clarius

Clarius HD3 Vet Scanners

Technical Specifications

Clarius HD3 Vet Scanner Specifications

Model		Frequency	Max Depth	# Elements	Radius	Field of View	Pitch
C3 HD3 Vet	Convex	2–6 MHz	40 cm	192	45 mm	73°	300 µm
C7 HD3 Vet	Microconvex	3–10 MHz	18 cm	192	20 mm	112°	205 µm
L7 HD3 Vet	Linear	4–13 MHz	11 cm	192	N/A	38 mm	200 µm

Imaging

Transmission

- 1 to 20 MHz waveforms
- Up to 20 continuous pulses
- Bi-polar output
- 10 to 70V peak-to-peak

Post-processing

- Adaptive speckle reduction
- Edge enhancement
- Persistence

Total Input Dynamic Range

- 160dB

Beamforming & Reception

- 8 parallel beamformers
- Synthetic aperture beamforming with virtual focal zones
- 60 MHz sampling rate @ 14 bits per channel

Automated Algorithms

- Time-gain-compensation (TGC)
- Frequency-depth adjustment
- Patient contact detection
- Needle enhancement
- Motion sensing
- Heart Rate

Imaging Modes

B-Mode	Yes
M-Mode	Yes
Power Doppler	Yes
Color Doppler	Yes
Pulsed-Wave Doppler	Optional
Needle Enhance	Optional

Clinical Applications†

C3 HD3 Vet
- General Vet
- General Cardiac
- Abdomen
- Cardiac
- Bladder
- MSK
- Lung
- Obstetrics

C7 HD3 Vet
- General Vet
- General Cardiac
- Abdomen
- Cardiac
- Bladder
- MSK
- Lung
- Obstetrics
- Small Organs

L7 HD3 Vet
- General Vet
- MSK Equine
- MSK
- Lung
- Nerve
- Ocular
- Vascular
- Small Organs

† Some Presets available via Advanced Software Packages

Interface & Image Controls

- Depth
- Read zoom
- 3 TGC sliders or automated TGC
- Flip / mirror
- Freeze
- Color / power ROI
- Flow speed
- Doppler gate
- Doppler correction angle
- Doppler steer
- Baseline
- Invert

Advanced Controls†

- Chroma
- HD Zoom
- Smoothing
- Dynamic Range
- Trapezoidal
- Penetration Mode

Standard Configuration

- Scanner
- 1 Charger with global AC adapter

Battery, Charging and Bootup

Battery Life	~60 min scanning
Charge Time	~90 min
Bootup	Platform dependent, generally less than 30 sec

Connectivity

Wi-Fi	802.11 a/b/g/n, dual band 2.4GHz & 5GHz
Bluetooth	Bluetooth low energy 4.1

Warranty*

Included	3 year limited warranty
Optional	Clarius Care - 1/2/3 years – Accidental damage – Uptime – RMA shipping – Hospital theft – Battery Service

* Click here to see full terms and conditions

Internally Optimized Parameters

Clarius internally optimizes the following parameters to ensure the scanner is easy to use:

Frequency Range	1 to 20 MHz
Focal Zones Range	1 to 10
Compression Dynamic Range	30 to 90 dB
Reject	Yes
Sector Width Range	50% to 100%
Grey + Color Maps	Yes
Frame Rate	Up to 30 FPS

Mechanical

Enclosure

- Light weight magnesium alloy
- Durable
- IP67 rated for 1 meter immersion for 30 minutes

SCANNER DIMENSIONS AND WEIGHT

C3 HD3 Vet	Dimensions: 146 x 76 x 32 mm Weight: 308 g
C7 HD3 Vet	Dimensions: 151 x 76 x 32 mm Weight: 289 g
L7 HD3 Vet	Dimensions: 147 x 76 x 32 mm Weight: 288 g

CHARGER

Input	Wall power supply: 100-240 VAC, 50-60Hz Charger: 5 VDC, 3.2 A
Output	Wall power supply: 5 VDC, 3.2 A Charger: 5 VDC, 3.2 A

Measurements and Calculations

TOOLS

Angle	Yes
Distance	Yes
Trace	Yes
Ellipse	Yes
Heart Rate	Yes
Time	Yes
Velocity	Yes
Volumes	Yes → Manual/Automated

CALCULATION PACKAGES

Obstetrics	HC, AC, CRL, GS, AFI, CxL, UA, FHR + Up to 12 Gestations
Bladder	Volume
Abdomen	Liver, Kidney, Spleen, Pancreas, GB
Ocular	ONSD, FB, CHLS
Small Organs	Thyroid, Testes
Vascular	Volume Flow
Equine MSK	SDFT, DDFT, ALDDFT, SL, ODSL, SDSL
Cardiac	LV EF (Simpsons), LV FAC, IVS, LVID, LVPW, TAPSE, MAPSE, EPSS, LVOT, HR

Data Management

Local Export	JPG/PNG/DICOM/BMP
Cloud Export	Optional
DICOM Store	Optional
DICOM Worklist	Optional

Security and Encryption

Wi-Fi Data Channel	TLS 1.2
Bluetooth	AES128 and RSA4096

Cleaning

Tested without adverse effects

- Accel® PREVention™ Wipes
- CaviWipes
- McKesson OPA/ 28 High-Level Disinfectant Solution
- MetriCide™ OPA Plus High-Level Disinfectant Solution
- Sani-Cloth® Plus Germicidal Disposable Cloth
- Tristel Trio Wipes System

Standards Compliance

IEC 60601-1, Medical Electrical Equipment - Part 1: General requirements for basic safety and essential performance

IEC 60601-1-2, Medical Electrical Equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral Standard: Electromagnetic disturbances - Requirements and tests

IEC 60601-2-37, Medical Electrical Equipment - Part 2-37: Particular requirements for the basic safety and essential performance of ultrasonic medical diagnostic and monitoring equipment

NEMA UD-2, Acoustic Output Measurement Standard For Diagnostic Ultrasound Equipment

NEMA UD-3, Standard for Real-Time Display of Thermal and Mechanical Acoustic Output Indices on Diagnostic Ultrasound Equipment

IEC 60601-1-12, Medical electrical equipment - Part 1-12: General requirements for basic safety and essential performance - Collateral Standard: Requirements for medical electrical equipment and medical electrical systems intended for use in the emergency medical services environment

FCC 47CFR Part 15, Radio frequency devices

ETSI EN 300 328 - Electromagnetic compatibility and Radio spectrum Matters (ERM)

ETSI EN 301 489-1 - Electromagnetic compatibility and Radio spectrum Matters (ERM)

ETSI EN 301 489-17 - Electromagnetic compatibility and Radio spectrum Matters (ERM)

ISO 10993-1, Biological evaluation of medical devices

IEC 60529, Degrees of protection provided by enclosures (IP Code)

IEC 62133, Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications

UN 38.3, Transport of dangerous goods - Classification procedures, test methods and criteria relating to class 9 - Lithium metal and lithium ion batteries

About Us

Clarius Mobile Health was founded by experienced innovators who have played an instrumental role in the ultrasound industry. Our developers were the brains behind the first PC-based platform for ultrasound research. They also introduced the first touch screen ultrasound system with a simplified user interface.

We started with a simple mission: to enable more clinicians to use ultrasound to improve patient care. Thanks to the power of smart phones, advanced technology and decades of collective ultrasound experience, we've developed a high quality, Point-and-Shoot Ultrasound™ scanner that works with your smart device.

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