

Echo Blaster 64 family scanners and kits

We would like to present our innovative project - Echo Blaster 64 family scanners and kits, new class of PC-based ultrasound scanners with compact dimensions, attractive price and great diagnostic potential:






Echo Blaster 64 is new line in the family of beamformers which can be connected to any modern personal computer via [USB 2.0 interface](#). Unlike previous Echo Blaster, new devices has advanced software scan-converter, capable to process up to 120 frames per second ([see note 3](#)). User interface built on Echo Wave software provide new capabilities which earlier was not achievable for entry-level systems:

- extended measurement package includes cardiology, urology, Ob/Gyn and special veterinary calculation
- movie clips as long as 2 minutes ([read more](#)) can be recorded and stored in the files
- new wide-bandwidth probes for any application
- possibility to work with [3DView](#), [PanoView](#) and [ClearView](#) plug-in modules adds new diagnostic value*
- Ready-to-Telemedicine concept allow remote diagnostic
- Multiline technology for scanning without "black dots" artifacts provides noticeable improvement of image quality
- attractive price

* optional component

Main information

Type / Order Code	Click on the photo to see additional details	Number of probe ports	Power	Dimensions W x D x H, mm	Weight, kg (see note 1)	Approval	Status
Echo Blaster 64 EXT-1T Kit		1	100~240 VAC, 50~60 Hz	145 x 225 x 85	2,3		full production
Echo Blaster 64 INT-1T Kit		1	from PC	145 x 225 x 85	2,3	-	full production
Echo Blaster 64 INT-2T Kit	-	2	from PC	145 x 225 x 126	2,8	-	full production

Common specifications

Imaging Modes

- B
- B+B
- B+M
- M
- "FREEZE" mode
- scan angle changing in 6 steps for frame rate maximizing

Ultrasound imaging

- 512*512 pixels
- true 256 gray shades
- full motion and full size real-time ultrasound imaging, up to 120 fps ([see note 3](#))

Scanning Method

- linear
- convex
- microconvex

Cineloop

- recording up to 2048 frames to memory ([read more](#))
- Play / Pause / Stop / frame selection
- saving ultrasound video file to disk
 - size optimized (lossy compression)
 - not size optimized (full quality)
- loading ultrasound video file from disk

Probes

- 7 available probes
- 64 elements probes (the list of compatible probes see [here](#)):
 - from 2,0 MHz to 7,5 MHz;
 - triple frequency
- automatic probe recognition
- 1 probe port

Depth Selection, cm

- 3
- 4.5
- 6
- 9
- 12
- 15
- 18
- 21
- 23.5

Focusing

- 16 Channel Analog Beamformer
- digital transmit focusing
- multi lines technology, 192 real ultrasound lines
- multi focus mode:
 - transmit/receive focusing, max 4 points;
 - programmable focus area presets

Measurements and Calculations

B-mode

- 4 distance measurements
- 2 area measurements:
 - Ellipse (area, perimeter, long axis, short axis and volume of the ellipsoid are calculated);
 - Freehand (area and perimeter are calculated).
- 2 angle calculations (based on 3 linear markers).
- GYN package:
 - GW Indication (based on LMP, BBT or KED);
 - GW estimation based on various parameters (USA, Hansmann, Campbell, Tokyo and Osaka methods);
 - Fetus Weight calculation (USA, Hansmann, Tokyo and Osaka methods);
 - GW estimation for animals (bovine, equine, canine, feline).
- Urology volume calculation (based on object's height, width and length).

M-mode

- 2 linear measurements (distance, time, speed and heart rate are calculated).
- Cardio package:
 - Left Ventricle measurements (HR, IVSTD, LVIDD, PWT, IVSTS, LVIDS, PWTS) and calculations (EDV, ESV, SV, EF, CO, FS). Three methods of volume calculations (Cubed, Pombo, Teichholz) are realized;
 - Aortic Valve measurements (AOD, LAD) and calculation of the LA/AO ratio.

Signal Processing

- pre-processing
 - TGC Control, 5 zones for each depth
 - dynamic range control, 8 steps
 - overall gain control, 16 steps
 - M - mode sweep speed control, 1-16 sec
 - acoustic power control, 256 levels, 10-100%
- post-processing
 - variable frame averaging
 - color processing
 - brightness, contrast, gamma control
 - scan direction and up / down orientation control
 - negative / positive control
 - real time Intelligent Zoom and Free Hand Zoom
 - bi-linear interpolation
 - echo enhancement control, 5 values
 - rejection function, 32 values

Functions

- mouse / trackball / keyboard operation
- image comment / save / recall browsing
- unlimited programmable presets for clinically specific imaging
- anatomical Icons with probe position indicator, 10 icons
- the set of predefined color schemes for software interface, possibility to create custom schemes
- 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)
- view / recall / save any from last 16 early freezed images
- multi-language support:
 - English
 - French
 - German
 - Polish
 - Romanian
 - Russian
 - Spanish

Ultrasound Software

- [Echo Blaster 64 drivers](#) package for beamformer and probes
- [Echo Wave](#) software
- [Echo Wave II](#) software
- [ClearView](#) plug-in (optional)
- [3DView](#) plug-in (optional)
- [PanoView](#) plug-in (optional)
- SDK documentation / sample code (available by agreement)

Computer Requirements

- IBM PC compatible Desktop/Notebook/Tablet PC
- CPU 1.0 GHz or better
- 256 Mb of RAM or better
- [USB 2.0 interface](#)
- Windows® XP/XP Tablet PC Edition

Warranty

- 1.5 years for scanner
- 1.0 year for probe(s)

Note 3. Depends on selected scan depth, scan angle, focus mode, High Line Density setting, computer