LogicScan 64 scanner

During the upcoming MEDICA 2007 in Düsseldorf, TELEMED will present new concept of PC-based personal ultrasound scanners, named LogicScan 64. The LogicScan ultrasound system is a Color Doppler device. Its key features include digital Doppler multi-beam processing, which will increase frame rate during colour and Power Doppler imaging and the novel hybrid signal processing module, for improving sensitivity. Pulsed wave (PW) spectral Dopplers will be available in the future as software upgrade. This system will also come equipped with a wide variety of probes to cover a broad range of application areas.

The ultrasound scanner has been developed as compact, lightweight, battery powered an entry-level color system for veterinary use.

Main information

Type / Order Code	Click on the photo for more details	Number of probe ports	Power	Dimensions W x D x H, mm (see note 1)	Weight, kg (see note 2)	Approval	Status
LogicScan 64 FLT-1T Kit		1	• 100~240V AC, 50~60 Hz	315 x 250 x 28	1,5	-	OK

Common specifications

Imaging Modes

- B
- B+B
- 4B
- B+M
- M
- Color Doppler (CFM)
- Power Doppler (Angio)
- Directional Power Doppler (DPD)
- "FREEZE" mode
- Viewing area variable for frame rate maximizing, 6 steps

Ultrasound imaging

- ultrasound image size: automatically resizable to screen resolution
- gray scale: 256
- color scale: 256
- full motion and full size real-time ultrasound imaging, up to 120 fps (see note 4)
- cineloop recording/play
- High Line Density scan mode for better resolution

Scanning Method

- electronic linear
- electronic convex
- electronic microconvex

Color Doppler

- Velocity mode
- Power Doppler
- Directional Power Doppler
- PRF variable: 0.5-10kHz
- Wall filter settings: 3 steps (5%, %10%, 15% PRF)
- Gain control: 50 dB
- Color priority control
- Angle steering for linear probes

Probes

- 15 available probes
- 64 elements probes
  - from 2,0 MHz to 8,0 MHz;
  - multifrequency
- automatic probe recognition

Depth Selection

- depth: 2-23 cm

Focusing

- 16-channel hybrid beamformer
- digital transmit focusing
- multi focus mode:
  - transmit/receive focusing, max 4 points;
  - programmable focus area presets
- dynamic focus mode:
  - transmit variable focus, 8 points;
  - dynamic receive focus, 8 zones

Signal Processing

- pre-processing
  - TGC Control, 5 sliders 40 dB
  - dynamic range: 120 dB, 8 values
  - overall gain control
  - M - mode sweep speed control
  - acoustic power control
- post-processing
  - variable frame averaging
  - brightness, contrast, gamma control
  - scan direction, rotation / up / down controls
  - negative / positive control
  - bi-linear interpolation
  - echo enhancement control
  - noise rejection function

Functions

- mouse / trackball / keyboard operation
- image comment / save / recall browsing
- unlimited programmable presets for clinically specific imaging
- anatomical Icons with probe position indicator
- the set of predefined skin schemes for software interface
- direct e-mail sending function with image or video attachment via Internet
- printing on system printer
- user-friendly pop-up menus and dialogue boxes
- standard TV output using computer's display adapter (option)

Ultrasound software

- TELEMED Drivers Package
- Echo Wave software (B/W modes only)
- Echo Wave II software (B/W + Doppler modes)
- ClearView plug-in (optional, works with Echo Wave/Echo Wave II)
- 3DView plug-in (optional, works with Echo Wave)
- PanoView plug-in (optional, works with Echo Wave)
- SDK documentation / sample code (available by agreement)

Recommended Computer Requirements

- IBM PC compatible Desktop/Notebook/Tablet PC
- CPU Core Duo / Core 2 Duo 1.6 GHz or better
- 512 Mb of RAM or better
- USB 2.0 interface
- Windows® XP SP2 / Windows® Vista

Echo Wave II future updates

- Zoom mode
- Pulsed wave (PW) spectral Doppler

Note 4. Depends on selected scan depth, scan angle, focus mode, High Line Density setting, Color Doppler modes, computer speed.

LogicScan 64 FLT-1T Kit

LogicScan 64 FLT-1T Kit with attached probe and notebook.

LogicScan 64 FLT-1T Kit

LogicScan 64 FLT-1T Kit includes:	
Item	**Comments**
Beamformer LogicScan 64 FLT-1T	+
USB cable	+
100~240 VAC, 50~60 Hz power supply / charger (UL2601, CSA601, TUV/IEC 601-1 certified)	+
AC power cable	+
Assembly and set-up manual	+
Operation manual	+
Software (CD-ROM)	+
Ultrasound probe (probes)	-
Delivery	-

(+) - includes
(-) - optional component

The list of LogicScan 64 family scanners and kits compatible probes

Probe			Parameters				Applications									
Photo	Type / Order Code	Biopsy Adapter	Probe Central Frequency, MHz	System Frequencies, MHz	Radius of Curvature, mm	Field of View / Degree, mm	Abdominal	Cardiac	Obstetrics	Pediatrics	Small Parts	Transrectal	Transvaginal	Vascular	Veterinary	Food Industry
Convex	PV6.5/10/64D	-	6.5	5.0 6.0 7.0 8.0	10	147					■			■	■	
Convex	EC6.5/10/64D	available	6.5	5.0 6.0 7.0 8.0	10	147						■	■			
Convex	C3.5/20/64D	-	3.5	2.0 3.0 4.0	20	104	■	■								
Convex	C3.5/60/64D	-	3.5	2.0 3.0 4.0 5.0	60	63	■		■	■						
Linear	HL7.5/40/64D	available	7.5	5.0 6.0 7.0 8.0	-	38					■	■		■	■	
Linear	LV7.5/65/64D	-	6.5	3.0 4.0 5.0 6.0 7.0	-	63									■	

Photo	Type / Order Code	Biopsy Adapter	Probe Central Frequency, MHz	Avail. Freq., MHz	Radius of Curvature, mm	Field of View, degree / mm	Abdominal	Cardiac	Obstetrics	Pediatrics	Small Parts	Transrectal	Transvaginal	Vascular	Veterinary	Food Industry
Probe			**Parameters**				**Applications**									