3D and Static 3D					
STIC					
Color STIC available					
Acquiring Time: 7.5s, 10s, 12.5s, 15s, 17.5s					
Support iPage ⁺ viewing					
CMPR available					
SCV ⁺ available					
3 Slice and Niche available					
iPage⁺					
Slice display mode: Slice only, Slice with SCV					
Slice cut direction: Horizontal and Vertical					
Slice layout: 2x2, 3x3, 4x4, 5x5					
Active quadrant: A plane, B plane, or C plane					
Reset: All, Reset Curve, Reset Ori					
Spacing: 0.5-10mm, 0.1mm/step					
Thickness: 0.0-10mm, 0.1mm/step					
Slice Number: odd numbers ranging from 3 to max. 25, depends on slice layout					
Slice Position: a unique number for current selected slice					
Brightness: 0%-100%, 2%/step					
Contrast: 0%-100%, 2%/step					
SCV⁺					
Display mode: SCV only, SCV ⁺ CMPR					
Reset: All					
Thickness: 0-30mm, 1mm/step					
Active quadrant: A, B, C					
Brightness: 0%-100%, 2%/step					
Contrast: 0%-100%, 2%/step					
Render modes: Surface, X-ray					
Rotate RL: Only in CMPR					
Reverse: ranges from 0-360°, 5°/step (Only in CMPR)					
SCV Enhance: 7 levels (Only in CMPR)					
3D iClear: off, 1-7					
Opacity: 0%-100%, 5%/step (Only in CMPR)					
Trace Options: Line, Trace, Spline (Only in					
		Auto rotation			
		Rotation control:	play, single loop, loop		
		Direction:	left/right, up/down		
		Image Editing			
		Area selection:	inside polygon, outside polygon, inside contour, outside rect		
		Undo:	undo, undo all		
		Eraser:	Soft Eraser, Hard Eraser		
		Edit diameter:	8-60, 1/step		
4D					
Available on all volume transducers					
Static 3D and 4D					
4D frame rate: max. 80vps					
3D iClear: Off, 1-7					
VR Refine: Off, 1-7, 1/step					
VR: on/off, select volume rendered image					
MPR: on/off, select A, B and C plane					
Display formats: MPR only/asymmetric					
VOI: on/off					
Flip VOI: on/off					
Reset VOI: on/off					
Reset: all, orientation, reset curve					
Active quadrant: A, B, C, VR					
VR orientation: 0, 90, 180, 270					
Inversion: on/off					

Performance Specifications

	CMPR)
Reset Curve, undo last	
MPR Measurement types:	Distance, Trace, Area, Angle, Volume, Ratio of Distance, Ratio of Area
SCV fusion:	Set the main render mode and sub render mode and the mix ratio of the two render modes (when thickness is on)
Support labeled measurements	
CMPR™	
Trace Options:	Line, Trace, Spline
Active Quadrant:	A, B, C
Reset Curve	
Rotate RL:	ranges from 0-360°, 5°/step
3D Layout	
3 Slice	
Niche	
Reset:	All, Reset Curve, Reset Ori
Active Quadrant:	A, B, C, 3 Slice/Niche
Niche Views:	Inner, Outer
iLive	
Shading	
Move Light	
Light Position:	6
Soft View	
Grad View	
Hyaline:	on/off, 0~100%, 5%/step
Light 1/2/3:	off, parallel, point, torch
VL Saturation:	0~100%, 1%/step
VL Hue:	0~100%, 1%/step
VL Distance:	0.0-5.0
VL Angle:	0~100%, 1%/step
Reset Classic/ IntPoint/ ExtPoint/ Paralle/ Torch/ 3-Light/ User 1/ User 2	
Copy to:	Copy the current lighting mode to customized lighting mode
Smart FLC (Smart Follicle)	
Automatic follicle calculation	
Edit ROI and detect follicle contour automatically	
Undo:	Undo, Redo, Undo All
Active Quadrant:	A, B, C, Follicle
Calc:	Off/On
Edit:	Off/On
Edit:	Divide, Merge, Add/Del
Smart Planes CNS	
Detect automatically the standard sections of TCP, TTP, MSP and TVP	
Rotation around X/Y/Z axes	
Reference line:	hide/show, rotation
Reset:	All planes/ current plane
Thickness:	0-30mm, 1mm/step
3D iClear:	off, 0~7, 1/step
Brightness:	0%-100%, 2%/step
Contrast:	0%-100%, 2%/step
Auto comment supported:	A (anterior), P (posterior), L (Left), R (Right), U (Up),

	D (down), CSP, T, CH, CV, CM, LV on TCP, TTP, MSP and TVP
Auto measurement supported:	TCD and Cist Maga (CM) on section TCP; BPD, OFD and HC on section TTP; LVW on section TVP
Support editing measurement results	
Hide/show measurement results	
MSP adjust:	A/B/C
Support comment and bodymark on sectional plane	
Smart Face	
Recognize fetal face automatically and then display the face in a recommended viewing angle	
Face Contact:	-15~15
Smart-V™	
Auto 3D volume calculation	
Manual ROI on A, B, C plane separately	
Auto detect contour of target	
Volume result shows in result window	
MPR Measurement	
Measurement types:	Distance, Trace, Area, Angle, Volume, Ratio of Distance, Ratio of Area
Support labeled measurements	
Smart Track	
Available on linear transducers in Upper Ext Artery, Upper Ext Vein, Lower Ext Artery, Lower Ext Vein, carotid, IMT EM Vascular exam	
Enable the function under Color/Power mode, the angle and the position of the ROI are adjusted automatically	
Enable the function under Color/Power+PW mode, the angle and the position of the PW sampling line, SV size, SV angle and SV position are adjusted automatically	
iScape™ View	
Acquisition method:	Band Power
Supports speed indicator	
Actual size:	on/off
Fit size:	on/off
Ruler:	on/off
Tint map:	off; 8 types
Rotation:	0-360 degrees, 5/step
Natural Touch Elastography (option)	
Available on L12-3E, L14-6NE, L14-6WE, V11-3E, V11-3BE, L9-3E, DE11-3E, V11-3HE, L14-5WE, DE11-3WE, and L20-5E probes	
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

Display format:	V 1:1, H1:1, Full
Elasto Map:	6 types
Smooth:	0-5
Invert:	on/off
Opacity:	0-5
ROI size/position:	adjustable
Focus Position:	10 or 13 levels (depends on probes)
Depth:	6 or 9 levels (depends on probes)
Strain Scale:	on/off

Smart Pelvic

This feature is available only under GYN or pelvic floor exam mode in 2D or 3D/4D imaging mode

Set Rest and Valsalva frames

Measure automatically

Stress Echo

Available on phased transducers (excluding TEE transducers)

14 factory protocols

User-defined protocols

ECG triggered acquisition, display, selection, comparison, evaluation and archiving of multiple cardiac loops during various stages of a stress echo examination

Customized stages: up to 6 views per stage, and up to 12 stages per study

View: standard views (PSLA, PSAX, A4C, A2C), and customized views

Image acquisition

R-wave trigger

Acquire mode: Manual ROI or full screen

Ability to acquire frames or clips in B-mode, M-mode, Color, PW and TDI

Image selection

Attach the images with view annotation label (PSLA, PSAX, A4C, A2C, and customized views)

Review

Automatically adjust to the number of images user defined

Wall Motion Scoring

ASE 16 (with score 4-7), or ASE 17 (with score 4-7)

Graphical display of scoring (Normal, Hyperkinetic, Severely Hyperkinetic, Akinetic, Dyskinetic)

LV volume measurement

Measurement of LV Volume in all phases of cardiac cycle

Report

Reporting for both Wall Motion Scoring and LV volume measurement

iBeam™

DC-70 X-Insight Diagnostic Ultrasound System

Performance Specifications

Spatial compound imaging	
Off, 1-5; or off, 1-3 (depends on probes)	
iClear™	
Speckle suppression imaging	
Available for B, 3D, 4D	
iTouch™	
Auto image optimization	
B-mode:	gain, TGC
Color:	gain, color box position and steer (single trigger)
Power:	gain
PW:	gain, baseline, scale, PRF, WF, SV, Angle
Contrast imaging:	gain
Echo Boost™	
Only for cardiac exams using phased probes	
improve the homogeneity of cardiac images through the whole field of view	
Better contrast resolution of myocardium tissue layers	
Better noise control in cardiac chambers and muscles	
B steer	
Only for linear transducers	
ExFov	
Extended field of view	
Available for all convex, linear and volume transducers	
Zoom	
Zoom:	Spot zoom (write zoom) up to 10x, Pan zoom (read zoom) 0.8-10
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, Save as, Restore	
AutoEF	
Output EDV/ESV/EF/SV/CO by Simpson method	
Activated with or without ECG	
Adjustment for the border of endocardium by single	

point or multi-points	
Adjust Frame	
Layout:	Dual/ Single
Diastole FR	
Systole FR	
Volume curve:	on/off
TDI QA (option)	
Dedicated quantification tool for TDI velocity, strain, strain rate analysis	
Ellipse ROI, Standard ROI	
Up to 8 of ROI	
Delete all	
Delete current	
ROI tracking:	tracking ROI along with cardiac movement
Smooth:	1-7, 1/step
X scale:	1-5, 1/step
Std. Height:	1.5-50 mm
Std. Width:	1.5-50 mm
Std. Angle:	-89-90 degrees
Export:	export current data as CSV format file
iNeedle (option)	
Needle visualization enhancement	
Available on C5-1E, SC6-1E, and all linear transducers	
Needle direction:	left or right
B/iNeedle:	On/Off
Premium angle display	
iScanHelper	
Tutorial function as a guidance to show basic scanning skill with graphic of probe position, schematic of anatomy and example clinical image	
Support ABD, SMP, URO, OB, NERVE, GYN applications	
iCompare	
Allow to compare real-time ultrasound imaging to the past	
DICOM	
CT/MRI/Mammography/X-Ray/Ultrasound images without external workstation	
Helpful to easily evaluate and follow up the progression of disease, treatment effect monitoring	
UWN Contrast Imaging (option)	
UWN (Ultra Wideband Non-linear) contrast imaging technology, which provides exceptional contrast agent detecting capability, not only extracts second	

harmonic, but also non-linear fundamental signals	
Available on C7-3E, L12-3E, L9-3E, L14-5WE, C5-1E, SC6-1E, V11-3E, V11-3BE, V11-3HE, P4-2E, SP5-1E, DE11-3E, DE11-3WE transducers	
Supports Low MI contrast imaging	
Micro Flow Enhancement (MFE) available	
Timer 1:	on/off
Timer 2:	on/off
Pro capture:	captures prospective image less than 480s preset table
Retro capture:	captures retrospective image less than 120s preset table
Dual live:	side by side displays tissue image and contrast image
MFE:	on/off
MFE period:	0.1s, 0.2s, 0.4s, 0.6s, 0.8s, 1.0s, MAX
Destruct:	instantly destroy contrast bubbles
Destruct voltage:	-30~0 dB, 0.3/step
Destruct time:	500-2000 ms
iClear:	off; 7 steps
Mix:	mix contrast image with tissue image
Mix map:	7 types, available when Mix modes active
Persistence:	8 steps
Gray map:	8 types
Tint map:	off; 8 types
Supports U/D Flip and L/R Flip	
Rotation:	0/90/180/270
CEUS Position:	on/off
Line density:	L/M/H/UH
FOV:	on/off
FOV size/position:	continuously adjustable
ExFov:	off, 1-2, 1/step
Gain:	0-100, 1/step
iTouch:	on/off, -8~8, 2/step
Image quality:	3 levels

* The DC-70 is designed for compatibility with commercially available ultrasound contrast agents. Because the availability of these agents is subject to government regulation and approval, product features intended for use with these agents may not be commercially marketed nor made available before the contrast agent is cleared for use. Contrast related product features are enabled only on systems for delivery to an authorized country or region of use. Mindray medical systems makes no claims concerning the safety or effectiveness of contrast agents.

UWN Contrast Imaging Quantitative Analysis (option)

DC-70 X-Insight Diagnostic Ultrasound System

Performance Specifications

Support Time-Intensity Curve analysis	
Table display:	display data in table
Freehand ROI:	manually deploy ROI on the cine
Up to 8 ROIs	
Delete all	
Delete current	
Fit curve	
Raw curve	
Motion tracking:	Reduce the effect of tissue movement
X scale:	1-5, 1/step
Export:	export current data as CSV format file
LVO (option)	
Only available on SP5-1E and P4-2E	
Dedicated left ventricle contrast imaging tool	
Tissue Tracking with Quantitative Analysis (option)	
Available on P4-2E / P7-3E / P10-4E/SP5-1E in adult cardiac/cardiac-difficult (car-penetration)/pediatric cardiac/neonatal cardiac.	
Tissue tracking quantitative analysis	
Mandatory ECG connection before TT QA cine acquisition	
Six views for analysis:	ALAX, A4C, A2C, PSAXB, PSAXM, PSAXAP
Reload:	reload cine again for new study
Edit:	modify trace points
Start tracking	
Accept & compute:	start tracking myocardium movement when user accept trace result
Display effect:	0/1; at 1, tracking in velocity vector arrow; at 0, tracking in dots
Trace method:	3 point or manual for ALAX, A4C, A2C; manual for PSAXB, PSAXM, PSAXAP
Bulls eye:	trace result in bulls eye model
LGC:	available
Valves open and close time index:	MVC, MVC, AVC, AVO, MVO
Data export:	export data in CSV file
Cycle:	ECG triggered cardiac cycle recognition for analysis; adjustable
Auto play:	stop, X1/10, X1/5, X1/4,X1/3, X1/2, X1, X2, X3
Thickness:	1-30mm, 1mm/step; adjust trace thickness

Track point:	20-40, 1/step
Parameter:	Volume, Speed, Displacement, L Strain, L Strain R, T Strain, T Strain R, Area, R Strain, R Strain R, C Strain, C Strain R, Global Strain, Global Strain-rate
Smooth:	0-4, 1/step

Cine Review and Raw Data Processing

Cine Review	
Available in all modes	
Frame by frame manual cine loop review or auto playback with variable speed	
Maximum cine memory up to 40,433 frames or 343.7s (M)	
Maximum 4D cine memory up to 144,556 frames	
Retrospective and prospective storage are available and length is pre settable	
Max. time 480s, Max. frames: 656,489	
Frame compare:	displays one cine in dual format and allows frame by frame compare side by side
Image/cine compare:	max 4 for 2D /Color/Power/ TDI files compare max 2 for M/PW/TVVD/TVM files compare compare cines which are saved in same patient file
Jump to first and jump to last:	one key stroke goes to first or last frame in the cine

Raw data processing

B-mode:	
TGC	
Gain	
Dyn Ra.	
Gray Map	
Tint Map	
iClear	
L/R Flip	
U/D Flip	
Rotation	
iTouch	
LGC	
Dual Live	
Auto Merge	
H Scale	
Echo Boost	
Zoom	
Ref Lines	
M mode:	
Gain	
Speed	
Dyn Ra.	
Gray Map	
Tint Map	

Edge Enhance
Time Mark
Color:
Gain
Baseline
Smooth
Color Map
Priority
Dual Live
Invert
Velocity tag
B display
Glazing flow
PW:
Gain
Baseline
Volume
Angle
Speed
Dyn Ra.
Gray Map
Tint Map
Invert
WF
Quick Angle
T/F Res
Auto Calculate
Auto Calc Cycle
Auto Calc Parameter
Trace Sensitivity
Trace Smooth
Trace Area
Time Mark

Measurement /Analysis and Report*

Generic Measurements

2D mode
Distance
Ellipse
Trace
Spline
Cross
Angle
Double Dist
Trace Len
Trace Len (Spline)
Parallel
IMT
B Profile
B Hist (Ellipse)
B Hist (Trace)
B Hist (Spline)
B Hist (Rectangle)
Depth
Color Vel
Strain Hist
Color Vel Profile

DC-70 X-Insight Diagnostic Ultrasound System

Performance Specifications

Volume
Volume (Ellipse)
Volume (E+Dist.)
Ratio (D)

Volume
Volume
Volume (Ellipse)
Volume (E+Dist.)

Ratio (A)

Area 1
Area 2

Strain Ratio

A
B

Volume Flow

Vas Area
TAMEAN
TAMAX

M mode

HR
HR (R-R)
Slope

Distance

Time

Velocity

Doppler mode

PS/ED

Vel

HR

HR (R-R)

Time

Acceleration

D Trace

Ratio (Vel)

Ratio (VTI)

Volume Flow

Vas Area
TAMEAN
TAMAX

Automatic Doppler Spectrum Analysis

Heart cycle pre set table (1, 2, 3, 4, 5)

Automatic real time and retrospective tracing

User configurable display of items

Support PI, RI, TAMAX, TAMEAN, Volume Flow calculations

Appropriate factory setting
Appropriate factory setting according to applications according to applications

Report

Specific report template by application
User-defined report template
Editable value in report
Images selectable
Able to Export as PDF/RTF file

IMT

Intima-Media Thickness Measurement
Automatic detection of IMT when ROI is set
Support CCA, ICA, ECA, Bulb IMT
Near wall and far wall detection
Angle selectable
IMT trend analysis

IVF

The uterus and follicle growth curve can be displayed in the IVF report.
Data of IVF history exams can be checked in the IVF report

Smart OB™

Auto measurement for OB, a special tool for easy OB scan, and greatly reduce time and increase productivity
Support BPD, HC, OFD, FL, AC, HUM, NT
Better get GA before start auto AC
Measurement result can be modified by user

Smart NT™

NT auto measurement
Auto detection of NT inside ROI

* Not all measurements are listed in this part; For more detailed information please refer to User Manual

Exam Storage and Management

Exam Storage

1TB hard drive. Up to 855 GB internal hard drive for patient data storage
Capable to store up to approximate 4,189,404 single frames
Direct digital storage of single frame and cine 2D, color and Doppler

Exam Management

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

iWorks™ (option)

Auto workflow protocol
Templates are user configurable
Functions: pause, stop, replace, repeat, skip, insert single step, return and continue, steps in thumbnail, iNSert™ another template
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

Security

Patient data encryption
Transmission Encryption: encrypt the data using VPN network
Exam backup encryption: encrypt the exams after a backup to the USB device
Drive encryption: encrypt the patient data stored in the hard drive
Hiding patient information during patient data backup or sending
Anti-Virus software: McAfee and Windows Defender. They can effectively prevent the ultrasound system from being attacked by virus, spyware, or other malware

Connectivity

Ethernet Network Connection

Cable connection
Wireless connection: built in wireless adaptor

DICOM 3.0

DICOM basic (option)
Verify (SCU, SCP)
Print
Store
Storage Commitment
Media Exchange
DICOM Worklist (option, HL7 supported)
DICOM Query/Retrieve (option)
DICOM Modality Performed Procedure Step MPPS (option)
DICOM OB/GYN structure report (option)
DICOM Cardiac structure report (option)
DICOM Vascular structure report (option)
DICOM Breast Report (option)

DC-70 X-Insight Diagnostic Ultrasound System

Performance Specifications

iStorage (included in UltraAssist)

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 Needs to be installed on mobile terminal

Transfer images or clips Transfer images or clips from system from system to mobile terminal to mobile terminal through WiFi through WiFi

Support both Support both iOS OS and Android powered system

For IOS powered smart device:

DICOM is mandatory, iOS 5.0 or above; For Android powered smart device: DICOM device: DICOM not necessary, Android 4.0 or above

MedTouch

Connect Ultrasound machine to smart devices, such as tablet PC or mobile phone. Remote control of Ultrasound machine, review of patient information, and tutorial software iScanHelper study on smart devices.

Support iOS and Android powered smart devices Android 4.0 or above

DICOM not necessary

Network Storage

Network storage is used to save image files and measurement reports to the remote PC server

Transducers

Curved array

SC6-1E

Application: Gynecology, Obstetrics, Abdomen, Musculo-skeletal, Vascular, Urology, Nerve

Bandwidth: 1.3-5.7MHz

Number of Elements: 192

FOV (max): 60°

Extended FOV: 100°

Convex Radius: 60mm

Depth: 4-40cm

Physical Footprint: 65.1mm × 16.4mm

Footprint: 64.9mm × 16.2 mm

B-mode

Frequencies: 1.3-3.2, 1.9-4.6, 2.3-5.7MHz

Harmonic

Frequencies: 3.5, 4.0, 5.0, 6.0MHz

Color Frequencies: 2.0, 2.5, 2.5 MHz; HR Flow: 3.3MHz

Doppler

Frequencies: 2.0, 2.5, 2.5MHz

Biopsy Guide: NGB-022, multi angle, reusable

C5-1E

Application: Obstetrics, gynecology, abdomen, vascular, nerve

Bandwidth: 1.3-5.7MHz

Number of Elements: 128

FOV (max): 60°

Extended FOV: 100°

Convex Radius: 60mm

Depth: 4-40cm

Physical Footprint: 76.5 × 28mm

Footprint: 64.9mm × 16.2mm

B-mode

Frequencies: 1.3~3.2, 1.9~4.6, 2.3~5.7MHz

Harmonic

Frequencies: 3.8, 4.0, 5.0, 6.0MHz

Color Frequencies: 2.0, 2.5, 3.0 MHz;HR Flow: 3.5MHz

Doppler

Frequencies: 2.0, 2.5, 3.0MHz

Biopsy Guide: NGB-022, multi angle, reusable

C7-3E

Application: Obstetrics, gynecology, Adult Abdomen, Pediatric Abdomen, Vascular

Bandwidth: 2.6-7.2MHz

Number of Elements: 192

FOV (max): 70°

Extended FOV: 110°

Convex Radius: 50mm

Depth: 3-32cm

Physical Footprint: 71mm × 21.5 mm

Footprint: 60.5mm × 12.2 mm

B-mode

Frequencies: 2.6-4.8, 3.6-6.4, 3.6-7.2MHz

Harmonic

Frequencies: 5.5, 6.0, 6.5MHz

Color Frequencies: 3.0, 3.3, 3.5MHz; HR Flow 3.8MHz

Doppler

Frequencies: 3.0, 3.3, 3.6MHz

Biopsy Guide: NGB-019, multi angle, reusable

C11-3E

Application: Pediatric abdomen, transcranial

Bandwidth: 2.6-12.8MHz

Number of Elements: 128

FOV (max): 101°

Extended FOV: 141°

Convex Radius: 15mm

Depth: 1.5-28cm

Physical Footprint: 32.8 mm ×25mm

Footprint: 27.4 mm ×8.4mm

B-mode

Frequencies: 2.6-6.5, 3.2-7.9, 4.7-12.8MHz

Harmonic

Frequencies: 7.0, 8.0, 9.0MHz

Color Frequencies: 4.4, 5.0, 5.0MHz

Doppler

Frequencies: 4.4, 5.0, 5.7 MHz

Biopsy Guide: NGB-018, multi angle, reusable

Endocavity

V11-3HE

Application: Gynecology, obstetrics, Urology

Bandwidth: 2.6-12.8MHz

Number of Elements: 192

FOV (max): 170°

Extended FOV: 210°

Convex Radius: 11mm

Depth: 1.5-28cm

Physical Footprint: 24.9mm × 21.8mm

Footprint: 24mm × 9mm

B-mode

Frequencies: 2.6-6.5, 3.2-7.9, 4.7-12.8MHz

Harmonic

Frequencies: 7.0, 8.0, 9.0MHz

Color Frequencies: 4.4, 5.0, 5.3MHz; HR Flow: 5.5MHz

Doppler

Frequencies: 4.4, 5.0, 5.7MHz

Biopsy Guide: NGB-025, single angle, reusable, CIVCO 610-543, CIVCO 610-1274

V11-3WE

Application: Gynecology, obstetrics, Urology

Bandwidth: 2.6-12.8MHz

Number of Elements: 160

FOV (max): 173°

Extended FOV: 213°

Convex Radius: 11mm

Depth: 1.5-28cm

Physical Footprint: 24.9mm × 21.8mm

Footprint: 24mm × 9mm

B-mode

Frequencies: 2.6-6.5, 3.2-7.9, 4.7-12.8MHz

Harmonic

Frequencies: 7.0, 8.0, 9.0MHz

Color Frequencies: 4.4, 5.0, 5.0MHz

Doppler

Frequencies: 4.4, 5.0, 5.7 MHz

Biopsy Guide: NGB-004, single angle, reusable, CIVCO 610-543, CIVCO 610-1274

6LB7E

Application: Urology

Bandwidth: 2.6-12.8MHz

Number of Elements: 128

Field of View (max): 65.7mm (6LB7E-L)/152° (6LB7E-C)

DC-70 X-Insight Diagnostic Ultrasound System

Performance Specifications

Steered Angle: 6°,9° (B); 0-30° (C, PW)(6LB7E-L)
 Extended FOV: 192° (6LB7E-C)
 Convex Radius: 10mm (6LB7E-C)
 Depth: 1.5-28cm
 Physical Footprint: 21.9mm × 21.9mm (6LB7E-C)
 Footprint: 72mm × 11mm (6LB7E-L)/21.92mm × 11.2mm (6LB7E-C)

B-mode
 Frequencies: 2.6-6.5, 3.2-7.9, 4.7-12.8MHz
 Harmonic
 Frequencies: 7.0, 8.0, 9.0MHz
 Color Frequencies: 4.0, 5.0, 5.7MHz
 Doppler
 Frequencies: 4.0, 5.0, 5.7MHz
 Biopsy Guide: NGB-009, single angle, reusable

CB10-4E

Application: Urology
 Bandwidth: 2.6-12.8MHz
 Number of Elements: 128
 FOV (max): 165°
 Extended FOV: 205°
 Convex Radius: 9mm
 Depth: 1.5-28cm
 Footprint: 20.1mm × 9mm

B-mode
 Frequencies: 2.6~6.5, 3.2~7.9, 4.7~12.8MHz
 Harmonic
 Frequencies: 7.0, 8.0, 9.0MHz
 Color Frequencies: 4.4, 5.0, 5.0MHz
 Doppler
 Frequencies: 4.4, 5.0, 5.7MHz
 Biopsy Guide: NGB-004, single angle, reusable

Volume curved array

SD8-1E

Application: Gynecology, Obstetrics, Abdomen
 Bandwidth: 2.6-8.2MHz
 Number of Elements: 192
 FOV (max): 66°
 Extended FOV: 106°
 Convex Radius: 45mm
 Depth: 4-40cm
 Physical Footprint: 75.7mm × 52.6mm
 Footprint: 54.5mm × 14.9mm

B-mode
 Frequencies: 2.6-4.8, 3.0-5.5, 3.8-8.2MHz
 Harmonic
 Frequencies: 4.5, 5.0, 5.5MHz, 6.0MHz
 Color Frequencies: 2.5, 3.0, 3.0MHz; HR Flow: 3.5MHz

Doppler
 Frequencies: 2.5, 3.0, 4.0MHz
 Biopsy Guide: NGB-039, multi angle, reusable

D7-2E

Application: Gynecology, obstetrics,

abdomen
 Bandwidth: 2.6-8.2MHz
 Number of Elements: 128
 FOV (max): 70°
 Extended FOV: 110°
 Convex Radius: 40mm
 Depth: 4-40cm
 Physical Footprint: 74mm × 49mm
 Footprint: 49mm × 14.15mm

B-mode
 Frequencies: 2.6-4.8, 3.6-6.4, 3.8-8.2 MHz
 Harmonic
 Frequencies: 4.5, 6.0, 6.5 MHz
 Color Frequencies: 2.5, 3.0, 3.0 MHz
 Doppler
 Frequencies: 2.5, 3.0, 4.0 MHz
 Biopsy Guide: None

DE11-3E

Application: Gynecology, Obstetrics
 Bandwidth: 2.6-12.8MHz
 Number of Elements: 128
 FOV (max): 150°
 Extended FOV: 190°
 Convex Radius: 11mm
 Depth: 1.5-28cm
 Physical Footprint: 24.9mm × 21.8mm
 Footprint: 24mm × 9mm

B-mode
 Frequencies: 2.6~6.5, 3.2~7.9, 4.7~12.8MHz
 Harmonic
 Frequencies: 7.0, 8.0, 9.0MHz
 Color Frequencies: 4.4, 5.0, 5.0MHz; HR Flow: 5.0MHz

Doppler
 Frequencies: 4.4, 5.0, 5.7 MHz
 Biopsy Guide: NGB-027, single angle, reusable

Linear

L12-3E

Application: Musculoskeletal, nerve, small parts, vascular, pediatric hip, pediatric abdomen, adult abdomen
 Bandwidth: 4.4-13.5MHz
 Number of Elements: 192
 Field of View (max): 38.1mm
 Steered Angle: 6°,12°(B); 0-30° (C, PW)
 Depth: 1.5-28cm
 Physical Footprint: 45.7mm × 10.9mm
 Footprint: 44.2mm × 8.5mm

B-mode
 Frequencies: 4.4-9.6, 5.4-11.5, 6.6-13.5MHz
 Harmonic
 Frequencies: 8.0, 9.0, 10.0MHz
 Color Frequencies: 4.4, 5.0, 5.0MHz; HR Flow: 5.7 MHz

Doppler
 Frequencies: 4.4, 5.0, 5.7 MHz
 Biopsy Guide: NGB-007, multi angle, reusable, CIVCO 658-001

L9-3E

Application: Abdomen, Pediatric, Small Parts, Musculo-skeletal, Vascular, Nerve
 Bandwidth: 1.8-9.8MHz
 Number of Elements: 192
 Field of View (max): 43.7mm
 Steered Angle: 6°,12°(B); 0-30° (C, PW)
 Depth: 1.5-28cm
 Physical Footprint: 62mm × 22mm
 Footprint: 48mm × 11mm

B-mode
 Frequencies: 1.8-7.0, 2.4-8.2, 3.6-9.8MHz
 Harmonic
 Frequencies: 5.0, 6.0, 7.0MHz
 Color Frequencies: 3.0, 3.6, 5.0MHz; HR Flow: 4.0MHz

Doppler
 Frequencies: 3.0, 3.6, 4.4MHz
 Biopsy Guide: NGB-034, multi angle, reusable

L14-5WE

Application: Small parts, Musculoskeletal, Vascular, Nerve, Pediatric, Abdomen
 Bandwidth: 4.0-12.6MHz
 Number of Elements: 192
 Field of View (max): 54.4mm
 Steered Angle: 6°,12°(B); 0-15° (C); 0-30° (PW)
 Depth: 1.5-28cm
 Physical Footprint: 66mm × 23mm
 Footprint: 58.5mm × 6mm

B-mode
 Frequencies: 4.0-9.6, 4.8-10.0, 6.0-12.6MHz
 Harmonic
 Frequencies: 8.0, 10.0, 12.0MHz
 Color Frequencies: 6.2, 7.3, 8.0MHz; HR Flow: 8.0 MHz

Doppler
 Frequencies: 5.0, 6.2, 7.3MHz
 Biopsy Guide: NGB-035, multi angle, reusable

L14-6WE

Application: Small parts, Vascular, Musculoskeletal, Nerve, Pediatric hip
 Bandwidth: 4.8-16.0MHz
 Number of Elements: 256
 Field of View (max): 51mm
 Steered Angle: 6°,12°(B); 0-30° (C, PW)
 Depth: 1.5-28cm
 Physical Footprint: 59.1mm × 12mm
 Footprint: 56.1mm × 10mm

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Performance Specifications

B-mode
 Frequencies: 4.8-10.6, 5.4-11.6, 6.6-16.0MHz
 Harmonic
 Frequencies: 8.0, 10.0, 12.0 MHz
 Color Frequencies: 5.0, 5.7, 5.7MHz; HR Flow: 7.2 MHz

Doppler
 Frequencies: 5.0, 5.7, 6.6 MHz
 Biopsy Guide: NGB-007, multi angle, reusable

L14-6NE
 Application: Small parts, Vascular, Musculoskeletal, Nerve, Pediatric hip, neonatal cephalic

Bandwidth: 5.4-16.0MHz
Number of Elements: 192
Field of View (max): 38.1mm
Steered Angle: 6°,12°(B); 0-30° (C, PW)
Depth: 1.5-28cm
Physical Footprint: 45.7mm × 10.9mm
Footprint: 44.2mm × 8.5mm

B-mode
 Frequencies: 5.4-11.6, 6.0-12.6, 6.6-16.0MHz
 Harmonic
 Frequencies: 8.0, 10.0, 12.0MHz
 Color Frequencies: 5.0, 5.7, 5.7MHz; HR Flow: 6.2 MHz

Doppler
 Frequencies: 5.0, 5.7, 6.6 MHz
 Biopsy Guide: NGB-007, multi-angle, reusable, CIVCO658-001

Phased array

SP5-1E
 Application: Cardiac, transcranial, abdomen
Bandwidth: 1.0-5.0MHz
Number of Elements: 80
Field of View (max): 90°
Depth: 2-38cm
Physical Footprint: 38.2mm x 30.5mm
Footprint: 23.4mm x 15.2mm

B-mode
 Frequencies: 1.0~3.5, 2.0~4.0, 2.5~5.0MHz
 Harmonic
 Frequencies: 3.0, 3.4, 3.8MHz
 ColorFrequencies: 2.0, 2.3, 2.5MHz; TDI 3.0, 3.8MHz

Doppler
 Frequencies: 2.0, 2.3, 2.5MHz; TDI 2.5, 4.0MHz

CW Frequency: 2.0MHz
Biopsy Guide: NGB-011, multi-angle, reusable

P4-2E
 Application: Adult cardiac, Pediatric Cardiac, adult transcranial, Adult Abdomen

Bandwidth: 1.3-4.6MHz
Number of

Elements: 64
Field of View (max): 90°
Depth: 3-32cm
Physical Footprint: 25.2mm × 20.6mm
Footprint: 23.4mm × 15.2mm

B-mode
 Frequencies: 1.3-3.2, 1.6-3.8, 1.9-4.6MHz
 Harmonic
 Frequencies: 3.4, 3.8, 4.2MHz
 ColorFrequencies: 2.0, 2.3, 2.3MHz; TDI 3.0, 3.8MHz

Doppler
 Frequencies: 2.0, 2.3, 2.6MHz; TDI 2.5, 4.0MHz

CW Frequency: 2.0MHz
Biopsy Guide: NGB-011, multi-angle, reusable

P7-3E

Application: Pediatric abdomen, pediatric cardiac, neonatal cephalic, neonatal abdomen, neonatal cardiac, nerve, orthopedics

Bandwidth: 2.3-7.2MHz
Number of Elements: 96
Field of View (max): 90°
Depth: 2-31cm
Physical Footprint: 34mm × 24.5mm
Footprint: 20.4mm × 12.8mm

B-mode
 Frequencies: 2.3-5.4, 2.8-6.4, 3.3-7.2MHz
 Harmonic
 Frequencies: 6.0, 6.5, 7.0MHz
 Color Frequencies: 2.7, 3.3, 4.0MHz; TDI 5.0, 6.2MHz

Doppler
 Frequencies: 2.7, 3.3, 4.0MHz; TDI 5.0, 6.2MHz

CW Frequency: 2.5MHz
Biopsy Guide: none

P10-4E

Application: Abdomen, cardiac, pediatric, nerve

Bandwidth: 3.0-11.4MHz

Number of Elements: 128
Field of View (max): 90
Depth: 2-16.5cm
Physical Footprint: 15.1mm × 10.2mm
Footprint: 15mm × 9.1mm

B-mode
 Frequencies: 3.0~6.8, 3.8~10.2, 4.6~11.4MHz
 Harmonic
 Frequencies: 7.5, 8.0, 9.0MHz
 Color Frequencies: 4.0, 5.0, 5.7MHz; TDI 5.7, 6.2MHz

Doppler

Frequencies: 4.4, 5.0, 5.7MHz; TDI 5.7, 6.2MHz
CW Frequency: 5.0MHz
Biopsy Guide: none

P7-3TE

Application: Cardiac
Bandwidth: 2.3-7.2MHz
Number of Elements: 64
Field of View (max): 90°
Depth: 2-31cm
Physical Footprint: 14mm × 12mm

B-mode
 Frequencies: 2.3~5.4, 2.8~6.4, 3.3~7.2MHz
 Harmonic
 Frequencies: 6.0, 6.5, 7.0MHz
 Color Frequencies: 2.7, 3.3, 4.0MHz; TDI: 5.0, 6.2MHz

Doppler
 Frequencies: 2.7, 3.3, 4.0MHz; TDI: 2.7, 5.0MHz

CW Frequency: 2.5MHz
Biopsy Guide: none

Pencil

CW5s
Application: vascular
Number of Elements: 2
CW Frequency: 5.0MHz

CW2s

Application: cardiac, transcranial
Number of Elements: 2
CW Frequency: 2.0MHz

Peripheral Devices and Accessories (Option)

Black/white video printer

MITSUBISHI P95DW-N, SONY UP-X898MD, MITSUBISHI P93W Z

Color digital printer

SONY UP-D25MD

Graph/text printer

HP Officejet 7000 wide format , HP Officejet Pro 8100

Gel warmer

Easily be disassembled off system for cleaning
Temperature: 37°C, 40°C, off
Light indicator: Green - working normally; Flickering orange - working abnormally

Footswitch

DC-70 X-Insight Diagnostic Ultrasound System

Performance Specifications

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

ECG

6-pin, AHA/IEC, for 3-lead wires
ECG wave display: on/off
Gain: 0-30, 1/step
Sweep speed: 1-6, 1/step

Barcode reader

Model: SYMBOL LS2208,
SYMBOL DS4308

System Inputs and Outputs

Video/Audio input

Microphone: 1 port

Video/Audio output

S-Video out: 1 port, PAL/NTSC
HDMI: 1 Port
VGA out: 1 port
Audio out: 2 ports

Physio input

Support ECG signal
ECG: 1 port
PCG: 1 port (reserved)

Other input/output

USB: 5 USB 3.0 ports, 1 more dedicated USB port for printer
Ethernet: 1 port

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 IEC60601-2-37
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.

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