

i50

Full Digital Ultrasonic Diagnostic System (LED Portable)



System Overview

Clinical Application

Abdomen
Obstetrics
Gynecology
Urology
Cardiac
Small Parts
Vascular

Imaging Modes

B, B+B, 4B, B/M, M

Main Technology

RDF (Real Time Dynamic Filtering)
DBF (Digital Beam Former)
RDA (Real-time Dynamic Aperture)
DRA (Dynamic Receiving Apodization)
DRF (Dynamic Receiving Focusing)
DFS (Dynamic Frequency Scan)
THI (Tissue Harmonic Imaging)
TSI (Tissue Specific Imaging)

Transducer Type

Convex Array Probe
Linear Array Probe
Micro-convex Probe
Trans-Vaginal Probe

Physical Specification

Dimension & weight

Equipment:
362mm×382mm×170mm; 6.5 kg
Package: (Wooden Carton)
465mm×355mm×405mm; 9.0 kg

Monitor

12 " high resolution medical grade LED display; 90 degree adjustable

Probe port & holder

Probe ports: 2 activated ports
Automatic recognition

Automatic detection

16-Segment Acoustic

Power output adjustment

Electronic probe-shift

Probe holders: 4 probe holders

Electrical power

Voltage: AC 100V-240V
Frequency: 50/60Hz
Input Power: 100VA
Fuse: F3.15AL250V (φ5×20 mm)

Operating Environment

Ambient temperature: 10°C-40°C
Relative humidity: 35%≤85%
Atmospheric pressure: 70kpa-106kpa

Transportation & Storage

Ambient temperature: -25°C-40°C
Relative humidity: 10%≤90%
Atmospheric pressure: 50kpa-106kpa

User Interface

Control Panel

Backlit silica-gel (PBT) material
Full-scaled QWERTY keyboard
Independent function keys
Smart trackball
Intelligent 8 segment TGC
Full screen button to enlarge scanning area and hide menu.
Guide button to support online study of machine.

Comments

Full screen text input
Arrows (four directions)
Common-use comments preset by user

Body Mark

83 types of body marks

Information on Monitor

Data & Time, week
 Info of Hospital/Doctor/Patient ID,name
 Probe Model/Frequency
 Focus No. /Dist./Gain
 Frame Rate/ Frequency/Correlation No
 Scanning Angle/Depth
 Acoustic Power/Dynamic Range/Mode
 Measurement values, Zoom
 Body mark, character note and etc.

Imaging Parameter (Adjustable)

Pseudo-color Display: 6
 Scanning Depth: 40mm to 295mm
 Scanning Angle: 30° to 150°
 Multiplying Factor: No limited
 Picture in Picture (PIP)
 M Speed: 4-63 levels
 Dynamic Range: 0-130dB
 Gray Scale: 256
 Focus: 4 segments focusing
 Focus No., Position, Distance Adjustable
 Image Reverse: up/down, left/right, B/W
 Cine Loop: 1024 frames
 Gain Control: Overall/8 segments TGC
 Edge Enhancement & Gamma Correction
 Frame Correlation: 0-5 level
 Frame Rate: 400fps
 Acoustic Power: 16 segments

Image Management

Manual & Automatic Cineloop
 Image Management System
 Support External USB Storage Devices
 Auto generate BMP format report, support

USB import and export reports
 Automatic Diagnostic Report Browsing,
 saving and printing.
 External Flash Stick, USB, Hard Disk

Imaging Pre-Processing

Pre-setting, Dynamic Range, Edge Enhancement, Frame
 Correlation, Line Correlation, Line Density, 8-TGC
 Adjustment, 4-Focus Adjustment, Tissue Harmonic Imaging
 (THI), Tissue Specific Imaging (TSI), Pseudo Color.

Imaging Post processing

Grey Transform, Gamma Correction, Left-right Reverse,
 Up-down reverse, Polarity reverse, 20 Levels Depth
 Adjustment, Picture in Picture (PIP)

Measurement & Calculation

B-Model:Distance,Circumference/ Perimeter, Area, Volume,
 Angle, Ratio
 M-Mode : Distance, Time, Velocity, EF Slope, Heart Rate
 Software Packages: Abdomen, Gynecology, Obstetrics,
 Urology, Small Part, Cardiology.

Probe Frequency

Convex Array Probe
 - 2.5/3.5/4.0/5.0MHz
 Micro-convex Array Probe
 - 2.0/3.5/4.0/5.0MHz
 Linear Array Probe
 - 5.0/6.5/7.5/10MHz
 Trans-vaginal Probe
 - 5.0/6.5/7.5/8.5MHz

Measurement & Report

General

Distance,Circumference

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Perimeter (ellipse & trace)

Area (ellipse & trace)

Surface (ellipse)

Volume (ellipse)

Angle

Ratio

Line Straitness

Surface Straitness

Automatic Report & Print

Abdomen

Gallbladder Measure:

GB L/GB H/GB W/CBD

Kidney Measure:

Lt Kidney L/Lt Kidney H/Lt Kidney W

Lt Kidney Cortex/Lt Suprarenal L/

Lt Suprarenal H/Lt Suprarenal W

Rt Kidney L/Rt Kidney H/Rt Kidney W

Rt Kidney Cortex/Rt Suprarenal L

Rt Suprarenal H/Rt Suprarenal W

Pancreas Measure:

Pancreas Duct/Pancreas Head/

Pancreas Body/Pancreas Tail

Automatic Report & Print

Obstetric

School: Tokyo/Hadlock/China/

JSUM2001/TODAI96T/HAD84

BPD, FL, CRL, AC, GS, TIBIA, ULNA

CER, NT, NF, PL AF, AFI, YS

GA & EDD Auto-calculation

Automatic Report & Print

Gynecology

Corpus Uteri Measure (L/H/W)

Cervical Measure (L/H/W)

Ovary Measure

Lt Ovary L/Lt Ovary H

Rt Ovary L/Rt Ovary H

Follicle Measure (F1-F8)

Cardiac

Distance/ Time/ HR/ Ratio

Velocity EF Slope

Automatic Report & Print

Small Parts

Thyroid Measure:

Lt Thyroid L/ Lt Thyroid H/ Lt Thyroid W

Lt Thyroid masses / Rt Thyroid L/

Rt Thyroid H/ Rt Thyroid W/

Rt Thyroid masses /

Hip Joint H

Lt Testical L/ Lt Testical H/ Lt Testical W

Rt Testical L/ Rt Testical H/ Rt Testical W

Lt Breast mass/ Rt Breast mass

Automatic Report & Print

Urology

Bladder Measure:

Pre-urinary L/H/W

Post-urinary L/H/W

Prostate Measure: L/H/W/ Mass

Seminal Measure:

Lt Seminal L/H/W

Rt Seminal L/H/W

Ureteral Diameter

Automatic Report & Print

System Inputs & Outputs

1 RS-232 port

2 USB2.0 port

1 PAL-D port

1 VGA port

1 Video port

Standard Package

Main unit

Convex array probe

Power cord

Fuse (2)

i50

Full Digital Ultrasonic Diagnostic System (LED Portable)

Built in Lithium Battery with 3.5 h back up

User's Manual

Service Manual

Coupling Gel (0.25L)

Optional Accessories

Linear Array Probe

Transvaginal Probe

Thermal video printer

USB disk/CF card/SD card

Foot Switch

Certificates

Quality Standards

ISO9001

ISO13485

CMD

Design Standards

EN ISO13485 and EN ISO10993-1

MDD93/42/EEC

EN60601-1-4

EN14971 and EN980

EN60601-1 and IEC60601-1

EN60601-1-2 and IEC60601-1-2

EN60601-2-37 and IEC60601-2-37

EN61157 and EN62304

CE Declaration

ZONCARE i50 has been assessed with respect to the conformity assessment procedure described in Article 11.3.a and Annex II excluding section 4 (Module H) of Council Directive 93/42/EEC on Medical Devices, as amended, and found to comply.

(Notified Body No.: 0434)