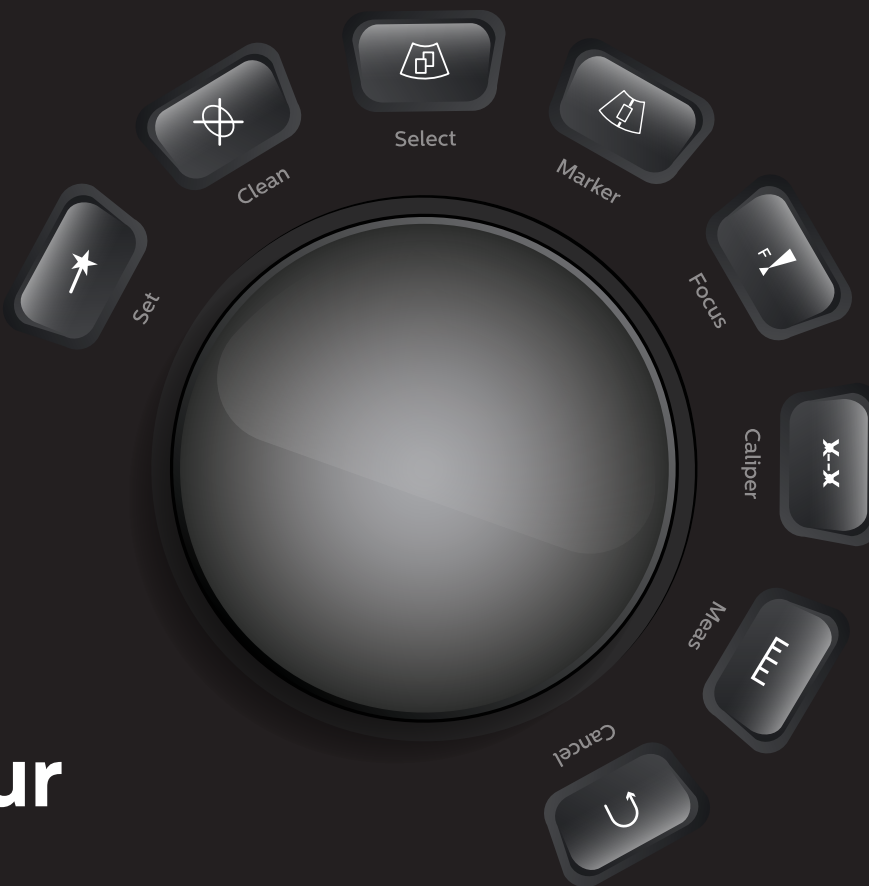




Fulltouch **LUNA** Ultrasound Systems

Customize the fulltouch screen interface to suit your unique workflow



www.simut.ir/products/luna

SIMUT

Enhancing diagnostic confidence. Improving patient care.

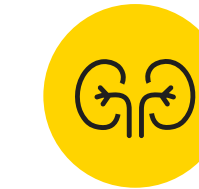
The LUNA ultrasound system fluidly brings together an intuitive interface, imaging performance, advanced features, and educational resources in a convenient, all-in-one case, and fulltouch screen design.

LUNA constantly evolves to meet your needs

Since inception, LUNA has continuously evolved to meet your needs. Multiple software upgrades & Artificial Intelligence (AI) and development using fuzzy networks expanded functionality, while several transducers ensure you have the tools you need. We also added new exam types, measurements, and calculations. At your request, we've made numerous workflow and menu enhancements.



Product Segmentation



General Imaging

We are innovating every day in a general imaging ultrasound system and give you the best solution to care for a wide range of patients and full applications from abdominal to endocrinology. We have always tried to provide the highest efficiency for users by using modern technology as well as the use of Artificial Intelligence (AI) networks and through exceptional image quality, advanced quantification to provide information to customers to enable a more confident diagnosis.



OB/GYN

For Obstetricians and Gynecologists an ultrasound machine has become a primary tool for diagnosis. Simut ultrasound women health's care machines will provide easy calculations, variety smart measurements using deep learning method and Artificial Intelligence (AI), common measurements and women's health specific reports, excellent 2D image quality, specialized automatic measurements and have the option to do other types of scans such as 4D, Elastography or Doppler.



Point of Care

Simut family in point of care group provided a pocket-sized ultrasound system to the simplicity of a tablet and a portable console device with high ergonomic, intuitive, improve clinical outcomes, enhance patient care, increase staff satisfaction and reduce costs of care. Fully compact system, variety to smart applications, transducers, intelligence performance and function, automatic measurements, quite powerful with longevity, and all you need to expect from a compact and portable system.



Cardiovascular

Simut's ultrasound systems are all equipped with comprehensive cardiac and vascular packages by the applications and transducers. Intelligence analyzes for diagnosis specifically by Artificial Intelligence (AI) with a special focus to early and fast automatic detection without any clicking, outstanding functionality and performance, highest accurate diagnosis, fluently workflow and preventive quality of healthcare protocols.

#1 Luna Portfolio

Luna Pro

New premium ultrasound that combines the latest advances in transducer innovation and enhanced performance to improve clinical confidence & patient experience. If you are looking for a state of the art ultrasound device in your treatment center, LUNA pro will meet all your needs.

Luna Eco

Economy model from Simut LUNA Family that it can cover everything you expect from a general ultrasound machine. Experience with just a few touches! we control our electronic world by touch. We tap, swipe, pinch, and zoom, also we can define a gesture key. If you are looking for a high-performance ultrasound scanner, with diagnostic capabilities in many different fields of application, highest accuracy, and confidence in your diagnosis, it is enough to experience LUNA once.



Improve decision making with better image visualization:



The LUNA ultrasound system based on the windows system, combining compact design, high-resolution clinical images, and friendly workflow with new advanced technologies that simultaneously provide enhanced spatial detail with increased frame rates for improved visualization of moving structures while optimizing image formation to reduce noise and artifacts. Imaging and Doppler improvements allow for a more consistent visualization of subtle tissue contrast differences and can improve the ability to see small structures.

Advanced software that meets all the needs of physicians in daily activities with smart measurements guarantees maximum reliability and ease of use with the highest accuracy. LUNA ultrasound designed to meet the requirements for a wide range of applications & clinical environments. The system delivers premium performance and an intuitive workflow. Perfect for use general imaging, women's healthcare, and cardiology.

The all-touch advanced imaging capabilities LUNA ultrasound system reflects perfectly today's needs for diagnostic capabilities in many different fields of applications from Radiology and Cardiology to Women's Healthcare and Emergency.

This device is designed to be light with high ergonomics and can easily move between different parts of medical centers.

Superb image quality and the use of Artificial Intelligence (AI) technology make easier and faster for users and improve diagnostics. optimized workflow is always at your fingertips, you can customize all your unique needs just by one touch.

This device has the ability to independent and simultaneous management of multiple users for use and can cover a complete range of probes and advanced applications.

Fulltouch screen interface LUNA Ultrasound systems



Customize the touch-screen to suit your unique workflow

Optimized workflow is always at your fingertips, even while you are wearing gloves. Easily customize the LUNA systems interface to suit your unique needs. If you don't like the size and location of the buttons on your customized touch-screen, change them.

If you want to remove some buttons on your touch-screen, minimize them. You can also change the color of your buttons' performance as well as design of your own touch panel screen!



Techniques

Digital wide-band multi-frequency scanning
Multi-angle compound imaging
Second harmonic (2H)
Inverse harmonic (InvH)
Availability of improving image filters
Automatic optimization of echo images

B-mode (2B, 4B)

M-mode:
M-anatomic mode
Color M-mode
Tissue Doppler M-mode

Color mapping of:
Blood flow velocity
Blood flow power
Tissue movement
Dynamic flow

Blood flow velocity measurement:

PW mode
CW mode
PD mode

3D/4D-mode

Tissue movement velocity measurement:
PWTD-mode

Vessel's wall stiffness measurement:
Possibility of early diagnosis of atherosclerosis.

Shear Wave Elastography and Elastometry:
Quantitative estimation of tissue stiffness, including high accuracy in determining of the liver fibrosis stage.

Compression Elastography:
High-quality visualization of tissues with different stiffness and quantitative estimation of stiffness.

Fatty liver disease:
Steatosis measurement by attenuation coefficient (AC) analysis

State-of-the-art High-Tech
Platform & Design



rear
view



side
view



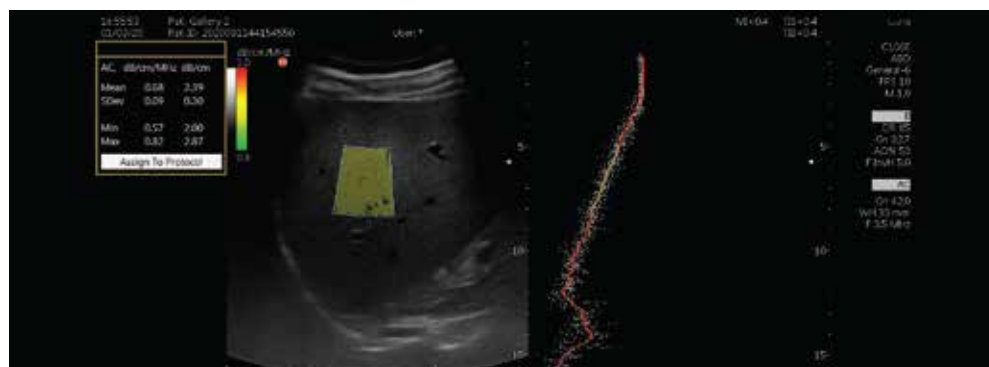
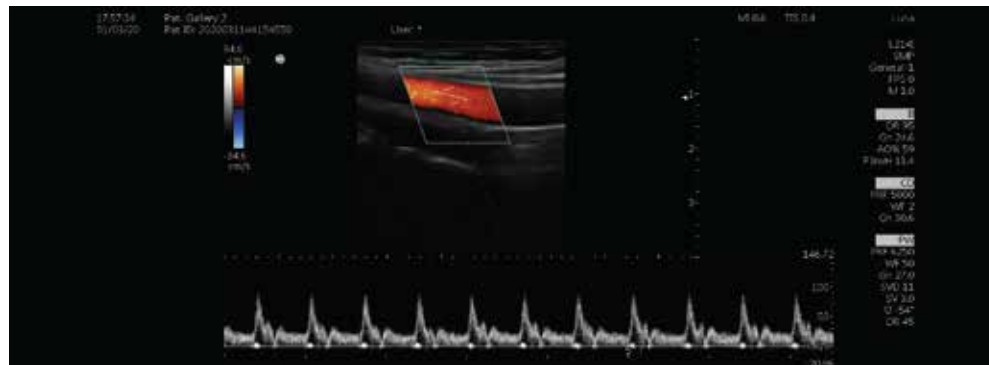
front
view

Superb Image Quality & Enhanced Workflow Courtesy

LUNA provides various applications and presets, which encompasses general advanced ultrasound imaging. You will be able to optimize and adjust your favorite image as you wish. Due to providing a lot of set up tools in all ultrasound modes, you will be able to create any kind of real-time imaging if you like.

A perfect image contains advantageous information about tissue characteristics, has a high signal-to-noise ratio, does not suffer from an artifact, has equal image properties throughout the imaging sector, permits you easily track the structures of body organs, and has a great resolution (in terms of spatial, lateral, axial, contrast and temporal resolution).

LUNA ultrasound system is all about balance. You have superb image quality, accurate diagnostic information, a simplified yet intuitive user interface, and easy access to the critical features at your hand.



Designed with our users in mind

Easily maneuver LUNA around beds and exam tables. For portability and durability, The LUNA monitor rotates easily to any direction you want. The modular design and removable engine provide easy service support of individual components.

LUNA touch ultrasounds come in a variety of designs - based on next-generation technology and customer voice guidance from ultrasounds around the world. Without any problems with heritage products, we had the freedom to offer a completely new ultrasound solution with features that change the way you work.

With LUNA touch, unprecedented ergonomics begin with a modern control panel. Primary controls have tactile feedback from traditional keys, which can be adjusted with the possibility of soft controls. But this is only for beginners: This system has a quite compact design for navigating in busy places, and it is fully adjustable, so it can be placed in all scanning situations, greatly reducing stress and fatigue.

Monitor

LUNA has adopted the highest 19" High-resolution monitor providing clear clinical images and optimum image display wider viewing angle featured by IPS technology to prevent the undistorted images.

Height Adjustment

The 1-axis arm is employed for the up/down mechanism of the whole system height, enabling height adjustment of the panel easily with one up and down push button.

Easy Movement

Silent casters, universal brakes, multi-directional movement without obstacles. The steel plate base is equipped with high-quality brakes.



Fulltouch control panel

Optimized workflow is always at your fingertips, even while you are wearing gloves. Easily customize the LUNA interface to suit your unique needs. Tilting ability for a customized setup drives convenience and satisfaction.

Transducers

There are two options for the LUNA transducers device, the first with two probe outputs and the other with four probe outputs which can be selected based on the customer's order.

Dedicated foot-rest area improves comfort while scanning.

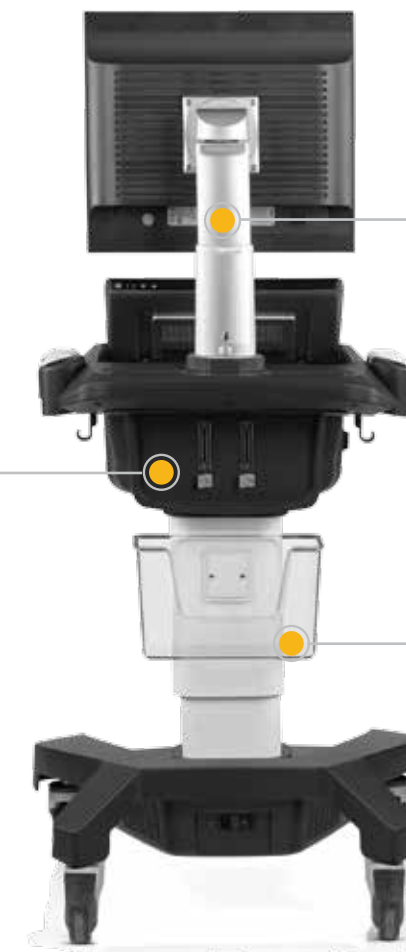
Arm Monitor

The monitor allows you to do tilt, swivel and rotation.

Basket

There is a basket on the back of the LUNA series, so you can use it to put various objects such as ultrasound printer paper, ultrasound gel and probe placement.

Handy storage bins hold procedure essentials



Artificial Intelligence [AI]

The potential to change the face of medical imaging is by two cutting edge technology that are Artificial Intelligence (AI) and Augmented Reality (AR). These technologies have revolutionized image interpretation and visualization. Machine Learning algorithms can learn to see patterns similar to the way doctors see them, hence, they can support diagnosing procedure. On the other hand, AR makes a great promotion in the methods of displaying medical images for learners and surgeons.

At MFP, we provide intelligent solutions that help people to improve their healthy lifestyles, and increases the efficiency of medical imaging systems by using AI and AR. We aim to become the most influential company in the region by the year 2025. Regarding the growing nature of our projects, hard-working, intelligent people are always welcome to join us

Auto IMT

The carotid intima-media thickness test (CIMT) is a measure used to diagnose the extent of carotid atherosclerotic vascular disease. The test measures the thickness of the inner two layers of the carotid artery—the intima and media—and alerts physicians to any thickening when patients are still asymptomatic. We have proposed a novel real-time system for automatic IMT measurement in our ultrasound machines.

Fetal Biometry Measurement

The fetal biometry measurement encounters several challenges, including the presence of speckle, limited soft-tissue contrast, and difficulty in the presence of low amniotic fluid. We proposed a reliable system based on deep learning for automatic segmentation and measurement of fetal biometry parameters in ultrasound images. Our novel architecture learns to extract fetal head, abdomen, and femur automatically as the object of interest. The system outperforms the state-of-the-art approaches in the segmentation of fetal ultrasound images and automatic measurement of biparietal diameter (BPD), head circumference (HC), abdominal circumference (AC), and femur length (FL).

Breast Tumor Analysis

Ultrasound plays an essential role in breast disease diagnosis, follow up, and guided biopsy. Several efforts have been performed to classify breast tumors automatically. At MFP, we are developing a powerful image understanding system for distinguishing breast lesions and BI-RADS prediction.

Smart Kidney Measurement

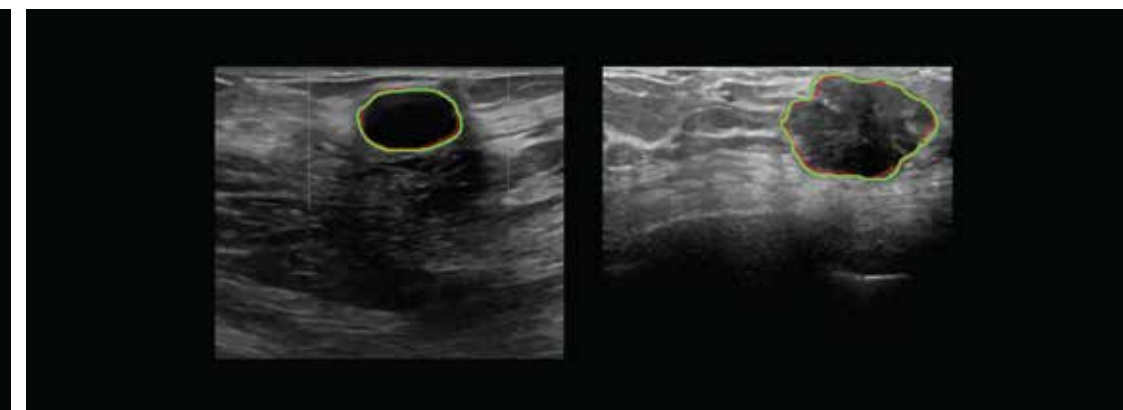
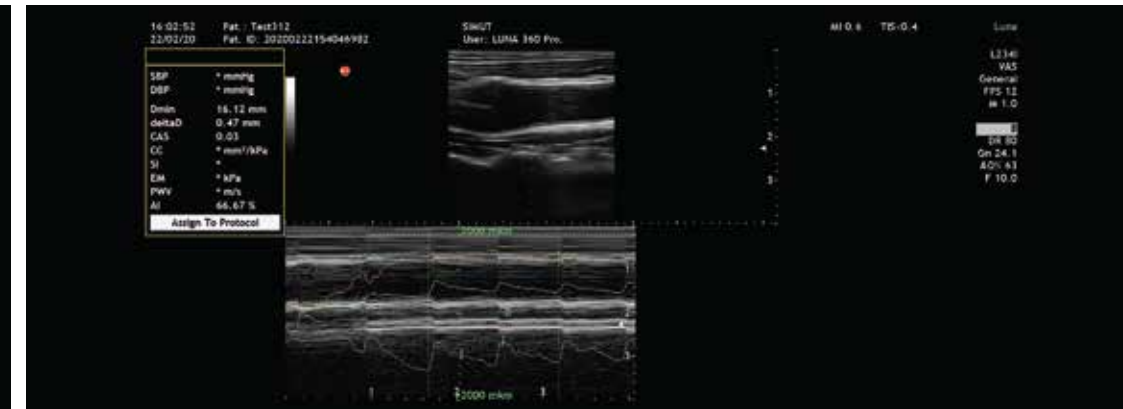
Kidney measurement is a tedious and time-consuming task, which is performed automatically in LUNA AI service. Kidney length, width, and parenchyma size are measured without any click. Our intelligent system segments the kidney in the ultrasound images, predict the length and width, and finally separates the parenchyma from the image to approximate its length.

Cardiac Echo Quantification

Quantification of global and regional functional parameters of the cardiovascular system is a time-consuming and tedious task. We are developing an intelligent heart analysis system to extract chamber volumes, ejection fraction (EF), fractional area change (FAC), wall motion abnormalities, etc. from echocardiography sequences. Our deep learning-based system has a novel architecture, which we named it based on our company: MFP-Unet.

E-AS

Evaluation of the rigid-elastic properties of the vascular wall of the arteries and measurement of some parameters (such as minimum vessel diameter per heart cycle, changes in vessel diameter per cardiac cycle, arterial tension index, arterial stiffness index, modulus of elasticity, single-point pulse wave speed, and growth index) are helpful tools for vessel analysis. We have provided these parameters in our ultrasound machines.





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