

CAE Vimedix 3.0

Lung Ultrasound Case for COVID-19



CAE Vimedix 3.0 is proud to release a brand-new learning module for point-of-care ultrasound training associated with COVID-19.

Physicians worldwide are rapidly adopting point-of-care ultrasound (PoCUS) to assess lung and cardiac pathology in COVID-19 patients. Our Vimedix 3.0 ultrasound training scenario for coronavirus strengthens procedural competency so that clinical learners can deliver better patient care during this pandemic.

Combining the best of three CAE hardware and software product platforms, CAE's comprehensive suite of COVID-19 ultrasound training solutions also includes CAE ICCU e-Learning curriculum and CAE Blue Phantom COVID-19 Lung Simulator. As part of this suite, CAE Vimedix 3.0 helps healthcare practitioners learn and train how to scan and assess for COVID-19 symptoms related to lung damage and cardiac dysfunction. With enhanced lung images for increased fidelity, CAE Vimedix 3.0 provides the most realistic scanning experience with the use of a manikin with realistic anatomical landmarks, all within a risk-free environment.

Offered as a standalone or included in CAE's COVID-19 ultrasound training suite, CAE Vimedix 3.0 is the preferred ultrasound training solution to ramp up new and existing staff in ultrasound scanning in response to the COVID-19 pandemic.

For more information on CAE Vimedix 3.0 ultrasound simulator, visit caehealthcare.com

Your worldwide training partner of choice



Technical Specifications

Standard Equipment

- Male multi-purpose manikin
- Phased Array, Transesophageal and/or Curvilinear transducer(s)
- HP Omen Laptop with wireless mouse
- Cables (Power, DVI, Ethernet)
- Electronic user guide
- Option to add Ob/Gyn capabilities to the simulator (including a female manikin, curvilinear and transvaginal transducer)

Optional Software

- Additional cardiac and abdominal pathology packages available

Specifications, Dimensions

- Bob 1.3 Male Multi-Purpose Manikin
- 39.5" x 17" (100 cm x 43 cm)
- 31.5 lbs (14.3 kg)

Optional Catherine Female Manikin

- 38" x 18.5" (96.5 cm x 47 cm)
- 30 lbs (13.6 kg)

Computer

- 15.94 x 11.01 x 1.06 in (W X D X H)
(40.49 x 27.97 x 2.69 cm)
- 7.04 lb (3.2 kg)
- CPU: Intel® Core™ i9-9880H
- Hard drive: 1 TB SSD
- Memory: 16 GB
- Graphics card: NVIDIA® GeForce® RTX 2080 (8GB)
- OS: Windows 10
- Screen: 17.3"

External Polhemus Box

- 7.00 x 6.00 x 2.00 in (17.78 x 15.24 x 5.08 cm)
- 1.65 lbs (0.62 kg)

Electrical

- Operates at 110/240V 50/60Hz

Ambient Temperature Range

- 41°F - 95°F (5°C - 35°C)

Humidity

- 40-80%

Key Features



Simulator Capabilities

- Manikin-based system that replicates real-time visual, physical and ergonomic attributes of ultrasound scanning
 - Palpable thoracic and pelvic bony landmarks that with motion tracking system that allows 6 degrees of freedom (DOF) to align physical manikin with virtual anatomy in Vimedix software
- Supports Transthoracic Echocardiography (TTE), Transesophageal Echocardiography (TEE), and abdominal/pelvic ultrasound scanning on a single platform
- Simulation of cardiac, lung and abdominal ultrasound images and functions
 - 2D, Bi-Plane and M-Mode Views
 - Adjustable image settings (depth, viewing angle, gain, contrast)
 - Color Doppler, Continuous Wave Doppler and Pulsed Wave Doppler of the Heart
 - Color Doppler of the Inferior Vena Cava for specific pathologies
 - Ability to complete measurements including length/diameter, circumference and area
 - Echo report function with automated calculations and drop-down menus consistent with typical echo scanning protocol and workflow
 - Zoom function for ultrasound images
 - Ability to freeze image and scroll through frames
 - Ability to add noise on ultrasound view to alter image quality and viewing level of difficulty
 - Over 200 available pathologies with the optional ability to hide pathology names (Stealth Mode)
- 3D Augmented Reality showing animated anatomy with labeled structures that can be moved and rotated in 3D to learn structure identification and spatial orientation
- Ability to enable/disable anatomical structures on 3D Augmented Reality display and bone, lung and abdominal artefact on the ultrasound display
- Ability to switch between split screen and single screen views of 3D Augmented Reality display and ultrasound display
- Included self-directed instructional content modules that allow learners to practice in the absence of a live instructor:
 - Basic probe movements
 - Optimization of image settings
 - Obtaining views using Target Cut Planes
 - Echocardiographic measurements
- Target Cut Plane exercises that provide reference guides and images to aid learners the correct probe positioning / orientation to obtain specific ultrasound views
- Quantifiable kinematic metrics that can be recorded during Target Cut Plane exercises to assess and monitor user performance
- Ability to capture and export images, videos, reports and metrics
- Ability to connect the simulator to a second display, with the option to either extend or mirror the Vimedix interface onto said display
- Access to CAE Healthcare's ICCU E-Learning curricula

Differentiating Features

- Simulator content and kinematic metrics validated through numerous scientific publications published in peer-reviewed journals
- Multiple ultrasound modules on a single common platform with a single manikin (cardiac, lung, abdominal)
- Self-directed instructional content that makes ultrasound learning more easily scalable
- Continuous development of new functionalities and content
- 3D/4D cardiac ultrasound for improved assessment and diagnosis
- Microsoft HoloLens compatible for more enhanced and intuitive ultrasound learning in Augmented Reality