imv imaging

EXAPad micro
A NEW VIEW ON ULTRASOUND

DATA SHEET

Contents

imv imaging · BCF Technology · ECM Echo Control Medical

Your complete animal imaging solution

Product Description

- **On-the-Go Companion:** Ideal for mixed practice veterinarians on the move, The ExaPad Micro weighs less than 2kg and is adaptive to any environment.

- **Extensive application range:** The ExaPad Micro comes with a comprehensive range of probe and accessories to support you in various use cases and workflows.

- **Cutting-Edge Software:** Equipped with automatic follicle sizing as well as regular upgrades to your image quality, the Micro allows for quick and accurate diagnosis

- **User-Centric Design:** Our scanner is designed with your comfort in mind. Experience the convenience of a portable ultrasound system that can be used effortlessly in different settings.

1 General Specifications

1.1 Dimensions and Weight
- Width: 28 cm
- Depth: 5.5 cm
- Height: 20 cm
- Weight: < 2kg without battery

1.2 Electrical Power
- Works on interchangeable battery or on mains supply
- Battery autonomy: 1 hour 40 min
- Battery recharging time: 3.5 hours
- Mains Voltage: 100-120 Vac or 220- 240 Vac, 50/60 Hz Out Put: 45 W Internal voltage: Max. 20V

1.3 Console Design
- 1 Probe connector
- Integrated SSD (Capacity: 180Go)
- 1 USB - C
- WIFI 802.11 b/g
- Bluetooth 4.0

1.4 Processing
- Digital beamformer
- Dual beam computing
- 32 true emission channels
- 32 reception channels
- Continuous dynamic focusing in receive
- 256 shades of gray
- Raw data storing for post processing
- Evolutive hardware with firmware upgrade (FPGA)
- System boot up: 2 min

2 User Interface

2.1 Operator Keyboard
- Touch screen
- Touch-pad and touch-keyboard up to 8 TGC curve keys adapted to depth
- Quick access to advanced adjustment menus by touch screen

2.2 Monitor
- 10.1 inches LCD LED backlight
- WXGA Format:
  - Display size: 1280 x 800
  - Recording size: 730 x 660
- Ultrasound image: 700 x 900 in portrait (depends of probe) and 670x 700 in landscape.
- Stereo sound
- Digital Brightness/ Contrast Adjustment
- MI: Mechanical Index
- TI: Thermal Index
- Portrait, landscape left or landscape right mode

3 Operating modes
- B mode
- B/B mode (Dual B)
- Color Flow Mapping (CFM) Velocity
- Dual CFM (B/CFM mode)
- PW simplex
- M Simplex
- M Anatomic

4 Settings
- Clinic name: 30 characters
- User name: 30 characters
- Several possible users
- Time: 12 hours am/ pm or 24 hours
- Image storing formats - raw data, Jpeg (.jpeg), bitmap (.bmp), DICOM (.dcm)
- Clip storing formats
- - raw data, Avi (.avi) DICOM (.dcm)
- Individual user protocols for each application
- Export of images, clips, reports, patient files to external media
- Remote access
- DICOM Store

5 B Mode imaging
- Depth: from 3-35 cm (probe dependent)
- Multi-frequency wideband technology on all probes
- B Frequency: 3 frequency steps for each probe
- B Gain: From 1-100, 1 step
- TGC:
  - TGC curve adapted to depth
  - 8 adjustable zones
- Focus zone position: up to 7 selectable focus points (depth dependent)
- Dynamic: up to 90 dB (probe dependent)
- Time average: 6 steps
- Smoothing: 6 settings
- Dual imaging B/B - Left/right dual selection
- Emission power adjustment
- Field of View: 3 view
- Orientation of image:
  - Up/down
  - 90° / 180° / 270°
  - Left/right

6 M Mode imaging

- Same settings as B-Mode
- Time scale: 4 steps 3-15sec
- M-Line: positioning

7 M Anat Mode imaging

- Same settings as B-Mode
- Time scale: 4 steps 3-15sec
- M Anat Line: Free positioning on screen

8 Color Flow Mapping (CFM) Mode imaging

- CFM Velocity
  - Color Invert: on/off
- ROI Position: adjustable
- ROI size: adjustable
- CFM Frequency: 3 frequency steps for each probe
- CFM Gain: 1-20, 1 step
- Steering: 7 steps
- CFM PRF: 1000-11000 Hz (probe dependent)
- Wall Filter: 1-4
- Persistence: 1-5
- Spatial filter: 1-4
- Min. velocity: 1-31
- Emission power adjustment
- Dual CFM: B/CFM

9 PW Mode imaging

- PW invert: On/off
- PW Gate size/ position: adjustable
- PW Angle: Adjustable direction
- PW Frequency: 3 frequency steps for each probe
- PW Gain: 1-20, steps of 1
- PW dynamic range: 2 steps
- PW Audio: 1-10: steps of 1
- Steering: 7 steps
- PW PRF: 1000-11000 Hz (probe dependent)
- Baseline: 5 steps
- PW Time Scale: 4 steps
- Wall Filter: 3 steps
- Persistence: 1-5
- Spatial filter: 1-4
- Min. velocity: 1-31
- PW Power: 5 Steps

10 Freeze - Cineloop

- Cineloop window:
- Cine-review: Frame by frame, Loop
- Image storing (based on average image):
  - Raw data: 60 000 images
  - Bitmap: 80 000 images
  - JPEG: 6 500 000 images
- Clip storing:
  - Raw data and AVI: 1000 sequences (based on 500 i/clip)
- Post-processing on frozen images and frozen clips
- Post-processing on stored images and stored clips
- Measurements and calculations on frozen images and clips
- Measurements and calculations on stored images and clips
- Easy user annotations on frozen and stored images and clips
- Review of stored images and clips
  - Patient related with report
  - Patient related without report
  - Non attached
- Renaming of stored images and clips
- Export of stored images and clips to USB stick

11 Measures in B

- Distance: Up to 4 distances
- Circumference and surface by Ellipse: Up to 4 ellipses
- Circumference and surface by Trace: Up to 4 traces
- Arrow: Up to 5 arrows
- Annotations: Up to 10 annotations
  - Free text
  - Easy annotation access

12 Post-processing

- Raw data treatment
- On cine-loop images and clips
- On stored and loaded images and clips
- B Gain: From 1-100, 1 step
- TGC:
  - TGC curve adapted to depth
  - up to 8 adjustable zones
- Dynamic: up to 90 dB
- Time average: 6 steps
- Smoothing: 6 settings
- Orientation of image:
  - Up/down
  - 90° / 180° / 270°
  - Left/right

13 Applications

- Reproduction
- Abdominal
- Musculo
- General
- Cardiology

14 Presets

- Factory presets for each application
- User specific presets
- Favorite presets for accessibility
- Display of current preset on screen

15 Patient

- Patient files
- Patient file modification
- Easy patient search
- Export of patient files
- Export of images and clips
- List of previous reports for each patient

16 Report

- Automatic transfer of measures to report.
- Export of reports
- List Display
- Text Display
- Comments
- Conclusion

⑰ Probes
L738V
C360S
LR76V
CR46V

L738V Linear probe:
Applications: tendons diagnosis on horses, superficial parts on small animals
- Wideband
- Central frequency: 7.5 MHz
- B-Mode frequencies: 5.0, 7.5, 10.0, MHz
- Doppler frequencies: 5.0, 6, 7.5 MHz
- Number of elements: 128
- Pitch: 0.3 mm
- Aperture: 4 mm
- FOV: 38 mm
- Foot print: 38x4 mm

C360S Convex probe:
Applications: musculo-skeletal, cardio on horses, abdominal, small parts on small animals
- Wideband
- Central frequency: 3.5 MHz
- B-Mode frequencies: 2.5, 3.5, 5.0 MHz
- Doppler frequencies: 2.0, 2.7, 3.3 MHz
- Number of elements: 128
- Pitch: 0.5 mm

- ROC (Radius of Curvature): 60 mm
- Aperture: 14 mm
- Angle: 60°

LR760V Wide Band linear probe
Applications: OB/GYN; Foetal sexing, Ovarian diagnosis,follicles visualization
- Wideband
- Central frequency: 7.5 MHz
- B-Mode frequencies: 5, 7.5, 10 MHz
- Doppler frequencies: 5.0, 6.0,7.0 MHz
- Number of elements: 128
- Pitch: 0.47 mm
- Aperture: 6 mm
- FOV: 60 mm
- Foot print: 60x6 mm
- Automatic measurement of the follicles

CR460V Wide Band linear probe
Applications: OB/GYN; Foetal sexing, Ovarian diagnosis,follicles visualization
- Wideband
- Central frequency: 4 MHz
- B-Mode frequencies: 2.5, 4.3, 6.5 MHz
- Doppler frequencies: 2.5, 3.3, 4.3 MHz
- Number of elements: 128
- Pitch: 0.5 mm
- ROC (Radius of Curvature): 60 mm
- Aperture: 9.5 mm
- Angle: 61°

⑱ Inputs and Outputs
- 1 USC C port
- Wifi 802.11
- Bluetooth 4.2

⑲ Safety Conformity
- CE Marked to Council Directive
- 93/42/EEC on Medical Devices
- Conforms to the following standards for safety:
  - EN 60601-1 Electrical medical equipment
  - EN 60601-1-1 Electrical medical equipment
  - EN 60601-1-2 Electromagnetic compatibility
  - EN 60601-1-4 Programmable medical systems
  - EN 60601-2-37 Particular requirements for the safety of ultrasonic medical diagnostic and monitoring equipment
  - IEC 61157 Declaration of aco output
  - ISO 10993 Biological evaluation of medical devices

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Not all features or specifications described in this document may be available for all probes and/or modes. IMV imaging reserves the right to make changes in specifications and features shown herein, or discontinue the product at any time without notice or obligation.
Contact IMV imaging representative for the most current information.

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