

# SAMSUNG

EXPERIENCE  
A New Healthcare  
Solution



## Hera W10

Image Is Everything



## Transforming Ultrasound

Hera, Greek goddess, protector of women and childbirth. Fiercely loyal and guardian of family. Empathetic and caring. Hera represents some of the best and important moments in life and reflects Samsung's passion and commitment to life-long healthcare for women.

Samsung is now transforming the ultrasound experience for both the clinician and the women they care for with the introduction of Hera. Hera, takes ultrasound to a new level, resulting in more meaningful ultrasounds that may lead to better clinical outcomes and brings calming reassurance to the women they care for. From exquisite image clarity and new technologies to assess blood flow to advanced ergonomics, Hera delivers ultrasound in a way never seen before.

## Because it's all about the Images

Our **Crystal Architecture™** is at the core of our exceptional image clarity and penetration and is built upon a combination of innovative beamforming and sophisticated image processing to produce clear, uniform and high resolution images.

### Crystal Architecture™

#### CrystalBeam™



#### CrystalLive™

Our state of the art **beamformer** leverages Coherent Pixel Summation and Massive Parallel Processing to efficiently and consistently create uniform image clarity throughout the field of view while maintaining high frame rates.

Our advanced **Image Processing System** provides exceptional detail and contrast resolution, artifact reduction and shadow suppression.

**This means high quality images, in less time, without the need for excessive manipulation.**

In the end, it is all about the images. Our exceptional image clarity and color sensitivity are the result of our Crystal Architecture, Transducers and Advanced Image Processing working seamlessly together to help you see the tiny details in every image in order to provide a confident diagnosis.

**10X**

**Data Transfer Rate \***  
for fast frame rates

**11X**

**Processing Power \***  
for high-quality images

**3X**

**GPU Memory \***  
for fast rendering



\* Compared to the Samsung WS80A with Elite

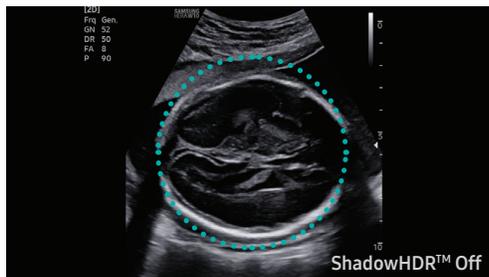
## Fundamental 2D Imaging, Elevated

2D imaging is at the heart of each and every exam and integral to a confident diagnosis. Hera elevates 2D imaging to a level not seen before thanks to shadow suppression, artifact reduction and image clarity techniques that produce grayscale images with crisp interfaces, outstanding contrast resolution and precise spatial detail.

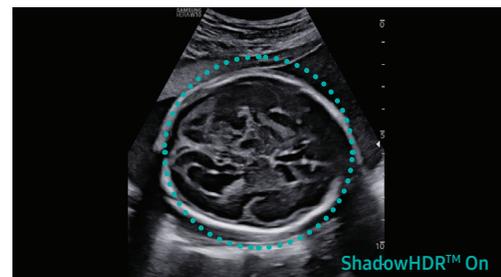
From routine to complex, you can rely on Hera to provide the exceptional image clarity needed to provide confident answers.

### ShadowHDR™

ShadowHDR™ improves image clarity by separating the ultrasound image into low and high frequency components. Shadow HDR then performs dynamic shadow suppression to reveal additional details, otherwise obscured. This proprietary technique is advantageous when assessing the fetal brain as it suppresses cranial shadowing for a more complete display of intracranial anatomy.

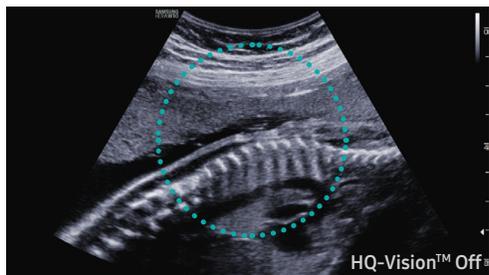


Fetal brain

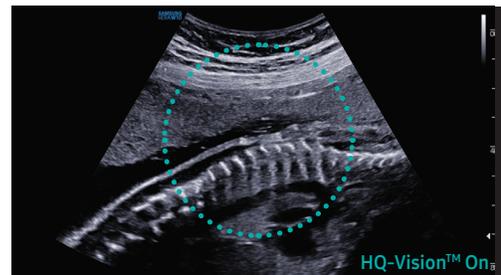


### HQ-Vision™

HQ-Vision™ is a sophisticated image processing technology designed to compensate for natural signal distortion as sound propagates through tissue. HQ-Vision continuously analyzes, deconstructs and then recalculates the received ultrasound image to display maximum sharpness and precise spatial clarity. This is especially helpful when performing detailed documentation of subtle interfaces, as well as fetal vertebrae.

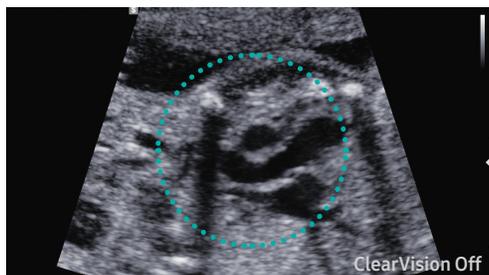


Fetal spine

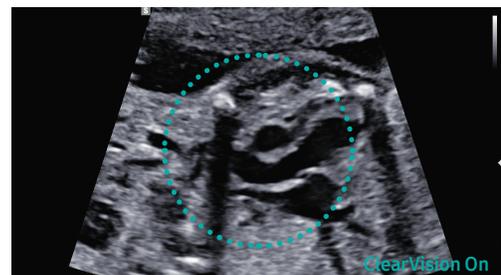


### Advanced ClearVision

Advanced ClearVision is an adaptive image optimization technology designed to remove distracting speckle artifacts, while sharpening tissue interfaces and enhancing subtle changes in the displayed grayscale image.



Fetal heart



## Superb Volume Imaging

Studies have shown the importance of early bonding between mom and baby and 3D ultrasound can help begin this process before birth. However, volume imaging brings so much more to the ultrasound exam beyond facilitating these special moments. Seeing the anatomy in 3D and or 4D provides a more comprehensive understanding of anatomical spatial relationships and rendering techniques like RealisticVue™ and CrystalVue™ continue to evolve to show the tiny details even in first trimester. These new perspectives provide clinicians more information, earlier than ever before, helping identify anomalies and better prepare for surgery and other early interventions.

### HDVI™ 2.0

High Definition Volume Imaging (HDVI) provides detailed edge definition and exceptional clarity of three-dimensional anatomy. HDVI is especially useful when visualizing three-dimensional skeletal dysplasia and spinal defects.



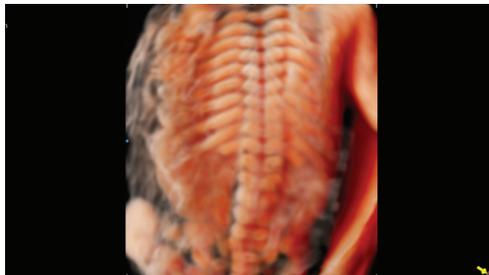
Fetal face with 3D



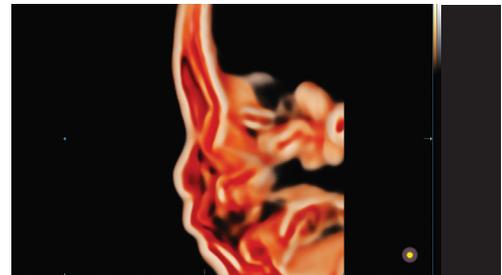
Fetal spine with 3D

### CrystalVue™

CrystalVue™ is an advanced volume rendering technology that enhances visualization of both internal and external structures in a single rendered image. The resulting image reveals more definitive documentation of skeletal dysplasia, early neural tube defects, as well as first trimester brain development.



Fetal spine with CrystalVue™



Fetal profile with CrystalVue™

### RealisticVue™

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. From detailed understanding of complex pathology to patient consultation and education, RealisticVue is a versatile and important tool for effective diagnostics and communication.



Fetal face with RealisticVue™



Fetal foot with RealisticVue™

# Elevating Hemodynamic Assessment

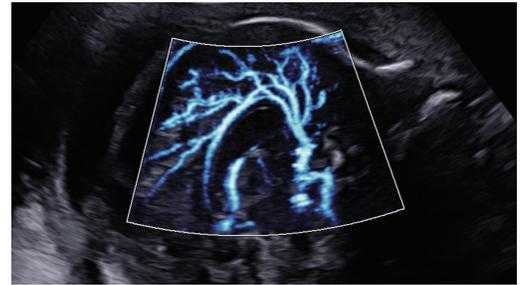
Assessing blood flow through the fetal heart and brain are an important part of every ultrasound exam performed. Fetal movement or the small size of the structure provide unique challenges to completing your assessment and without this information, a confident diagnosis cannot be reached. Samsung is introducing two new technologies to help you visualize blood flow; MV-Flow™ and LumiFlow™, technologies that can be used independently or in combination with each other to help assess both fetal and maternal circulation.

## MV-Flow™

MV-Flow™ is an advanced power Doppler technology providing detailed visualization of microvascular perfusion into tissues and organs. Sophisticated spatial filtering differentiates slow moving blood flow from adjacent tissues for a more confident display of color Doppler hemodynamics. Fetal lung perfusion, ductus venosus, MCA, as well as adnexal low flow hemodynamics may be easier to visualize with MV Flow.



Placental cord insertion with MV-Flow™



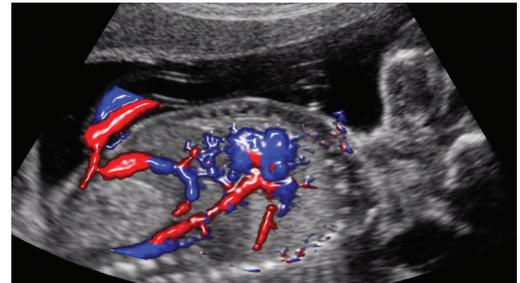
Pericallosal artery using MV-Flow™

## LumiFlow™

LumiFlow™ provides dimensional visualization of blood flow which aids in quickly understanding vessel boundaries and may provide additional spatial comprehension when documenting vasa previa, placental cord insertion or outflow tracks.

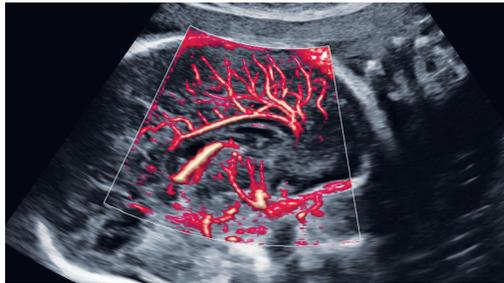


Umbilical cord with LumiFlow™

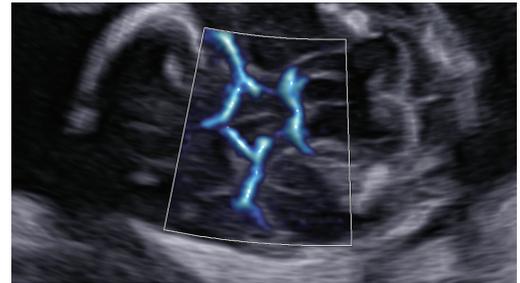


Fetal circulation with LumiFlow™

## MV-Flow™ with LumiFlow™



Sagittal view of fetal brain with MV-Flow™ with LumiFlow™



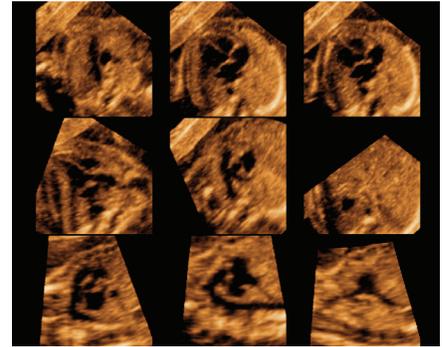
Circle of Willis demonstrated with MV-Flow™ with LumiFlow™

# Advanced Tools for Confidence and Consistency

Advanced tools can help you see the fetal anatomy in new ways and provide additional information to help you make confident decisions quickly and provide women and the people they care for, calming reassurance. Samsung's innovative technologies not only help provide answers, but they can also add consistency and efficiency to the ultrasound exam.

## Advanced 5D Heart

5D Heart increases the sensitivity and specificity of ultrasound for the assessment of congenital heart disease. 5D Heart quickly generates the nine recommended fetal echocardiography views for a more thorough sonographic examination of the fetal heart. This enhanced technology includes Auto Fetal Positioning and Predictive Cursor which may help to display the nine views even easier by letting the software do some of the work for you.



# 5D

5D ultrasound helps streamline workflow and enhance reproducibility with a suite of semi-automated tools.

## 5D NT

5D NT automatically locates the mid-sagittal plane from an acquired 3D dataset and measures the maximum NT distance, reducing inter-user variability.

## 5D CNS+™

5D CNS+™ simplifies the fetal brain assessment by automatically providing nine planes simultaneously with biometric measurements. This innovative tool aids in visualization of intracranial anomalies.

## 5D Limb Vol.™

5D Limb Vol.™ is a semi-automated tool to estimate fetal weight by quickly and accurately measuring upper arm or thigh volumes from 3 simple seed points on a single volume data set.



## Biometry Assist™

Biometry Assist™ streamlines routine biometry measurements including BPD, HC, AC, and FL. Biometry Assist enables users to measure fetal growth more quickly and with greater accuracy while maintaining exam consistency.

## Adaptable Ergonomic – Designed for Comfort

Our new state of the art ergonomic design allows the ultrasound system to adapt to the user's scanning position rather than forcing the user to adjust to the system. With the wide range of motion on both the control panel and the monitor, Hera can be adjusted, nearly infinitely, to allow for a more comfortable scanning experience as well as help decrease repetitive reaching and shoulder strain.



Hera  
provides a  
**34%**  
reduction  
in shoulder  
stress\*

An internal study shows that the improved ergonomics of the Hera W10 reduces shoulder stress by about one third compared to our previous premium model. It does this by simplifying the user interface and increasing the range of motion of the control panel and monitor, resulting in less repetitive strain from hours of scanning.

\* Control panel usability study compared to the Samsung WS80A with Elite.  
Tested using same body postures.

# Customizable for the Way You Work

Everyone works a little bit differently, wouldn't it be nice if your ultrasound was customizable to your preferences? With Hera, it is. Tailoring the functionality of buttons on the control panel and customizing the layout of your touch panel menus are just a few conveniences we've added to help you keep your focus on what matters most.

## Contextual Button

Frequently used functions can be assigned to buttons around trackball to reduce repetitive menu selection.



## Touch Customization

Customizable touchscreen interface allows user to move frequently used functions to the first page, keeping the focus on the patient instead of the system.



## Quick Preset

With one touch, the user can select the most common transducer and preset combinations. Quick Preset increases efficiency to make a full day of scanning simple and easy.



Sleep mode

Approx. 20sec.

# Fast Boot Up with MobileSleep

Mobile Sleep allows you to move the system from one place to another without shutting down. Simply press the power button to put the system to sleep, unplug and go. System powers back up in about 20 seconds.

Wake-up

Approx. 20sec.



# See More, In Less Time, with Greater Confidence

Samsung offers a wide variety of transducers to fit your unique practice needs and patient population.

## Convex Array Transducers



**CA1-7A**  
Abdomen, obstetrics,  
gynecology, contrast



**CA3-10A**  
Abdomen, obstetrics,  
gynecology



**CA2-9A**  
Abdomen, obstetrics,  
gynecology



**CF4-9**  
Pediatric, vascular

## Endocavity Transducers



**EA2-11AR**  
Obstetrics, gynecology



**EA2-11AV**  
Obstetrics, gynecology

## Linear Array Transducers



**L3-12A**  
Small parts, vascular,  
musculoskeletal



**LA2-9A**  
Small parts, vascular,  
musculoskeletal

## Phased Array Transducers



**PA4-12B**  
Cardiac, pediatric



**PM1-6A**  
Cardiac, TCD, abdomen



**PA3-8B**  
Cardiac, pediatric, abdomen

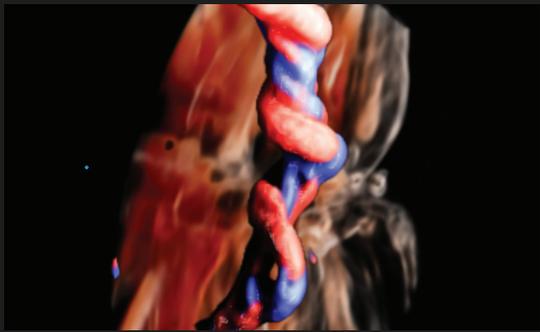
## Volume Transducers



**CV1-8A**  
Abdomen, obstetrics,  
gynecology



**EV2-10A**  
Obstetrics, gynecology



Umbilical cord rendered using CrystalVue Flow™



Fetal heart in 4-chamber view



Fetal Abdomen



Umbilical cord insertion and placental perfusion demonstrated with MV-Flow™



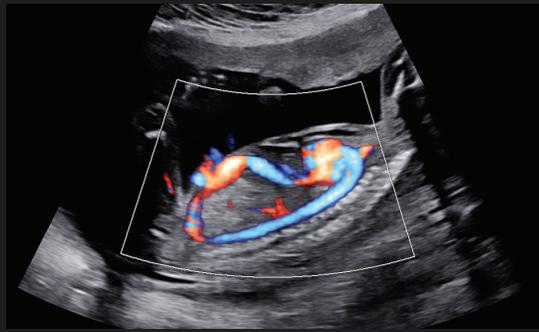
Hepatic vasculature utilizing S-Flow™ and LumiFlow™



3rd trimester fetal face with RealisticVue™



12 week fetus with S-Harmonic™



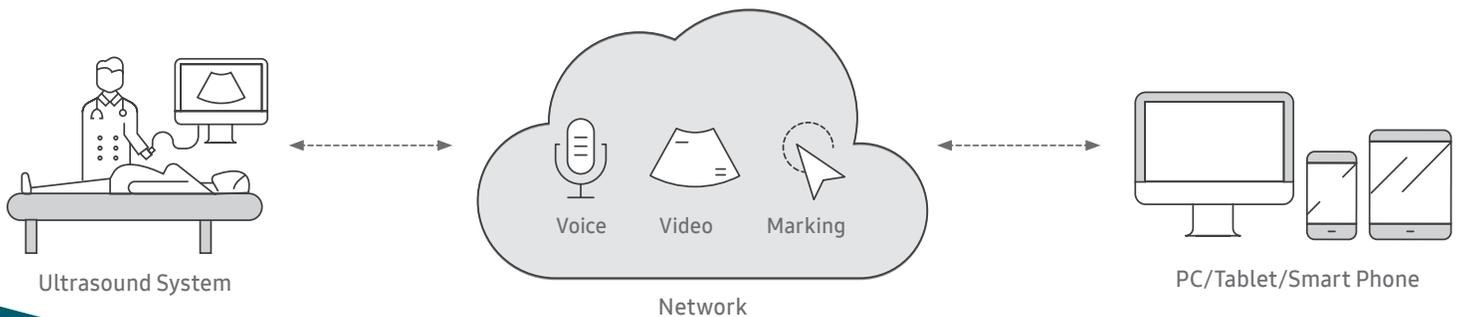
Fetal circulation with S-Flow™

# Hera W10 IMAGE GALLERY



## SonoSync™ \*

SonoSync™ is a real-time image sharing solution that allows collaborative communication for care guidance and training between doctors and sonographers. In addition, voice chatting and real-time marking function are provided for efficient communication, and the MultiVue function is included to monitor multiple ultrasound images on a single screen.



\* SonoSync™ is an image sharing solution, not a diagnostic solution.

# 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

- Security Tools (Anti-virus & Firewall)
- Secured Operating System



### Access Control

- Account Management
- Enhanced Audit Trail



### Data Protection

- Data Encryption
- Transmission Security

# SAMSUNG

NeuroLogica, the healthcare subsidiary of Samsung Electronics Co., Ltd., develops, manufactures, and markets innovative imaging technologies and is committed to delivering fast, easy and accurate diagnostic solutions to healthcare providers. NeuroLogica, the global corporate headquarters and manufacturer of Samsung computed tomography, is also the US headquarters for sales, marketing and distribution of all Samsung digital radiography and ultrasound systems. NeuroLogica's growing portfolio of advanced medical technologies are used worldwide in leading healthcare institutions helping providers enhance patient care, improve patient satisfaction, and increase workflow efficiency. Samsung is committed to being leaders in the field of healthcare imaging.

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.

\* 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.

\* This product is a medical device, please read the user manual carefully before use.

Samsung is a registered trademark of Samsung Electronics Co., Ltd

NeuroLogica is a subsidiary of Samsung Electronics Co.

© 2020 NeuroLogica

To learn more please visit [www.samsunghealthcare.com](http://www.samsunghealthcare.com)

1-W10-103rev00