





## XCUBE 90

eXtensive Insight  
eXpanded Capability  
eXceptional Care

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Standalone clinical images may have been cropped to better visualize pathology.

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# Infinite Insight XCUBE 90



**ALPINION MEDICAL SYSTEMS**  
We are Ultrasound Professionals



# Exceptional value in your patient care

X-CUBE offers the highest level of efficiency and insight for healthcare providers, enabling you to utilize clear and detailed image and a comfortable user interface. X-CUBE 90 reflects the needs of fields that require quick and accurate diagnosis. With ALPINION's amassed image processing technology and the latest diagnostic solution, more precise diagnosis and quicker decision are now possible. Improve the quality of your diagnosis with X-CUBE 90.

ALPINION is a professional ultrasound value innovator that manufactures and supplies full systems, including transducers, diagnostic and therapeutic ultrasounds, based on its own advanced technology. X-CUBE 90 is a newly created premium diagnostic system developed with ALPINION's state-of-the-art technology. It integrates a one-probe solution with high-resolution and wideband, a seamless transducer and X<sup>+</sup> FIT, which is an imaging technology. ALPINION is working closely with healthcare providers and patients to develop advanced, optimized technologies by reflecting their needs to improve the quality of human life while adapting and responding to the changes in the today's challenging environment.

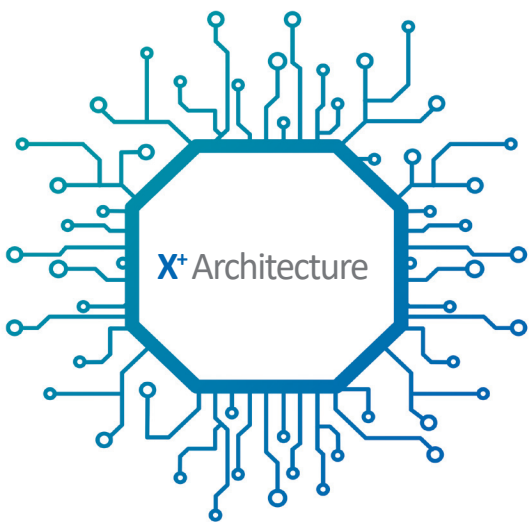
Powered by **X<sup>+</sup>** Architecture



# eXtensive Insight

## Powered by X<sup>+</sup> Architecture

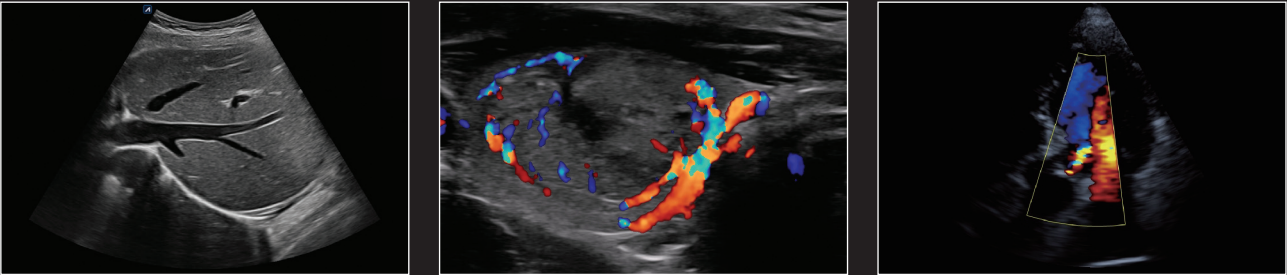
X<sup>+</sup> Architecture is a premium imaging platform created by combining X<sup>+</sup> Crystal signature™, the transducer technology with high sensitivity, wideband, and X<sup>+</sup> FIT, ALPINION's cutting edge beamforming and data processing technology. X<sup>+</sup> FIT is a new technology that transmits ultrasound beam width sharply, receives a large volume of data and processes it at a high speed. In addition, X<sup>+</sup> Crystal signature™ applies a single crystal and our own special material in the transducer to achieve excellent clarity to extend insight.



- Spatial Resolution ↑**  
X<sup>+</sup> FIT's beamforming technology based on  
X10 data transmission speed  
X14 data processing speed
- Frame rate ↑**  
X<sup>+</sup> FIT's multi-beam receiving technology
- Sensitivity ↑, Penetration ↑**  
X<sup>+</sup> Crystal Signature technology applied  
new Single crystal and Special materials

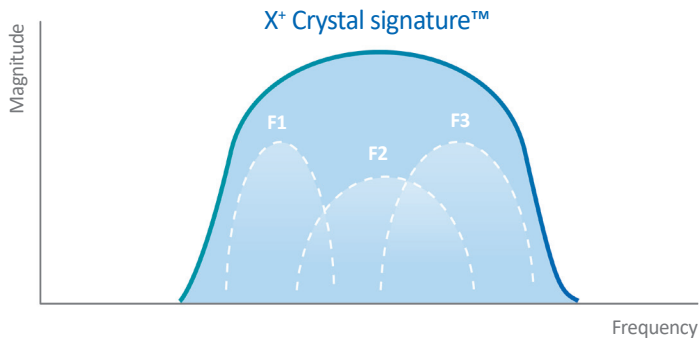
\* Compared to our previous model (E-CUBE 15 Platinum)

### eXtensive Insight Powered by X<sup>+</sup> Architecture



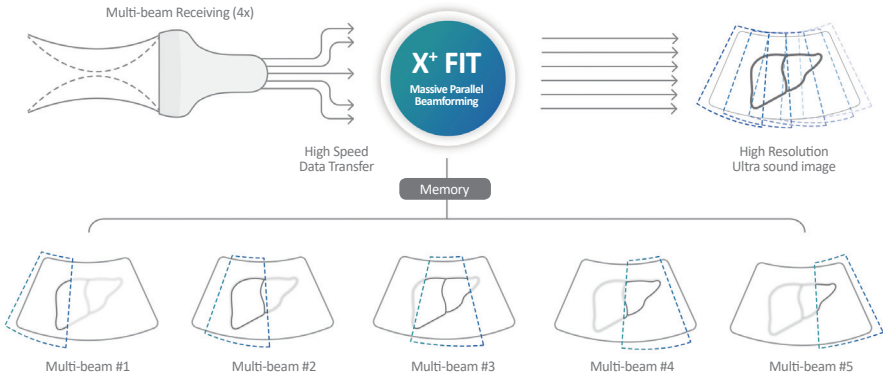
### X<sup>+</sup> Crystal signature™

Upgraded single crystal and a special material matching layer and backing material allow heat dissipation and minimize signal loss. ALPINION's signature transducer technology allows you to experience insightly clear image quality with high sensitivity and wideband, which shows significant improvements in image resolution, contrast, and uniformity. ALPINION develops and manufactures its own transducers, the key to ultrasound imaging.



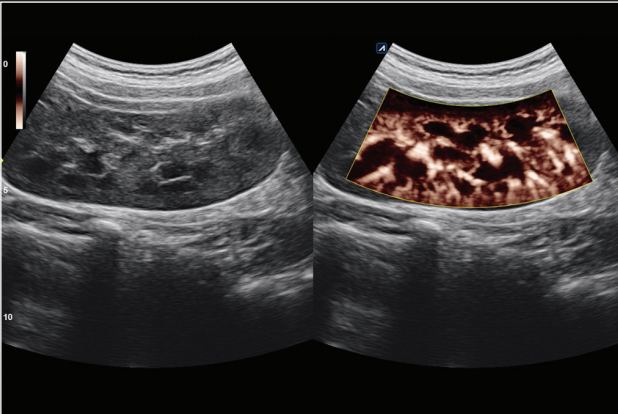
### X<sup>+</sup> FIT

X<sup>+</sup> FIT is a beamforming technology which improves resolution, frame rate, and uniformity. X<sup>+</sup> FIT utilizes massive parallel beamforming whose architecture is capable of transmitting 4 times larger volume with 10 times faster capacity and also processing data 14 times faster than our previous model (E-CUBE 15 Platinum). X-CUBE 90's high resolution imaging is a prerequisite for accurate diagnoses and quick decision-making.

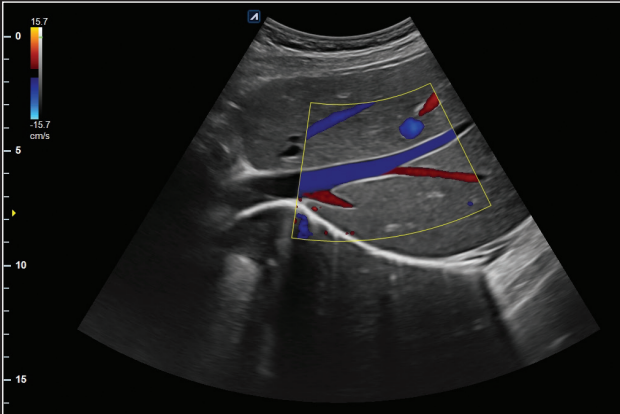




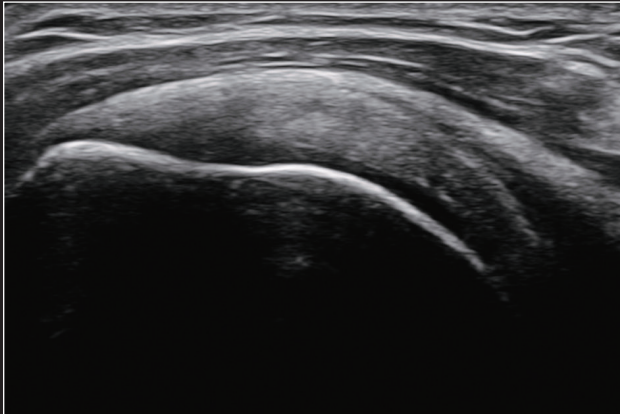
# Powered by X<sup>+</sup> Architecture



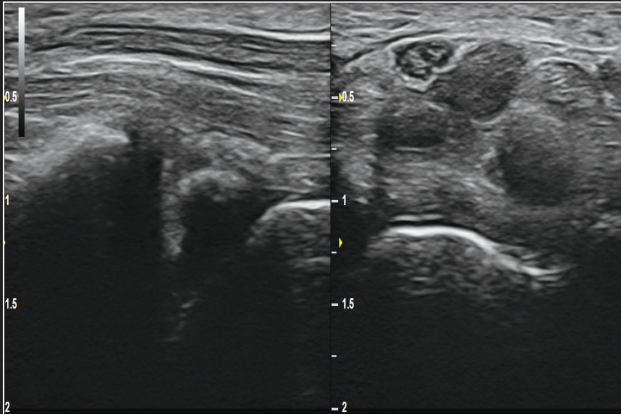
Kidney in Live Dual



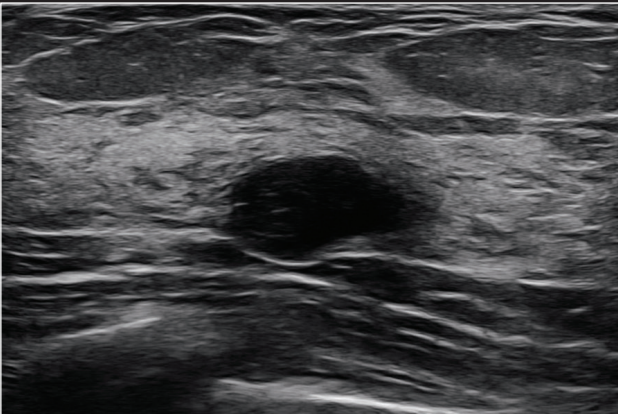
Liver in CF mode



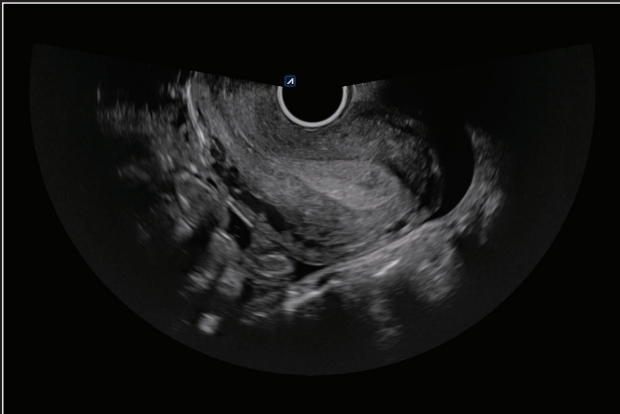
Shoulder in 2D mode



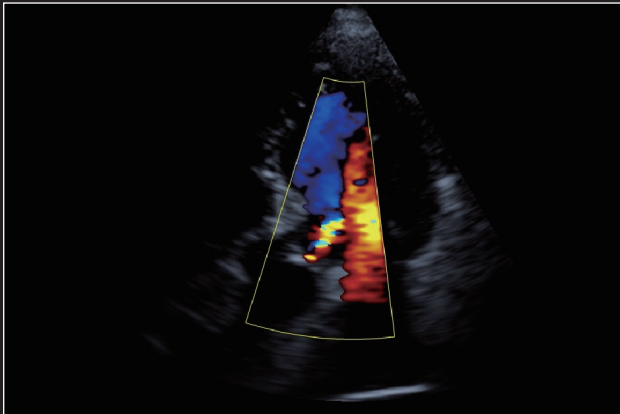
Wrist in 2D mode



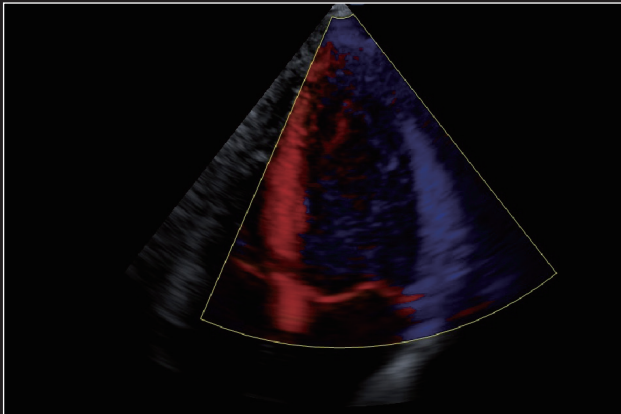
Breast nodule in 2D mode



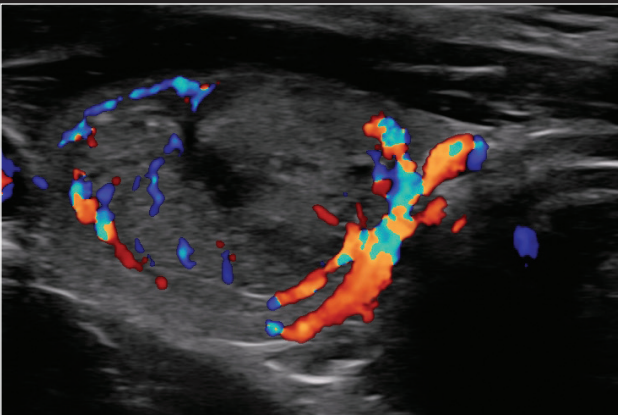
Uterus in 2D mode



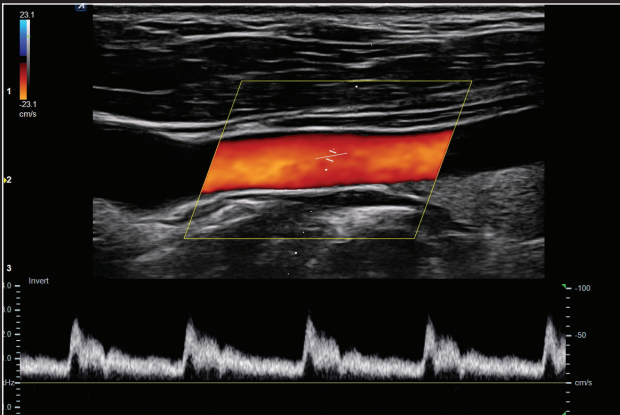
Cardiac in CF mode



4 chamber view in TDI mode



Thyroid nodule in CF mode



Carotid artery in PW mode



Fetal spine with Max mode



Fetus face at 29 weeks in 2D mode



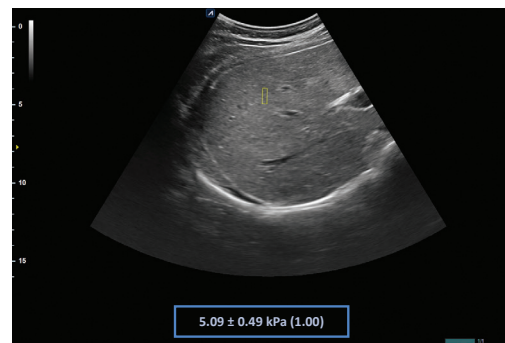
# eXpanded Capability

X-CUBE 90 is designed to provide objective and accurate diagnoses based on expanded technology. Intelligent clinical features upgrade diagnostic accuracy to new levels. Broaden your skills and range of capabilities.



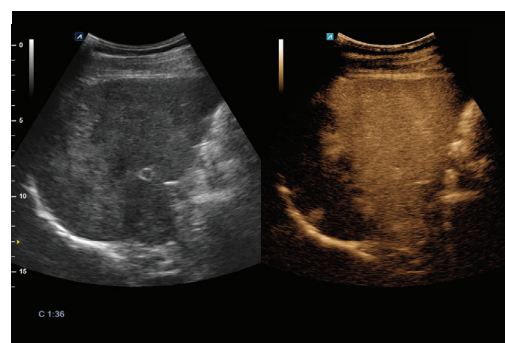
## X+ MicroView

X+ MicroView is the vascular imaging mode which displays micro blood flow. Users can observe the low-speed blood flow of tiny blood vessel. With this technology, low-speed blood flow areas which users previously couldn't see on Color Doppler are shown at the fast frame rate.



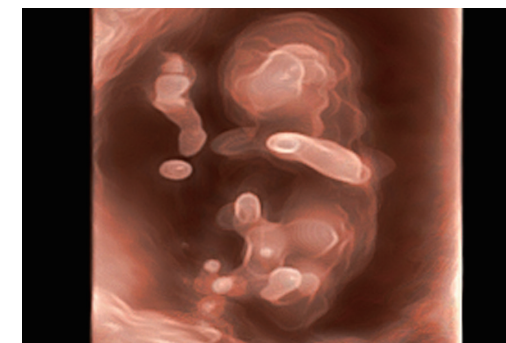
## X+ pSWE

Point Shear Wave Elastography shows objective quantified stiffness of tissue using the radiation force from a focused ultrasound beam. Users can identify significant liver fibrosis non-invasively, so it reduces unnecessary biopsies and increases patient satisfaction. Especially X+ pSWE ensures the highest reliability of measured results by displaying the Reliability Index.



## CEUS (Contrast Enhancement Ultrasound)

This is a function to diagnose patients using various angiographic patterns that appear while a contrast medium, administered intravenously, diffuses in blood vessels and organ tissue. CEUS has many advantages in various clinical indications for liver disease.



## Silhouette Imaging

This new technology provides silhouette outlines of the human fetus and other structures clearly. By using Live HQ technology with a shadowing effect, Silhouette imaging technology allows to delineate the outlines of structures behind the directly visualized structure.



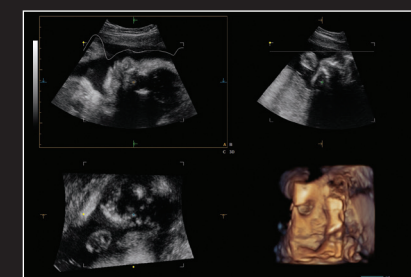
3D Speckle Reduction Imaging (SRI)



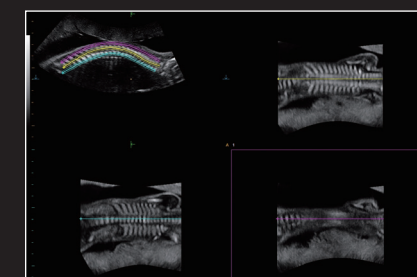
Depth View



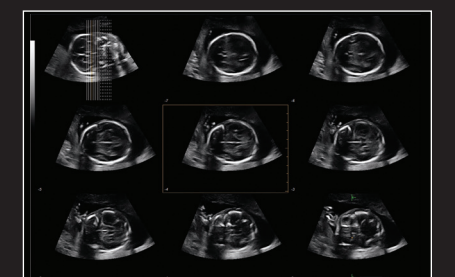
Live HQ



Clear Face



AnySlice™



Multi Slice View





# eXceptional Care

The detailed work process designed by X-CUBE 90 cares beyond realizing a more efficient working environment for medical professionals. Intuitive directions improve efficiency for medical professionals, and the transducer design provides comfort for the patient, thereby improving the quality of diagnoses.



## Reinforce durability with seamless transducer (SL3-19H)

The seamless transducer increases durability by using a special material, rather than rubber, which can be easily parted or damaged by contact with syringe needles, and also improved cleanliness with an all-in-one type mold.



## 10–25 MHz high resolution transducer (L10-25H)

Ultra-high frequency linear transducer, L10-15H, allows superficial regions such as small saphenous vein and peroneal nerve to be displayed more clearly and accurately.



## Comfortable grip (SVC1-8H)

The lighter, more compact single crystal volume convex transducer features an improved grip thanks to an ergonomic design, and thereby increases user convenience.

\* Compared to the transducer SVC1-6H, 20% lighter and 23% smaller



## Patient FIT transducer (EV/EC2-11H)

Minimizes patient discomfort during diagnoses with 36% smaller tip. Provides optimal care based on patient convenience.

\* Compared to the transducer of previous ALPION endocavity

## X<sup>+</sup> Assistant

X<sup>+</sup> Assistant enables users to reduce keystrokes by at least 50% and save time when conducting examinations. Registered optimal scan protocols that follow guidelines that each application requires help to reduce operator's fatigue and increase efficiency in operation. In addition, it is also possible to register applications and protocols optimized.

## X<sup>+</sup> Compare

This is a feature that allows users to import patients' previous study from a PACS server or hard disk and compare when scanning and reviewing. By comparing previous images of the same region, users can easily observe the patient's progress, thereby making this feature useful for providing patient care. X<sup>+</sup> Compare can be used not only in scan mode, but in review mode (E-View) as well.

\* X<sup>+</sup> Compare supports ultrasound studies only.

## X<sup>+</sup> Auto Biometry

When measuring Estimated Fetal Weight (EFW), the smart recognition algorithm allows you to automatically identify a structure of interest and measure fetal head circumference (HC), biparietal diameter (BPD), femur length (FL), abdominal circumference (AC) and Humerus. This feature boasts a examination speed and a high accuracy.

## USB Real-time recording

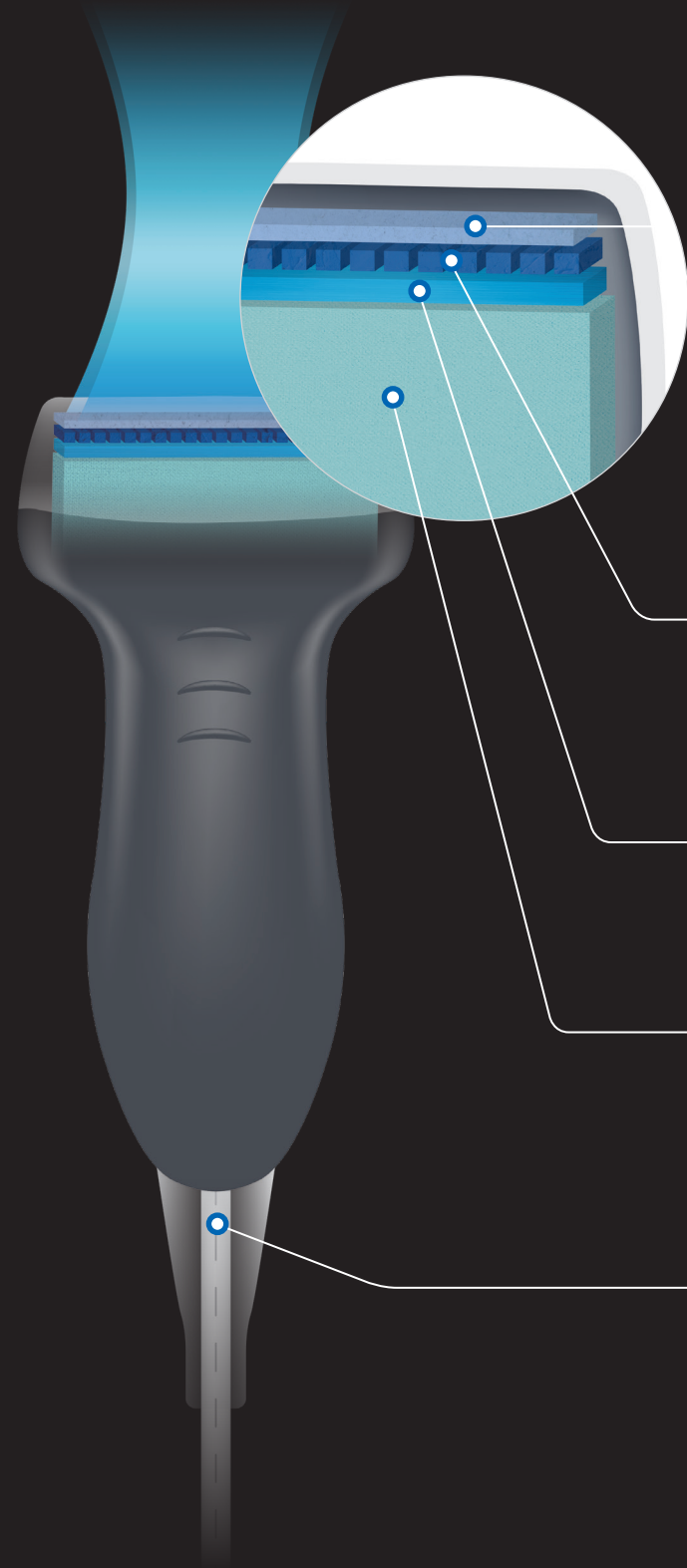
USB real-time recording makes data storage easier by allowing users to record ultrasound scan images on USB memory in real time. Videos are recorded as high-definition and stored in system quickly.





# ALPINON's Transducer Technology

The key to transducer technology is its process of generating a high sensitivity and wideband acoustic signal and receiving it without any loss, then converting it to a digital signal. ALPINION MEDICAL SYSTEMS has researched and developed the core technology of transducers and X<sup>+</sup> Crystal Signature™ is the accomplishment of all the innovative technologies we've accumulated.



## X<sup>+</sup> Crystal Signature™

### Special matching layer

We use a special material to increase the penetration efficiency of the acoustic power, thereby improving sensitivity and bandwidth.

### Upgraded Single Crystal

The upgraded single crystal features improved transmissivity of the ultrasound and produces high-resolution images.

### Quasi decoupling layer

Its unique structure increases ultrasound penetration efficiency and makes it possible to reach deeper tissues.

### Signal loss minimization

ALPINION's special material minimizes signal loss and maximize heat dissipation with our special material.

\* Thermal conduction efficiency increased 3.5 times compared to our previous product

### High sensitivity signal transmission

High performance low loss cable transmits high sensitivity signals to achieve optimal impedance matching with the system.



# Transducers

Developed and manufactured by ALPINION

## Convex

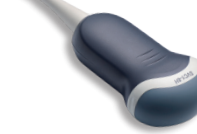


SC1-7H

New

X<sup>+</sup> Crystal Signature™  
Abdomen, EM, Gynecology,  
Obstetrics, Pediatric, Urology

## Volume Convex



SVC1-8H

New

Single Crystal Volume Convex  
Abdomen, Gynecology,  
Obstetrics, Pediatric, Urology, EM

## Linear



SL3-19H

New

X<sup>+</sup> Crystal Signature™  
Abdomen, Pediatric,  
Gynecology, Obstetrics, EM,  
MSK, Vascular, Small Parts, TCD



L10-25H

New

Wideband Ultra High Freq. Linear  
EM, MSK, Vascular, Small Parts



L3-12X

Extreme High Density Linear  
Pediatric, EM, MSK, Vascular,  
Small Parts

## Endocavity



EC2-11H

New

X<sup>+</sup> Crystal Signature™  
Gynecology, Obstetrics, Urology, EM



EV2-11H

New

X<sup>+</sup> Crystal Signature™  
Gynecology, Obstetrics, Urology, EM



VE3-10H

New

Volume Endocavity  
Gynecology, Obstetrics, Urology, EM

## Phased Array



MP1-5X

New

X<sup>+</sup> Crystal Signature™  
Abdomen, Pediatric,  
Cardiac, EM, TCD

## Pencil



CW2.0

Pencil Typed  
Cardiac



# Intuitive design for your daily practice



## 23 inch FHD LED Screen

Enjoy a larger widescreen and clear, high-definition images.



## Compact Size & Weight

Its compact size and light weight measuring 85 kg provides great mobility.



## Motorized Control Panel

The control panel can be easily adjusted vertically with its motorized button.



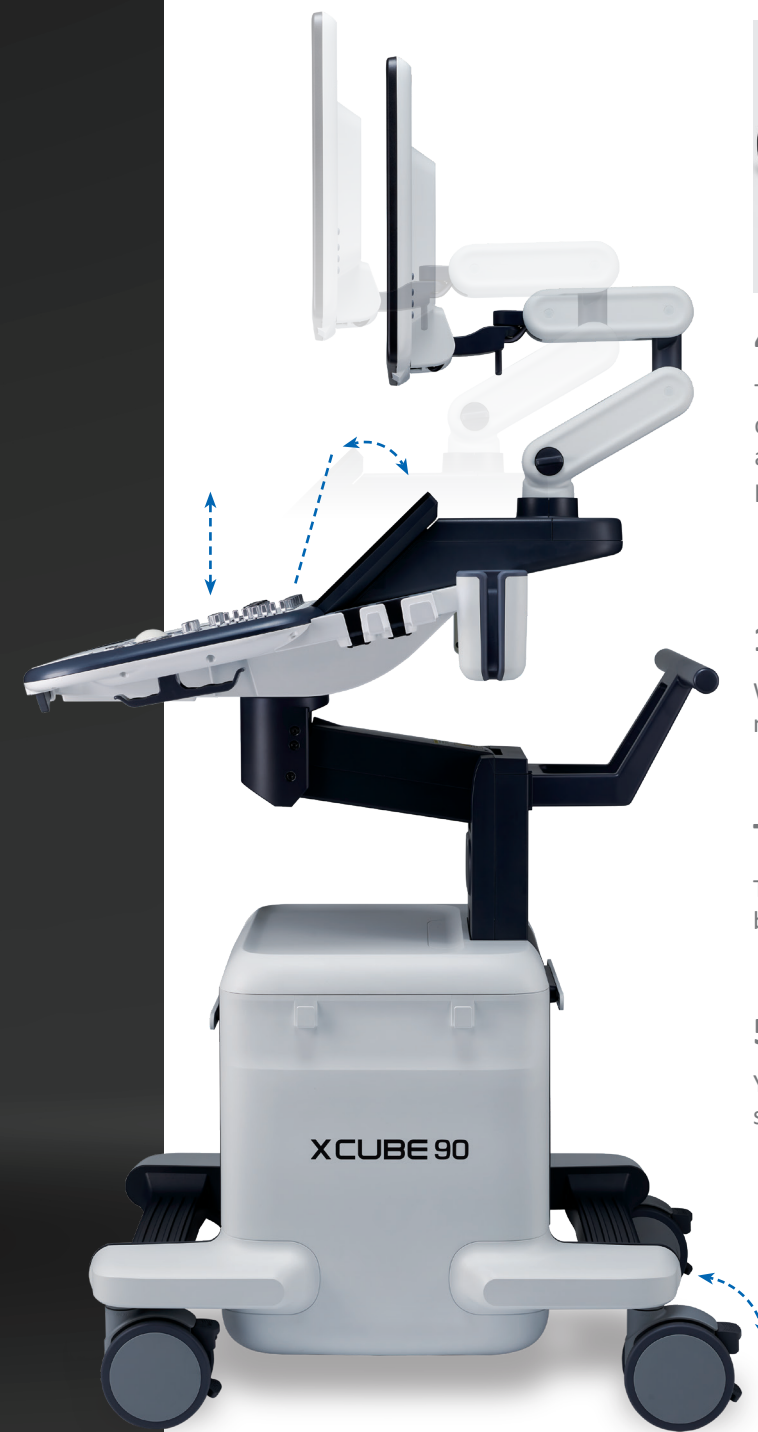
## 4 Swivel Wheels

Thanks to the 4 swivel wheels, the system can be moved around with a little effort and can be operated comfortably in any position.



## Antivirus Solution

As its automatic virus scanning function is activated whenever the system boots, patients' information is more securely protected.



## 12.1 inch tilting LCD color touch panel

We've combined angle adjustment functionality with its larger, full-color touch panel to maximize user convenience.

## Time saving solution

The built-in battery guarantees mobility while it is in use and Sleep mode helps the system boot up faster.

## 5 Transducer Ports

You can use a variety of transducers as required with no need to replace them, and thus saving time during conducting diagnosis.