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SPECIFICATION SUMMARY

PHYSICAL SPECIFICATION
- Height: 1,354 ~ 1,620mm (with monitor)
- Width: 520 mm
- Depth: 730 mm
- Weight: 54 Kg (without accessories)
- Weight: Approx. 57 Kg (with Safe Working Load)

IMAGING MODES
- 2D-Mode
- M-Mode
- Color M-Mode
- Anatomical Mode
- Color Doppler Mode
- Pulsed Wave (PW) Spectral Doppler Mode
- Continuous Wave (CW) Doppler Mode
- Tissue Doppler Imaging (TDI) Mode
- Tissue Doppler Wave (TDW) Mode
- Power Doppler (PD) Mode
- ElastoScan Mode
- 3D/4D/XI STIC imaging Mode
- Freehand 3D Mode
- Dual Mode
- Quad Mode
- Combined Mode
- Simultaneous Mode
- Zoom Mode
- S-Flow Mode

FOCUSING
- Transmit focusing, maximum of eight points (four points simultaneously selectable)
- Digital dynamic receive focusing (continuous)

PROBE CONNECTIONS
- 3 or 4 Probe Connectors (Selectable)
- CW Probe Connector (Optional)

MONITOR
- Main Monitor
  - Resolution: 1,920 x 1,080
  - 21.5 Inch LED Monitor
- Touch Screen Monitor
  - Resolution: 1,280 x 800
  - 10.1 Inch LED Monitor

ECG
- USB Type (Type CF)

IMAGE STORAGE
- Maximum 45,000 Frames for Cine memory
- Maximum 14,000 Lines for Loop memory
- Image filing system

REAR PANEL INPUT/OUTPUT CONNECTIONS
- Audio Output Port (Right/Left)
- VGA monitor
- S-Video Output
- LAN
- USB Port
- HDMI Output
- MIC

AUXILIARY
- DVD Multi-Drive
- Digital B/W Video Printer
- Digital Color Video Printer
- USB Printer
- DVD Recorder
- Foot switch (IPX8)
- USB Flash Memory Media
- USB HDD
- USB ECG
- Monitor

**USER INTERFACE**

- English, German, French, Spanish, Italian, Portuguese, Chinese

**ELECTRICAL PARAMETERS**

- 100-240 VAC, 620 VA, 50/60 Hz

**PRESSURE LIMITS**

- Operating: 700 hPa to 1,060 hPa
- Storage: 700 hPa to 1,060 hPa

**HUMIDITY LIMITS**

- Operating: 30 % to 75 %
- Storage & Shipping: 20 % to 90 %

**TEMPERATURE LIMITS**

- Operating: 10 °C to 35 °C
- Storage & Shipping: -25 °C to 60 °C
GENERAL SPECIFICATION

PHYSICAL SPECIFICATION

- Height: 1,354 ~ 1,620mm (with monitor)
- Width: 520 mm
- Depth: 730 mm
- Weight: 54 Kg (without accessories)
- Weight: Approx. 57 Kg (with Safe Working Load)

CONSOLE DESIGN

- 3 or 4 Active Probe Ports (Optional)
- 4 Swivel Wheel Cart Based Type
- Articulated Monitor Arm
- Built-in Printer Storages
- Ergonomic Operation Panel
- Touch Screen
- Alpha-Numeric Keyboard(Optional)
- Trackball
- Probe Holder / Gel Holder
- Front Handle
- Integrated PC Module
- Integrated HDD
- Windows Embedded Standard 7
- ODD (Optional)
- Gel Warmer (Optional)
- ECG (Optional)

MAIN MONITOR

- 21.5 Inches High Resolution LED Monitor
- Resolution: 1,920 x 1,080 (16:9)
- Number of Color: 16.7 M
- Brightness Adjustment
- Interactive Dynamic Software Menu

- Articulated Monitor Arm
  - Swivel: +/- 160°
  - Tilt: +25° / -70°
  - Lift: 180 mm

CONTROL PANEL

- Touch Screen
  - 10.1 Inches High Resolution LED Monitor
  - Resolution: 1,280 X 800
  - Capacitive Touch Type
  - Virtual Alpha Numeric KBD
- Alpha-Numeric KBD
- 4 User Keys
- Tri-Status backlit
- 5 Probe Holders
- Height Adjustment: 100 mm

PC

- Main Processor: AMD Bald Eagle RX-425BB
- Main Memory: 8 GB
- Built-in HDD: 0.5 TB

ELECTRICAL SPECIFICATIONS

- Frequency: 50/60 Hz
- Voltage: 100 ~ 240 VAC
- Power Consumption: Max.620 VA with Peripherals
- Heat Dissipation: 2,729.7 [BTU/h]
- System Noise: under 40dBA[MAX.]
- Built-in Equipotential Circuit
SYSTEM SPECIFICATION

APPLICATIONS

- Abdomen
- Cardiac
- Gynecology
- MSK
- Obstetrics
- Pediatric
- Small Parts
- Urology
- Vascular

PRESETS

- Abdomen
- Adult Echo
- Adnexa
- Aorta
- Aortic Arch
- Arterial
- Bladder
- Bowel
- Breast
- Carotid
- Deep
- Fetal Heart
- General
- Neo Head
- NT
- Ped Abd
- Ped Echo
- Ped Hip
- Prostate
- Renal
- Spine
- Superficial
- Thyroid
- Testicle
- TCD
- Uterus
- Venous
- 1st Trimester
- 2nd Trimester
- 3rd Trimester

OPERATION MODE

- B-Mode (2D)
- Color Doppler Mode (C)
- Pulse Wave Doppler (PWD)
- Continuous Wave Doppler (CWD): Steered / Static
- Power Doppler Mode (PD)
- S-Flow™ Mode
- M-Mode (M)
- Anatomical M Mode
- Single/Dual/Quad Mode
- Volume Mode
  - 3D / 4D / 3D XI / XI STIC™
- TDI/TDW
- ElastoScan Mode

DISPLAY MODE

- Dual Mode
  - B+B, B+B/C, B+B/PD, B+B/S-Flow
ElastoScan + ElastoScan

- Dual Live Mode
  - B+B, B+B/C, B+B/PD, B+B/S-Flow
  - B+ElastoScan

- Real-Time Triplex Mode (Simultaneous Mode)
  - B+C+PW, B+PD+PW, B+S-Flow+PW, B+TDI+TDW

- Duplex, Triplex Mode
  - B+C, B+M, B+3D, B+4D, B+PW, B+S-Flow, B+CW, B+C+PW, B+C+CW, B+C+M, B+ElastoScan, B+TDI, B+TDW

- Quad Mode
  - Combinations of B/B, B/C, B/PD and B/S-Flow, ElastoScan

- Zoom Mode
  - Write Zoom / Read Zoom / Pen zoom / Panning

- Needle Mate+
- Panoramic
- Trapezoid

**TRANSDUCER TYPES**

- Linear Array: LN5-12, LS-12/50
- Curved Array: C2-8, C2-5
- Endo-Cavity: EVN4-9, ER4-9
- Micro-Convex Array: CF4-9
- Phased Array: PN2-4
- Pencil: DP2B
- Volume Probe (3D mechanical probe)
  - Curved Volume: VN4-8

**SYSTEM STANDARD FEATURES**

- Hybrid Full Digital Beam-forming
- Frequency Range: 2 ~ 16MHz

- Displayed Imaging Depth (Probe dependent)
  - Minimum Depth of Field: 2cm
  - Maximum Depth of Field: 38cm

- Number of Focal Points: 1 ~ 4

- Transmission Focal Zone Position selection
  - 1 ~ 8 Focal Points Selectable

- Continuous Dynamic Receive Focus / Aperture

- Multi-frequency / Wideband Technology

- Frequency Compounding (FSI)

- ClearVision

- 256 Shades of Gray

- System Internal Dynamic Range: 256

- Maximum Frame Rate
  - Over 2,000 fps (Hz)

- Maximum Color Frame Rate
  - Over 400 fps (Hz)

- Image Reverse: Right/Left, Up/Down

- Image Rotation: 90°, 180°, 270°

- Pre Processing
- Post Processing
- Digital Calipers / Measurement
- Cine Memory
  - Capacity: 500 MB
  - Cine loop: Max. 14,000 Lines
  - Image storage: Max. 45,000 Frames / 60 Sec

- QuickScan™

- EZ compare

- Report Package
- Body Marker

- System Boot up: Max. 180 Sec
- Probe Change: 2-3 Sec
User Programmable Preset: Over 30 Presets

User Programmable Key: 4 Keys

Touch Screen Menu Editable Function

SonoView™

Data Backup / Restore

Image Exporting and Importing

PW Velocity Range: 0.1cm/s ~ 8.8m/s

CW Velocity Range: 1cm/s ~ 19.3m/s

**SYSTEM OPTIONS**

- 4D
- 3D XI™
- Auto IMT+
- Cardiac Measurement
- CW Function
- DICOM 3.0
- ElastoScan
- EZ Exam+
- Hello Mom
- Needle Mate+
- Panoramic
- 5D NT
- 5D Follicle
- RealisticVue
- Xi STIC
- MultiVision
- Strain+
- SEE Stream (RU region only)
- RUS restricted mode (RU region only)
- DVD-RW
- ECG (AHA / IEC)
- Foot Switch

**DISPLAY**

- Application
- Preset Mode
- Date: 3 types (Selectable)
  - YYYY-MM-DD
  - MM-DD-YYYY
  - DD-MM-YYYY
- Time: 2 types (Selectable)
  - 24 hours
  - 12 hours
- Patient (General Information)
  - Patient ID
  - Patient Name (First, Middle & Last)
  - Gender: Female, Male, Other
  - Birth / Age
  - Accession Number
  - Diag. Physician
  - Ref. Physician
  - Operator
  - Indication
  - Study Information
  - E-mail
- Gestational Age: LMP/EDD/GA
- Institute

---

**Gel Warmer**

Printer Tray (Large / Small)

3P connector PSA

3P Connector PSA (with Pencil Probe Port)

4P Connector PSA

4P Connector PSA (with Pencil Probe Port)
- Operator
- Probe Name
- Probe Orientation
- Depth / Width
- Focal Zone
- Focal Number
- TGC Line
- FPS (Hz)
- Frequency
- Gain
- Dynamic Range
- Map
- Frame Average
- Power
- ClearVision Index
- MultiVision Index
- Gray Bar
- Acoustic Index: Tls, Tlb, Tic
- Mechanical Index: MI
- Caliper & Measurement Result
- Indicator
- Pointer
- Body Marker
- ROI Position / ROI Size
- Wall filter
- Zoom / Panning
- Biopsy Guide Line (Probe dependent)

LANGUAGE
- Display Language
  - English, French, German, Italian, Spanish, Portuguese, Chinese, Russian
- Input Language

- English, French, German, Italian, Russian, Nordic
  (Norwegian, Finnish, Swedish, Danish)

OPERATING ENVIRONMENT
- Temperature: 10℃ ~ 35℃
- Humidity: Up to 90%
- Pressure: 700 ~ 1060 hPa

PROCESSING
- System Processing Channel: 286,720
- Raw Data Image Analysis
- Cine
  - Function: save / review / play / stop / pause / export /
  Trim Start / Trim End
- Clipboard: displays thumbnail images of the acquired data for the current exam
- Enlarged Preview of the image
- Image Archive / Connectivity
- Image format: AVI, MPEG, JPEG, BMP, TIFF, DICOM
- Image Viewer (Sonoview™)
- Measurements, Calculations and Annotations on CINE Playback
- Number of Image Storage : max. 350,000 images (RAW format)
- Image Preview
- Cine Image Preview
- Recalling Image from the Clipboard
- Scrolling Timeline Memory
- Start and End Frame Selections for Loop Playback
PRE-PROCESSING

- B/M-Mode
  - Dynamic Range
  - Frame Average
  - Frequency
  - Gain
  - Harmonic
  - Pulse Inversion Harmonic (Probe dependent)
  - Line Density
  - Power
  - Reject
  - Scan Area
  - TGC
  - Write Zoom
  - MultiVision (Probe Dependent)
  - Beam Steering (Probe Dependent)
  - Trapezoid (Probe Dependent)
  - Free Angle Plane

- PW Mode
  - Filter
  - Frequency
  - Gain
  - Power
  - PRF (Scale)
  - Sample Volume Angle
  - Sample Volume Position

- 3D / 4D Mode
  - Scan Quality
  - Volume Angle

- ElastoScan Mode
  - Frame Average
  - Frequency
  - Line Density

POST-PROCESSING

- B-Mode
  - Chroma Map
  - Gray Map
  - Image Size
  - Read Zoom
  - ClearVision
  - Sweep Speed

- M-Mode
  - Chroma Map
  - M Mode Map
  - Read Zoom
- Sweep Speed

- PW / CW Mode
  - Base line
  - Chroma Map
  - Doppler Map
  - Invert
  - Read Zoom
  - Sound
  - Trace Direction
  - Trace Method

- Color Doppler / Power Doppler Mode
  - Balance
  - Baseline
  - Chroma Map
  - Color Map
  - Hide Color
  - Invert
  - Read Zoom

- 3D Mode
  - 3D
  - 3D XI™
  - Accept ROI
  - Chroma Map
  - MagiCut™
  - VOCAL™
  - XI VOCAL™
  - 5D NT
  - XI STIC™

- ElastoScan Mode
  - E-Gain
  - Contrast
  - Color Map

- Alpha Blending
- Blending Level
- Enhancement

**CONNECTIVITY**

**DICOM**

- DICOM 3.0
- DICOM Media
- DICOM Performed Procedure Step (PPS)
- DICOM Print
- DICOM Storage
- DICOM Storage Commitment (SC)
- DICOM Structured Reporting (SR)
- DICOM Verification
- DICOM Worklist
- Gray Scale Converting
- Multi Frame
- Single Frame
- 3D Volume Frame
- Transfer Mode
  - Send after acquisition
  - Send on end exam
  - Send manually
- VOI LUT Setup

**IHE**

- Scheduled Workflow (SWF)
- Patient Information Reconciliation (PIR)
- Portable Data for Imaging (PDI)
- Evidence Documents (ED)
PERIPHERAL INTERFACE

- Audio in L/R
- Audio out L/R
- D-SUB output
- S-Video output
- HDMI output
- USB 2.0 (6 ports)
- Ethernet 10/100/1000BASE-T
- Foot Switch: USB 2.0 (IPX 8)
- DVD Recorder: Sony DVO-1000MD
  - S-video, NTSC/PAL
  - Recording only
- Printers
  - Digital BW Video Printer: Sony UP-D897, Sony UP-D898MD, Sony UP-X898MD, Mitsubishi P95DW, Mitsubishi P95D
  - Digital Color Video Printer: Sony UP-D25MD, Mitsubishi CP30DW
  - USB Line Printer: Samsung CLP-620NDK, ML-2950

SCANNING PARAMETERS

2D MODE

- Angle Steering: 0°, +/-7°, +/-12°
- Chroma Map: off, 1 ~ 11
- Cine Play: On, Off
- Cine Speed: 6, 12, 25, 50, 100, 150, 200, 300
- Depth: 2cm ~ 38cm (Probe dependent)
- Dual Live
- Dynamic Range: 30 ~ 256

- Flip: L/R, U/D
- Focus Number: 1 ~ 4
- Frequency Compounding
- Frequency: 3 ~ 5 steps (Probe Dependent)
  - Pen2, Pen1, Gen, Res1, Res2
- Gain: 0 ~ 100
- Gray Map: 1 ~ 12
- Harmonic: On, Off
- Image Size: 70 ~ 100%
- Line Density: Low, Med, High
- Number of TGC Level: 8
- Frame Average: 0 ~ 9
- Power: 2 ~ 100
- Pulse Inversion Harmonic: On, Off (Probe dependent)
- QuickScan™
- Reject Level: 0 ~ 30
- MultiVision Index: Off, Low, Med, High
- ClearVision Index: Off, 1 ~ 5
- Trapezoid: On, Off (Linear Probes only)
- Scan Area: 40 ~ 100%
- Zoom
  - Read Zoom: 100 ~ 800%
  - Write Zoom
- Panning
- Free Angle Plane

M MODE

- Chroma Map: Off, 1 ~ 11
- Display format
  - M-mode only
  - Up/down, Side by side
  - Size: 50/50, 70/30, 30/70
- Dynamic Range: 30 ~ 256
- Gain: 0 ~ 100
- M Mode Map: 1 ~ 12
- Power: 2 ~ 100
- QuickScan™: Off, On, Update
- Sweep Speed
- Color M
- Anatomical M

**COLOR MODE**

- Balance: 0 ~ 16
- Baseline: -8 ~ 8
- Color Map: 1 ~ 12
- Line Density: Low, Med, High
- Dual Live: On, off
- Sensitivity: 0 ~ 5
- Frame Average: 0 ~ 5
- Frequency: 2 steps
- Gain: 0 ~ 100
- Hide Color: On, Off
- Invert: On, off
- Frame Average: 0 ~ 10
- Power: 2 ~ 100
- PRF: 0.1kHz ~ 19.5kHz (Probe dependent)
- Sensitivity: 0 ~ 5
- Smoothing: 0 ~ 5
- Steer Angle: 0°, ±15°, ±20°, ±30°
- Velocity
- Filter: 1 ~ 4
- Vel + Variance Map

**PWD MODE**

- Auto Calc: Off, Live, Frozen
- Base Line: -8 ~ 8
- Chroma Map: Off, 1 ~ 11
- Display Format: Up/down, Side by side, Doppler Only
- Display Size: 70/30, 50/50, 30/70
- Doppler Map: 1 ~ 12
- Dynamic Range: 30 ~ 256
- Frequency: 2 Steps
- Gain: 0 ~ 100
- Invert: On, Off
- Power: 2 ~ 100
- PRF: 1.0 ~ 22.5 kHz (Probe dependent)
- QuickScan™: On, update
- Simultaneous: On, Off
- Sound: 0 ~ 100
- Angle Correction: -80° ~ 80°
- SV Position control
- SV Size: 0.5 ~ 25mm
- Quick Angle: 0°, 60°, -60°
- Sweep Speed: 15 ~ 117 mm/s
- Trace
  - Method: Off, Mean, Max
  - Trace Direction: Both, Above, Below
- Update
- Filter: 1 ~ 4

**CWD MODE**

- Auto Calc.: Off, Live, Frozen
- Base line: -8 ~ 8
- Chroma Map: Off, 1 ~ 11
- Display Format: Up/down, Side by side, Doppler Only
- Display Size: 70/30, 50/50, 30/70
- Doppler Map: 1 ~ 12
- Dynamic Range: 30 ~ 256
- Gain: 0 ~ 100
- Invert: On, Off
- Power: 2 ~ 100
- Sample Rate: 1.8kHz ~ 57kHz (probe dependent)
- QuickScan™: On, update
- Sound: 0 ~ 100
- Angle Correction: -80° ~ 80°
- SV Position Control
- Quick Angle: 0°, 60°, -60°
- Sweep Speed: 18 ~ 142 mm/s
- Trace
  - Method: Off, Mean, Max
  - Direction: Both, Above, Below
- Filter: 1 ~ 4

PD MODE

- Balance: 0 ~ 16 step
- Color Map: 1 ~ 12
- Line Density: Low, Med, High
- Dual Live: On, off
- Filter: 1 ~ 4
- Frame Average: 0 ~ 5 step
- Frequency: 2 steps (probe dependent)
- Gain: 0 ~ 100
- Hide Color
- Invert: On, Off (S-Flow™ only)
- Power: 2 ~ 100
- PRF: 0.1 ~ 19.5 kHz (Probe dependent)
- Sensitivity: 0 ~ 5
- Smoothing: 0 ~ 5
- Steer Angle: 0°, +/-15°, +/-20°, +/-30°
- Filter: 1 ~ 4

3D/4D MODE

- 3D
- 4D (Live 3D)
- Color 3D
- 3D XI™
  - MSV
  - Oblique View™
  - XI VOCAL™
- 5D NT
- MagiCut™
- Orientation Help
- Curved ROI
- 3D Cine
  - Rotation Angle: 30°/45°/60°/90°/180°/360°
  - Step Angle: 1°/3°/5°/15°
- 4D Cine
  - Cine Type: Volume, Image
  - Layout
  - Play Mode: Loop, Yoyo
  - Speed: Very Slow, Slow, Normal, Fast, Fastest
  - Trim Start, Trim End
  - Volume Index
- MPR
  - 2D
  - Render
  - Accept ROI
  - Init
  - Layout
  - Ref. Image: A/B/C/OH
- 3D Rotation: -90°/90°/180°
- Select
- Position
- Bias
- Mix
- Vol. Index
- Th. Low
- Transparency

* MSV
  - Layout
  - Ref. Image: A / B / C / MSV OH
  - Page
  - Init
  - Orientation Dot
  - Position
  - Bias
  - Selected Slice
  - Vol. Index
  - Slice Thick.
  - Ruler

* Oblique View™
  - Layout
  - Auto Increment
  - OVIX™
  - Init
  - Clear Line
  - Cut Type: Line / Contour / Parallel / Plumb
  - Image Rotation: -90° / 90° / 180°

* VOCAL™
  - Solid / General / Prostate / Cystic / Sphere / Manual
  - Init
  - Ref. Image: A / B / C

  - Step Angle: 12° / 18° / 30°

  - Start

  - Pole 1 / Pole2

  * XI VOCAL™
    - Solid / Cystic / General / Manual
    - Init
    - Ref. Image: A / B / C / Ref. Contour
    - Slice Direction
    - Start
    - Number of Slice

  * Chroma Map
    - 2D Chroma Map: Map 1 ~ Map 10
    - 3D Chroma Map: Map 1 ~ Map 10

  * Post Processing
    - Negative / Auto Contrast / Threshold / Sharpen / 3D CI
    - Preset (Probe dependent)
      - Default / Surface / Skeleton / Extremity / Brain / User1~3
    - Load / Save / Rename / Reset

  * ROI Size / ROI Position
  - Rendering Preset: Default / Surface / Skeleton / Extremity / Brain / User1~3

  * Scan Quality: Low, Med1, Med2, High
  - Volume Angle: 10 ~ 90 (Probe dependent)

* XI STIC™
  - Scan Time (7 ~ 15 sec)
  - Trimester (1Trim, 2Trim, 3Trim)
  - Speed (Very Slow, Slow, Normal, Fast, Fastest)
  - Vol. Index

* 5D NT

* 5D Follicle

* RealisticVue
- Light direction (9 directions)
- Move light
- Set color (Hue, Saturation, Lightness)

ELASTOSCAN MODE

- Line Density: Low, Med, High
- Invert: On, off
- Dual Live: On, off
- Frequency
- Gain: 0 ~ 100
- Contrast: 0 ~ 100
- Frame Average: 0 ~ 100
- Color Map: 1 ~ 5
- Alpha Blending: On, off
- Blending Level: 0 ~ 100
- Enhancement: 0 ~ 100

TRANSDUCERS

LINEAR

LA3-16AD

- Band Width: 3 ~ 16 MHz
- Radius of curvature: Flat
- Field of view: 38.4 mm
- Number of elements: 192
- Biopsy Guide: Available
- Application: Abdomen, MSK, Small Parts, Vascular, OB, GYN, Pediatric
- Safety Class: BF

L5-12

- Band Width: 5 ~ 12 MHz
- Radius of curvature: Flat
- Field of view: 38.1 mm
- Number of elements: 128
- Biopsy Guide: Available
- Application: Abdomen, MSK, Small Parts, Vascular, OB, GYN, Pediatric
- Safety Class: BF

L5-12/50

- Band Width: 5 ~ 12 MHz
- Radius of curvature: Flat
- Field of view: 52 mm
- Number of elements: 128
- Biopsy Guide: Available
- Application: Abdomen, MSK, Small Parts, Vascular, OB, GYN, Pediatric
- Safety Class: BF

CONVEX

CA2-8AD

- Band Width: 2 ~ 8 MHz
- Radius of curvature: 60.365 mm
- Field of view: 58°
- Number of elements: 192
- Biopsy Guide: Available
- Application: Abdomen, OB, GYN
- Safety Class: BF

C2-8

- Band Width: 2 ~ 8 MHz
- Radius of curvature: 51.07 mm
- Field of view: 68.176°
- Number of elements: 128
- Biopsy Guide: Available
- Application: Abdomen, OB, GYN
- Safety Class: BF

C2-5
- Band Width: 2 ~ 5 MHz
- Radius of curvature: 39.64 mm
- Field of view: 75°
- Number of elements: 128
- Biopsy Guide: Available
- Application: Abdomen, OB, GYN
- Safety Class: BF

VOLUME

VN4-8
- Band Width: 4 ~ 8 MHz
- Radius of curvature: 38.10 mm
- Field of view: 77.24°
- Number of elements: 128
- Biopsy Guide: Available
- Application: Abdomen, OB, GYN
- Safety Class: BF

V5-9
- Band Width: 5 ~ 9 MHz
- Radius of curvature: 10.1 mm
- Field of view: 150.6°
- Number of elements: 192
- Biopsy Guide: Available
- Application: Abdomen, OB, GYN
- Safety Class: BF

PHASED ARRAY

PN2-4
- Band Width: 2 ~ 4 MHz
- Radius of curvature: Flat
- Field of view: 90°
- Number of elements: 64

ENDOCAVITY

EVN4-9
- Band Width: 4 ~ 9 MHz
- Radius of curvature: 10.073 mm
- Field of view: 148.092°
- Number of elements: 128
- Biopsy Guide: Available
- Application: OB, GYN, Urology
- Safety Class: BF

ER4-9
- Biopsy Guide: Not available
- Application: Abdomen, Cardiac, Vascular, Pediatric
- Safety Class: BF

**PENCIL**

**DP2B**
- Center frequency: 2.0MHz
- Application: Cardiac
- Safety Class: BF

### MEASUREMENT

- Caliper
- Abdomen
- Cardiac
- Vascular
- Gynecology
- Obstetrics
- Fetal Heart
- Urology
- MSK
- Small Parts
- Pediatric

### CALIPER

- 2D Distance
- M Distance
- 2D Trace
- 2D Trace length
- Doppler Manual Trace
- Doppler Limited Trace
- 2 Lines Angle
- 3 Points Angle

### Ellipse (Area / Circumference)

- Spline
- Open Spline
- Closed Spline
- %Stenosis (Diameter)
- %Stenosis (Area)
- 1 Distance Volume
- 2 Distance Volume
- 3 Distance Volume
- Ellipse Volume
- Ellipse + Distance Volume
- Disk Volume
- Slope
- Heart Rate (M, Doppler)
- Time (M, Doppler)
- Velocity
- Acceleration
- RI
- Volume Flow (Diameter)
- Volume Flow (Area)
- Auto Trace
- Manual Trace
- Limited Trace

### ABDOMEN

- Gallbladder
- Pancreas
- Bowel
- Kidney Vol. (Right / Light)
- Liver
- Spleen
- Aorta
RA (Right / Left)
Seg. A (Right / Left)
Arc. A (Right / Left)
Celiac A
Splenic A
Hepatic A (C / R / L)
Hepatic V (R / M / L)
Portal V (R / M / L)
SMA
IMA
IVC
IMV
SMV

CARDIAC

LV (2D)
LV Vol. (Simpson)
LV Vol. (A/L)
LV Vol. (Bullet)
LV Mass
RV (2D)
Aorta
LA
LA Vol. (Simpson)
RA
LVOT
RVOT
AV
MV
TV
PV
Shunt

IVC
Tei Index
Plum. Vein
Hepatic Vein
Tissue Doppler
Qp/Qs
LV (M)
RV (M)

CAROTID

Subclavian A (Right / Left)
CCA (Right / Left/Prox./Mid./Dist)
Bulp (Right / Left)
ICA (Right / Left/Prox./Mid./Dist)
ECA (Right / Left)
Vertebral A (Right / Left)

UE ARTERY

Subclavian A (Right / Left)
Axillary A (Right / Left)
Brachial A (Right / Left)
Radial A (Right / Left)
Ulnar A (Right / Left)
SPA (Right / Left)

UE VEIN

Internal Jugular V (Right / Left)
Innominate V (Right / Left)
Subclavian V (Right / Left)
Axillary V (Right / Left)
Brachial V (Right / Left)
- Cephalic V (Right / Left)
- Basilic V (Right / Left)
- Radial V (Right / Left)
- Ulnar (Right / Left)

**LE ARTERY**

- CIA (Left / Right)
- IIA (Left / Right)
- EIA (Left / Right)
- CFA (Left / Right)
- SFA (Left / Right)
- DFA (Left / Right)
- Popliteal A (Left / Right)
- ATA (Left / Right)
- PTA (Left / Right)
- Peroneal A (Left / Right)
- DPA (Left / Right)
- MPA (Left / Right)
- LPA (Left / Right)
- Metatarsal A (Left / Right)
- Digital A (Left / Right)

**LE VEIN**

- CIV (Left / Right)
- IIV (Left / Right)
- EIV (Left / Right)
- CFV (Left / Right)
- PFV (Left / Right)
- SFV (Left / Right)
- GSV (Left / Right)
- Popliteal V (Left / Right)
- LSV (Left / Right)

- ATV (Left / Right)
- PTV (Left / Right)
- Peroneal V (Left / Right)
- MPV (Left / Right)
- LPV (Left / Right)
- Metatarsal V (Left / Right)
- Digital V (Left / Right)

**GYNECOLOGY**

- Uterus
- Cervix
- Cyst (Right / Left)
- Ovary (Right / Left)
- Follicles (Right / Left / 1 ~ 12)
- Mass 1 ~ 3
- Ovarian A (Right / Left)
- Uterine A (Right / Left)
- Pericystic Flow
- Endometrial Flow
- Endo. Polyp
- Ovarian Mass (Right / Left)
- Uterine Tumor 1 ~ 3
- Cervical Tumor
- Ectopic Pregnancy

**OBSTETRICS**

- Fetal Biometry
- Fetal Cranium
- Fetal Long Bone
- Fetal others
- AFI
- CTAR
- Maternal Others
- Ratio
- Umbilical Artery
- Mid Cereb A
- Uterine A (Right / Left)
- Placenta A
- Fetal Carotid (Right / Left)
- Fetal Aorta
- Renal A (Right / Left)
- Duct Venosus
- Fetal HR
- PLI

**FETAL HEART**

- LV Vol. (Simpson)
- 2D Echo
- CTAR
- MPA
- Duct Artriosus
- IVC
- Duct Venosus
- Asc Aorta
- Dsc Aorta
- MV
- TV
- PLI
- TEI
- Fetal HR
- M Echo

**UROLOGY**

- WG Prostate

- T-Zone Vol
- Bladder Vol.
- Residual Vol
- Renal Vol. (Right / Left)

**BREAST**

- Mass 1 ~ 10 (Right / Left)
- Breast Flow (Right / Left)

**MSK**

- Shoulder (Right / Left)
- Wrist (Right / Left)
- Knee (Right / Left)
- Ankle (Right / Left)

**THYROID**

- Thyroid Vol. (Right / Left)
- Thyroid Flow (Right / Left)
- Mass 1 ~ 5 (Right / Left)

**TESTICLE**

- Testis Vol. (Right / Left)
- Epididymis (Right / Left)
- Testis Flow (Right / Left)
- Mass 1 ~ 5 (Right / Left)

**SUPERFICIAL**

- Superficial Vol (Right / Left)
- Superficial Flow (Right / Left)
- Mass 1 ~ 5 (Right / Left)
PEDIATRIC

- Hip Angle (Right / Left)

SAFETY / EMC

CLASSIFICATIONS

- SAFETY
  - Type of protection against electrical shock: Class I
  - Degree of protection against electrical shock (Patient connection): Type BF or CF Applied Part
- EMC
  - RF Emission CISPR 11: Class A
  - Degree of protection against harmful ingress of water: Ordinary equipment (All of applied parts (IPX7) except for ECG, and Foot switch (IPX8))
- RoHS Compliant
- WEEE Compliant

APPLIED STANDARDS

- Safety
  - IEC/EN 60601-1-1: Ed. 2.0:2000
  - IEC/EN 60601-1-6: Ed. 2.0:2006 + Ed. 3.0:2010
  - IEC/EN 62366: Ed. 1.0:2007
  - Biocompatibility
    - ISO/EN 10993-1: 2009
  - Labeling
    - EN 980: 2008
    - EN 1041: 2008
    - ISO 15223-1: 2012
  - NEMA/AIUM
    - NEMA/AIUM UD-2: 2004
    - NEMA/AIUM UD-3: 2004

ACOUSTIC OUTPUT MANAGEMENT

- User selectable, transducer and scanning mode dependent
- Dedicated Output Display on the system monitor display of output acoustic
- Power level, as well as thermal and mechanical indices:
  - PWR – Output Power level. Range: From 2 % of maximum output
  - Mechanical Index (MI): 0.01~1.90 Range
  - Thermal Index (TI): 0.01~6.00 Range
    - TIC – Thermal Index, Bone at Surface
    - TIB – Thermal Index, Bone at Focus
    - TIS – Thermal Index, Soft Tissue

ANTI-VIRUS SOLUTION

- Disable USB Autorun Feature
  - Executable applications in USB stick are never launched
  - Prevent autorun virus through USB stick
  - Dedicated Output Display on the system monitor display of output acoustic
- Block Network Port (Except DICOM communication port)
  - Ultrasound Machine allow only DICOM data through DICOM port
  - The network data of other network ports are rejected by Windows firewall
- Prohibit user from accessing windows application (such as Explorer)
  - Impossible to execute applications which is not allowed
  - Impossible to access internet web pages