

## Secure your care

Samsung Healthcare Cybersecurity

### Bringing peace of mind to your hospital and patients

To address this emerging need for cybersecurity, Samsung provides a solution to support our customers by offering the tools to protect against cyberthreats that may compromise invaluable patient data and ultimately degrade the quality of care. Samsung's Cybersecurity Solution strives to abide by the CIA triad (Confidentiality, Integrity, and Availability) and takes a comprehensive approach to providing impeccable protection with the following pillars: Intrusion prevention, Access control, and Data protection.



#### Intrusion prevention

Tools for protecting against cyber threats from external attacks

- Security tools include Anti-virus & Firewall
- Secured operating system



#### Access control

Strengthened surveillance for tracking the access of patient information

- Account management
- Enhanced audit trail



#### Data protection

Encryption functions for safeguarding data whether at-rest or in-transit

- Data protection
- Transmission security

- \* This product, features, options and transducers are not commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local sales network for further details.
- \* Elite is not a product name but is Samsung's marketing terminology. This term may vary by country, time and model.
- \* S-Vue is not the name of a function, but is the name of Samsung's advanced transducer technology.
- \* In Canada and USA, strain value for ElastoScan is not applied.
- \* Crystal Clear Cycle is not the name of a function, but is Samsung's marketing terminology.

About Samsung Medison CO., LTD.

Samsung Medison, an affiliate of Samsung Electronics, is a global medical company founded in 1985. With a mission to bring health and well-being to people's lives, the company manufactures diagnostic ultrasound systems around the world across various medical fields. Samsung Medison has commercialized the Live 3D technology in 2001 and since being part of Samsung Electronics in 2011, it is integrating IT, image processing, semiconductor and communication technologies into ultrasound devices for efficient and confident diagnosis.

### SAMSUNG MEDISON CO., LTD.

© 2020 Samsung Medison All Rights Reserved.

Samsung Medison reserves the right to modify the design, packaging, specifications, and features shown herein, without prior notice or obligation.

CE0123

# Vision of a new dimension

## Ultrasound system WS80A with Elite



Scan code or visit  
[www.samsunghealthcare.com](http://www.samsunghealthcare.com)  
to learn more



**EXPERIENCE**  
A New Healthcare  
Solution

**SAMSUNG**



# CRYSTAL CLEAR CYCLE™

Samsung's Commitment to Life-long Healthcare for Women

Crystal Clear Cycle™, an integrated solution for women's health issues, represents Samsung's commitment to ensuring life-long healthcare for women. The Crystal Clear Cycle™ categorizes the most significant health events for women into six stages and provides effective diagnostic solutions at each stage. The WS80A with Elite is the premium system that covers all six stages with effective diagnostic solutions. Built with high-quality imaging and innovative features, it supports healthcare professionals in making faster and more accurate decisions for women's health issues.



## Powered by CrystalLive™

CrystalLive™ is a new ultrasound imaging engine applied to Samsung's sophisticated image processing technologies. WS80A with Elite incorporates CrystalLive™ 3D and CrystalLive™ Color, Samsung's advanced 3D rendering and color technologies, to provide improved visualization and structure expression.



### CrystalLive™ 3D

#### Margin enhancement with HDVI™

High Definition Volume Imaging™ (HDVI™) is a volume rendering technology that improves visualization of edges and small structures in volume data. HDVI™ provides upgraded marginal expression and image saturation with dedicated image sets for 3D/4D.

※ Optional Extra



Cleft lip in 3D

#### Improved structural description with AmbientLight

※ Optional Extra

Creating intricately graduated shades, AmbientLight improves depth expression of the surface. This 3D rendering feature is especially useful to see fetal face or hands in detail.



Fetal face with different shades in AmbientLight

### CrystalLive™ Color

CrystalLive™ Color, Samsung's advanced blood flow imaging technologies in color mode, enhances the visualization and hemodynamics of the blood flow.



Umbilical cord

# Crystal clear image from advanced imaging technologies

The crystal clear image quality of WS80A with Elite is built upon the successes of Samsung technologies. Samsung's advanced imaging technologies deliver diagnostic confidence when diagnosing challenging patients.

## ClearVision

The noise reduction filter improves edge enhancement and creates sharper 2D images for optimal diagnostic performance. The integration of specialized Samsung technology results in a notable improvement in image quality. In addition, ClearVision provides application-specific optimization and advanced temporal resolution in live scan mode.

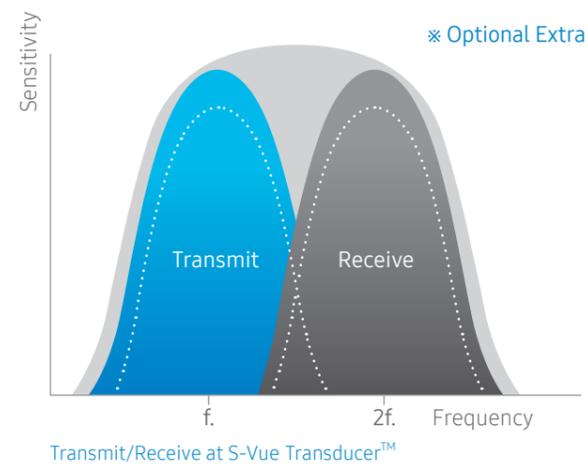
## S-Harmonic™

This new harmonic technology improves image clarity, near to far. Reducing signal noise, S-Harmonic™ provides more uniform ultrasound images. Combined with the S-Vue Transducers™, S-Harmonic™ takes WS80A with Elite image quality one step further.

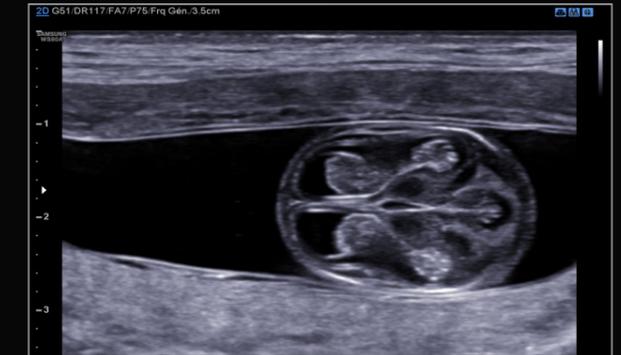
## S-Vue Transducer™

S-Vue Transducer™ provides more efficient piezoelectric properties, resulting in wider bandwidths that enable better penetration and higher quality resolution on even challenging patients.

\* Compared with the conventional Samsung transducers.  
\* The image is for illustrational purposes only and might differ from the actual performance of the device.



Fetal Heart in 4 chamber view \*



Fetal brain in ClearVision \*



Fetal abdomen in ClearVision \*



Umbilical artery in PW \*



Fetal abdomen



Umbilical cord in S-Flow™ \*

\* These clinical images were acquired using the WS80A V3.00 ultrasound system.



Healthy  
Pregnancy  
Biometry

## Intuitive fetal biometry measurements

Monitor fetal health more efficiently and effectively. The semi-automated functions, 5D Limb Vol.™, 5D CNS+™, and BiometryAssist™ enable the measurement of the growth of the fetus much faster and more accurately.

**5D Limb Vol.™**  
(Fetal weight estimation)

※ Optional Extra

5D Limb Vol.™ is a semi-automated tool to quickly and accurately measure upper arm or thigh volumes from 3 simple seed points on a single volume data set. These measurements can then be used to calculate an accurate estimation of fetal weight as well as provide additional information regarding fetal nutritional status.

**5D CNS+™**  
(Fetal brain measurement)

※ Optional Extra

5D CNS+™ uses intelligent navigation to provide 6 measurements from 3 transverse views of the fetal brain to enhance measurement reproducibility and streamline workflow. It includes axial, sagittal and coronal views with 9 planes following the international guidelines for assessing the fetal brain as set forth by the ISUOG.

**BiometryAssist™**  
(Fetal biometry estimation)

※ Optional Extra

Users no longer need to put effort and time into routine fetal biometry such as HC, BPD, AC, and FL. A semi-automatic technology for biometric measurement, BiometryAssist™, enables users to measure the growth of the fetus more quickly and with greater accuracy while maintaining exam consistency.



Family  
Planning

## Simple screening for risk of infertility

Check and manage the risk of infertility by using 5D Follicle™ and CEUS+ in 3D/4D.

**5D Follicle™**  
(Follicle measurement)

※ Optional Extra

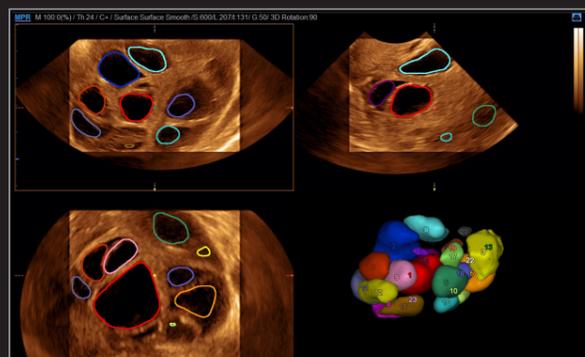
5D Follicle™ identifies and measures multiple ovarian follicles for rapid assessment of follicular size and status during gynecology examinations.

**CEUS+ in 3D/4D \***

※ Optional Extra

CEUS+ can be used in 3D/4D for effective examination for patency of the fallopian tube and morphology of uterus and endometrium.

\* 'CEUS+ in 3D/4D' is not the name of function. 'CEUS+' is the name of function.  
'CEUS+' is not commercially available in all countries.



5D Follicle™ \*



CEUS+ in 3D/4D



5D Limb Vol.™ \*

\* These clinical images were acquired using the WS80A V3.00 ultrasound system.



5D CNS+™ \*



Healthy  
Pregnancy  
Visualization

# Innovative fetal assessment

Discover Samsung's new, detailed volume imaging technology. The WS80A with Elite provides realistic 3D/4D images that enable you to see greater anatomical detail. It also includes CrystalVue Flow™, which combines morphological information and hemodynamic flow to bring greater understanding of the fetus.



Healthy  
Pregnancy  
Diagnosis

## Enhanced diagnostic confidence

With its advanced diagnostic tools, the WS80A with Elite supports your knowledge and experience to help you to make clear, confident decisions.

### 5D NT™ (Nuchal translucency measurement) \* Optional Extra

With Samsung's 5D NT™, operator dependency can be reduced for the first trimester fetal nuchal translucency (NT) measurement. 5D NT™ allows the user to obtain the true mid-sagittal plane automatically by rotating and auto-zooming the image. This advanced technology is especially useful when facing difficult cases involving fetal position.

### 5D Heart Color™ (Fetal heart examination) \* Optional Extra

5D Heart Color™ allows evaluation of fetal cardiac structures for potential blood flow disturbances, an important component of fetal cardiac examination. Using STIC volume datasets, color Doppler sonography is demonstrated in 9 standard fetal echocardiography views in a single display.



### RealisticVue™ \* Optional Extra

RealisticVue™ displays high resolution 3D anatomy with exceptional detail and realistic depth perception. User selectable light source direction creates intricately graduated shadows for better defined anatomical structures.

### CrystalVue™ \* Optional Extra

CrystalVue™ is an advanced volume rendering technology that enhances visualization of both internal and external structures in a single rendered image using a combination of intensity, gradient and position. The resulting image has the potential to enhance visualization and increase diagnostic confidence.

### CrystalVue Flow™ \* Optional Extra

CrystalVue Flow™ is an advanced volume rendering technology that provides increased depth perception of vascular structures and displays vessels in a range of different imaging planes. Based on CrystalVue™ technology, Samsung's volume rendering technology for visualizing interior and exterior structures, CrystalVue Flow™ adds improved spatial precision of hemodynamic flow to morphological information and provides a deeper understanding of relational anatomy and neighboring vessels.



5D NT™ \*



5D Heart Color™ \*



CrystalVue™

\* These clinical images were acquired using the WS80A V3.00 ultrasound system.



CrystalVue™



Gynecology  
& Breast  
Health

# Intelligent solutions for women's health

Even in complex cases, Samsung's intelligent solutions, such as S-Detect™ and IOTA-ADNEX, help you to make management decisions clearer and easier.

S-Detect™ (S-Detect™ for breast)

※ Optional Extra

S-Detect™ for Breast helps standardize reporting and classification of suspicious breast lesions by incorporating BIRADS @ ATLAS\* (Breast Imaging-Reporting and Data System, Atlas) into the tool. When the user selects a region of interest, S-Detect™ for Breast automatically defines the lesion boundaries, provides lexicon classification options and images export for an enhanced and streamlined workflow.

\* Registered trademark of the American College of Radiology. All rights reserved.

IOTA-ADNEX (Ovarian tumor classification)

※ Optional Extra

Samsung has adopted the ADNEX\* model for classifying ovarian tumors as proposed by the IOTA\*\* group and named it IOTA-ADNEX. Now all ultrasound procedures, from initial scan to the final report, can be carried out using the same system. It even fills in 2 ultrasound predictors\*\*\* automatically, as soon as they are measured, and provides a report that classifies the results according to the ADNEX model 5-level classification for ovarian tumors to help users make the appropriate decisions for managing the patient's condition.

\* Assessment of different neoplasias in the adnexa

\*\* International Ovarian Tumor Analysis

\*\*\* 2 ultrasound predictors:

- 1) Maximal Diameter of the Lesion (mm),
- 2) Maximal Diameter of the Largest Solid Part (mm)



ADNEX risk model in PC



ADNEX risk model in the Samsung ultrasound system



Intuitive result report in the Samsung ultrasound system



Healthy  
Birth

## Highly detailed information

E-Cervix™ provides highly detailed information which can be helpful for healthy deliveries. And the wide range of Neonatal/Pediatric transducers enables excellent detailed resolution and more efficient scanning of newborn babies and children.

E-Cervix™ (ElastoScan™ for Cervix)

※ Optional Extra

E-Cervix™ is a tool for measuring the stiffness of the cervix area. It uses an elastographic image to provide additional diagnostic information which can be helpful for predicting preterm birth and successful labor induction. This tool can increase reproducibility and reduce inter-observer variance using the sum of several elastographic images acquired over a few seconds. With various and reliable parameters, the E-Cervix™ helps you make more informed management decisions.

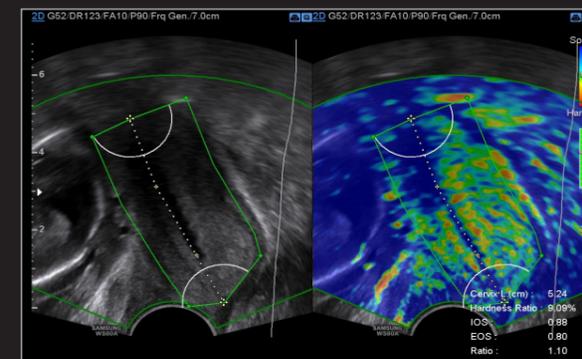
Neonatal/Pediatric transducers

※ Optional Extra

Highly advanced transducers allow for excellent detailed resolution and more efficient scanning.



Samsung Ultrasound System WS80A with Elite



E-Cervix™

\* These clinical images were acquired using the WS80A V3.00 ultrasound system.



S-Detect™ \*

# Designed for your convenience

With design aspects that enable clinicians to focus on imaging through features such as the large LED monitor and digital TGC, WS80A with Elite reduces stress when operating the system. It provides a comfortable environment as well as a streamlined user interface.

## 1 23-inch LED monitor

The WS80A with Elite features a 23-inch full HD LED display, delivering excellent contrast resolution, image clarity and vibrant color in any lighting condition.



## 2 10.1-inch touchscreen

The Samsung 10.1-inch touchscreen is highly sensitive, allowing for an efficient interaction during the examination.



## 3 Default gel warmer

Two-level adjustable gel warmer maintains ultrasound gel at a comfortable temperature.



## 4 Transducer cable hangers

Users can arrange the transducer cables neatly on the 2 hangers on either side of the system.



## 5 Adjustable control panel

Smooth up and down lift allows you to adjust the system to your preferred height without straining.



## 6 EC transducer holders \* Optional Extra

The WS80A with Elite features endocavity transducer holders for convenience when performing gynecological scanning and discrete storage when not in use.



# Comprehensive selection of transducers

## S-Vue transducer™

### Curved array transducers



**CA2-9A**

- Application : abdomen, obstetrics, gynecology



**CA3-10A**

- Application : abdomen, obstetrics, gynecology, pediatric



**CA1-7A**

- Application : abdomen, obstetrics, gynecology, musculoskeletal

### Volume transducer



**CV1-8A**

- Application : abdomen, obstetrics, gynecology

### Curved array transducers



**CA2-8A**

- Application : abdomen, obstetrics, gynecology



**CF4-9**

- Application : pediatric, vascular



**C2-6**

- Application : abdomen, obstetrics, gynecology



**SC1-6**

- Application : abdomen, obstetrics, gynecology

### Volume transducers



**LV3-14A**

- Application : small parts, musculoskeletal, vascular



**V4-8**

- Application : abdomen, obstetrics, gynecology



**V5-9**

- Application : obstetrics, gynecology, urology



**EV3-10B**

- Application : obstetrics, gynecology, urology

### Linear array transducers



**LA2-9A**

- Application : small parts, vascular, abdomen, musculoskeletal



**LA4-18B**

- Application : small parts, vascular, musculoskeletal



**LA3-16A**

- Application : small parts, vascular, musculoskeletal



**L5-13**

- Application : small parts, vascular, musculoskeletal



**LA3-16AI**

- Application : musculoskeletal



**LM4-15B**

- Application : small parts



**L3-12A**

- Application : small parts, vascular, obstetrics, musculoskeletal, abdomen

### Endocavity transducers



**EA2-11B**

- Application : obstetrics, gynecology, urology



**VR5-9**

- Application : obstetrics, gynecology, urology

### Phased array transducers



**PM1-6A**

- Application : abdomen, cardiac, TCD



**PE2-4**

- Application : abdomen, cardiac, TCD



**PA3-8B**

- Application : abdomen, pediatric, cardiac



**PA4-12B**

- Application : cardiac, pediatric