Venue 50 Ultrasound

Product Description

The Venue™ 50 is a high-performance tablet ultrasound system with an easy-to-use touchscreen and enhanced needle visibility. It boots up while you put your gloves on. The system's advanced tools and overall simplicity help provide clinical precision with ease. Venue 50 is designed for Anesthesia, Musculoskeletal, Point of Care, Interventional, and Vascular Access applications. The sleek and portable design easily fits into tight spaces. The single-surface screen can be easily cleaned and disinfected with medical grade cleaning solutions. Flexible data management and connectivity options, with optional DICOM™, help speed image storage and archiving for physicians at the Point of Care and patient bedside.

General Specification

Console Dimensions	
Height	282 mm (11.1 in)
Width	274 mm (10.8 in)
Depth	56 mm (2.2 in)
Weight	4.0 kg (8.8 lbs.) with probe

Console Electrical Power
Voltage: 100-240 V AC
Frequency: 50/60 Hz
Power: Max. 180 VA

Console Design
Tablet Style
Lithium-Ion Battery Pack
Single probe port
Integrated Speaker
Docking cart (optional)
Tabletop docking station (optional)

Docking Cart Dimensions
Height: 1152-1442 mm (45.4-56.8 in)
Width: 510 mm (20.1 in)
Depth: 480 mm (18.9 in)
Weight: 28.5 kg (62.8 lbs.)

Docking Station Dimensions
Height: 375 mm (14.7 in)
Width: 463 mm (18.2 in)
Depth: 243 mm (9.5 in)
Weight: 4.6 kg (10.1 lbs.)

User Interface

Touch Screen
Multi-touch user-interface with gesture recognition
Mode-specific controls
Alphanumeric Keyboard

Touch Screen (continued)
Measurement
Annotations
Body marks
Utility settings
Patient information entry

Display Screen
12.1 in High Resolution Color LCD
Display: 1024x768

Hard Keys
On/Off button

LED
Battery life

System Overview

Transducer Types
Linear Array
Phased Array
Convex Array

Operating Modes
B-Mode
M-Mode
Color Flow Mode (CFM)
Power Doppler Imaging (PDI)
Needle Recognition

Standard Features
Automatic Tissue Optimization (ATO)
CrossXBeam™
Measurements and calculations, editable
Pinch Zoom
Split window

System Overview

Standard Features (continued)

Configurable menu

Standard CINE Memory

Loops storage from memory

Internal solid-state drive (SSD)

Patient data protection

User-define preset

Software Options

M-mode

DICOM

OB Package

Needle Recognition

Ophthalmic

eSmart Trainer

Hardware Options

Docking Cart

Tabletop Docking Station

Probes

3-probe port

Media & Peripheral Options

USB thermal B&W printer

Memory Stick

Footswitch

Barcode reader

Wireless card

Display Modes

Live image or Stored image

Full size or split screen

Display Annotation

Institution/Hospital Name

Date: MM/DD/YY, DD/MM/YY and YY/MM/DD

Time: configurable 12 or 24 hrs

Patient Name: Last, First

Patient ID: 16 characters

| Power Output Readout | • MI: Mechanical Index |
| | • TIS, TIB, TIC: Thermal Index |

System Status (real-time or frozen)

Probe Orientation Marker: Coincides with a probe orientation marking on the probe.

Loop replay

Measurement Results Window

Probe Type

Preset Name

Imaging Parameters by Mode (current mode)	• B-mode:
	Gain
	Image Depth
	TGC: 4 plots
	Others: Configurable,
	3 at most
	• M-mode:
	M Gain
	Image Depth
	M sample line
	TGC: 4 plots
	Configurable, 3 at most
	• Color Flow Mode:
	Color Gain
	Image Depth
	Color ROI box
	TGC: 4 plots
	Configurable, 3 at most
	• Power Doppler Imaging Mode:
	PDI Gain
	Image Depth
	PDI ROI box
	TGC: 4 plots
	Configurable, 3 at most

System Overview

Display Annotation (continued)

Imaging Parameters by Mode (current mode)	• Needle Recognition Mode:
	B Gain
	Needle Gain
	Beam Angle
	Needle Direction
	TGC: 4 plots
	• CINE Mode
	Previous Frame
	Next Frame
	Play/Pause

B Scale Markers: Depth

System Messages Display

Annotation Library: 18-21 preset labels, defined by the application

Customizable annotations: 12 available for each application

Keyboard for free text on screen

Comments available in Live scan mode and Freeze mode

Body marks available for each application

Arrows available in Live scan mode and Freeze mode

Battery status

Biopsy Guide Line and Zone

Configurable user-interface with anatomy specific presets

System Parameters

System Setup

Factory default application data

Languages setup for UI: English, German, French, Italian, Spanish, Portuguese, Simplified Chinese, Swedish, Norwegian, Danish, Finnish, Greek, Russian, Dutch, Japanese

Languages for Manuals: English, French, Spanish, German, Italian, Portuguese, Japanese, Chinese, Czech, Danish, Dutch, Estonian, Finnish, Greek, Hungarian, Latvian, Lithuanian, Norwegian, Polish, Russian, Slovakian, Swedish, Korean

Operation Error Message Display

Patient Name Format: Last, First

System Boot Up: < 16 sec

Probe Loading: < 3 sec

Imaging Processing and Presentation

Software Intensive Ultrasound Imaging Platform

Digital Beamformer	• Displayed Imaging Depth: Minimum Depth of Field: 0.5 cm (probe dependent); Maximum Depth of Field: 30 cm (probe dependent)

Continuous Dynamic Receive Focus/Aperture

Multi-Frequency/Wideband Technology

CINE Memory/Image Memory

250MB Standard CINE Memory (120 sec of recording at most)

CINE Review: frame-by-frame and loop replay

Live Scan Save: Configure save button to save an image during llive scanning

Image Archive/Connectivity

Image Browser: Previewing of previous archived images as well as current stored patient images

Image Management (removable media)	• Delete Selected Image
	• Review in Full Image Area

One Print (Recording) UI Keys to approved printer

Live Scan Save: Configure save button to save an image during live scanning	• Archiving Format: JPEG MPEG4 /H.264
Capture Area:	• Image Area
	• Full Screen
Archiving Image Frames:	• Single: stores single frame while in Freeze mode
	• Multiple: stores image loops while in Live scan mode
	• Patient Information Window, and Search/Create Patient Window
	• Column header sorting from Image Review Screen by name, date, ID
	• Automatic generation of patient ID
	• Search by ID, First Name and Last Name
DICO	• DICOM store
	• Worklist query
	• Multi-frame DICOM

Network Quicksave

Scanning Parameters

B-Mode

Acoustic Output

Thermal Index: TI

Gain

Frequency

CrossXBeam

Gray map

Focus Position

Reverse

Harmonics: defined by the preset

Depth: 0.5-30 cm, defined by the preset, probe dependent

TGC

ATO level

Dynamic Range

Compression

Rejection

Frame Average

SRI HD

Edge Enhance

FOV

M-Mode

Gain

Depth: 0.5-30 cm, defined by the preset, probe dependent

Speed

Layout

Gray Map

Compression

Edge Enhance

Color Flow Mode

ROI Position

ROI Size

Gain

Scale

Depth: 0.5-30 cm, defined by the preset, probe dependent

Threshold

Color Flow Mode (continued)

Sample Volume

Frame Average

Frequency

Steer

Acoustic output

Wall Filter

Focus Position

Color Map

Compression

Invert

Quantification: the amount of blood flow within ROI

PDI-Mode

ROI Position

ROI Size

Gain

Scale

Depth: 0.5-30 cm, defined by the preset, probe dependent

Threshold

Sample Volume

Frame Average

Frequency

Steer

Acoustic Output

Wall Filter

Focus Position

Color Map

Compression

Quantification: the amount of blood flow within ROI

Needle Recognition Mode

Needle Direction

Beam Angle

Needle Gain

Measurements and Calculations

Distance
Area
Volume
Angle
Trace
Open Trace
Heart Rate/Time

Obstetrics Measurements/Calculations
Abdominal Circumference (AC)
Amniotic Fluid Index (AFI)
Area
Antero-Postero Trunk Diameter and Transverse Trunk Diameter (APTD-TTD)
Bi-parietal Diameter (BPD)
Crown Rump Length (CRL)
Estimated Fetal Weight (EFW)
Femur Length (FL)
Gestational Sac (GS)
Head Circumference (HC)
Humerus Length (HL)
Occipito frontal Diameter (OFD)
Cardio-Thoracic Area Ratio (CTAR)
Fetal Trunk Cross-Sectional Area (FTA)
Spine Length (SL)
Multi-Gestational Calculations
Up to 3 fetuses
Comparison of multiple fetus data on a graph and a worksheet

OB Worksheet	
Patient Information	• Fetus Number • CUA/AUA Selection
Measurement Information	• AFI • AC • HC • BPD • FL

OB Worksheet (continued)	
Calculation Information	• EFW • EFW GP (growth percentile) • FL/BPD • FL/AC • HC/AC • FL/HC • CI (Cephalic Index)
OB Graphs	• Fetal Graphical Trending • Quad views • Ultrasound and gestational age

Probes

12L-SC Wide Band Linear Probe
Applications: Peripheral Vascular, Pediatric, Small Organ, Conventional Musculoskeletal, Superficial Musculoskeletal, Thoracic/Pleural, Abdominal, Neonatal Cephalic, Intraoperative, Interventional Guidance, Vascular Access, Tissue Biopsy, Nerve Block, Ophthalmic
FOV (max): 38.4mm
B-mode Imaging Frequency: 8-13 MHz
CFM Imaging Frequency: 4-6.67 MHz
Steered Angle: +/-20
Biopsy Guide Available: Multi-angle, Transverse bracket, Infinite biopsy kit

3S-SC Wide Band Phased Array Probe
Applications: Fetal/OB, Abdominal, Pediatric, Neonatal Cephalic, Adult Cephalic (transcranial), Cardiac, Conventional Musculoskeletal, Thoracic/Pleural, Tissue Biopsy, Intraoperative, Ophthalmic
FOV: 60°-90°
B-mode Imaging Frequency: 1.5–4.0 MHz
CFM Imaging Frequency: 1.82-3.08 MHz
Biopsy Guide Available: Multi Angle

Probes (continued)

4C-SC Wide Band Convex Probe

Applications: Fetal/OB, Abdominal, Pediatric, Conventional Musculoskeletal, Thoracic/Pleural, Nerve Block, Intraoperative, Tissue Biopsy

Convex Radius: 60mmR

FOV: 35°-55°, application dependent

B-mode Imaging Frequency: 2.5-6 MHz

CFM Imaging Frequency: 2.22-3.08 MHz

Biopsy Guide Available: Multi Angle

L8-18i-SC Wide Band Linear Probe

Applications: Peripheral Vascular, Pediatric, Small Organ, Conventional Musculoskeletal, Superficial Musculoskeletal, Thoracic/Pleural, Abdominal, Neonatal Cephalic, Intraoperative, Interventional Guidance, Vascular Access, Tissue Biopsy, Nerve Block.

FOV (max): 25.2mm

B-mode Imaging Frequency: 8-18 MHz

CFM Imaging Frequency: 4.44-8.7 MHz

Steered Angle: +/-20

E8CS-SC Wide Band Convex Probe

Applications: Fetal/OB, Abdominal, Transvaginal and Tissue Biopsy.

Convex Radius: 8.7 mmR

FOV: 145°

B-mode Imaging Frequency: 3.48-9.0 MHz

CFM Imaging Frequency: 4.0-5.0 MHz

Biopsy Guide Available: Multi Angle

10C-SC Wide Band Convex Probe

Applications: Abdominal, Pediatric, Small Organ, Neonatal Cephalic, Superficial Musculoskeletal, Thoracic/Pleural, Intraoperative and Ophthalmic

Convex Radius: 10.0 mmR

FOV: 75°-102°

B-mode Imaging Frequency: 5.5-10.0 MHz

CFM Imaging Frequency: 4.0-5.0 MHz

Inputs and Outputs

Outputs

HDMI interface on docking station and docking cart

Connectors

3 USB interface on docking station and docking cart

1 USB interface on console

Docking Connector

Removable SD card

Wireless LAN 802.11 b/g/n by wireless card

Wired LAN 10/100 BaseT

Safety Conformance

Venue 50

Complies with ANSI/AAMI ES60601-1 Medical Electric Equipment

Certified to CAN/CSA-C 22.2 No.601.1 by an SCC accredited Test Lab

CE Marked to Council Directive 93/42/EEC on Medical Devices

Compliant with DIRECTIVE 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) requirement.

Conforms to the following standards for safety:

- EN/IEC 60601-1 Electrical medical equipment
- EN/IEC 60601-1-2 Electromagnetic Compatibility
- EN/IEC60601-1-6 General requirements for safety – Collateral Standard: Usability
- EN/IEC60601-2-37 Particular requirements for the safety of ultrasonic medical diagnostic and monitoring equipment
- ISO 10993 Biological evaluation of Medical devices
- AIUM/NEMA UD3 Acoustic output Display (MI, TIS, TIB, TIC)
- EMC Emissions Group 1 Class A device requirements as per Sub clause 4.2 of CISPR 11

About GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter - great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

GE Healthcare
9900 innovation Drive
Wauwatosa, WI 53226
U.S.A.
888 526 5144

www.gehealthcare.com

Europe

GE Healthcare
Beethovenstr. 239
D - 42655 Solingen
T 49 212 2802 0
F 49 212 2802 28

Asia

GE Healthcare Clinical
Systems ASIA
1105-1108 Maxdo Center
8 XingYi Road, Shanghai
200336
T 86 21 5257 4640
F 86 21 5208 0582

DOC1305745
6/2014

imagination at work