

# 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

### 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



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

#### Language Support

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

# 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)

### 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:	
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
MagiClean:	Off, Low, Mid, High and Max
Hyaline:	0%-100%
Thickness:	0-30mm
Depth VR:	Off/Black/Cyan/Blue/Rose
VR fusion:	Set the main render mode and sub render mode and the mix ratio of the two render modes

#### 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

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, User1-2
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

### 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)	
<b>iClear™</b>	
Speckle suppression imaging	
Available for B, 3D, 4D	
<b>iTouch™</b>	
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	
<b>Echo Boost™</b>	
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>B steer</b>	
Only for linear transducers	
<b>ExFov</b>	
Extended field of view	
Available for all convex, linear and volume transducers	
<b>Zoom</b>	
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	
<b>QSave</b>	
Quick save image parameter setting after image adjustment done	
Support Save, Save as, Restore	
<b>AutoEF</b>	
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	
<b>TDI QA (option)</b>	
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	
<b>iNeedle (option)</b>	
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	
<b>iScanHelper</b>	
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	
<b>iCompare</b>	
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	
<b>UWN Contrast Imaging (option)</b>	
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
<b>LVO (option)</b>	
Only available on SP5-1E and P4-2E	
Dedicated left ventricle contrast imaging tool	
<b>Tissue Tracking with Quantitative Analysis (option)</b>	
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

<b>Cine Review</b>	
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 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>B-mode:</b>	
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	
<b>M mode:</b>	
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)

Area1  
Area2

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 terminal

Transfer images or clips from system to mobile terminal through WiFi

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

**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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