Samsung Medison is a global leading medical devices company. Founded in 1985, the company now sells cutting-edge medical devices including diagnostic ultrasound, digital X-ray and blood analyzer around the world. The company has attracted global attention in the medical field with its R&D capabilities and advanced technologies. In 2011, Samsung Medison became an affiliate company of Samsung Electronics, integrating its IT, image processing, semiconductor and communication technologies into medical devices.

CT-RS80A with Prestige V3.0 -FTW-160415-EN

* Prestige is a package of technologies for upgraded systems.

* S-Vision is not the name of a function but is the name of Samsung’s ultrasound imaging technology.

* S-Vue is not the name of a function, but is the name of Samsung’s advanced transducer technology.

* S-Tracking is not a function name but a package of Clear Track and Virtual Track.

* In Canada and USA, a recommendation for whether the result is benign or malignant is not applied.

* In Canada and USA, the selectable 3 modes included in S-Detect is not available (High Sensitivity, High Accuracy, High Specificity).

* In Canada and USA, strain value for ElastoScan is not applied.

* Availability of some products, features, options and transducers mentioned in this catalog may vary from country to country and is subject to varying regulatory requirements.

* The 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.

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Pushing the boundaries

Ultrasound system
RS80A with Prestige  V3.0

SAMSUNG
Superior image quality for confident diagnosis

The superior image quality of RS80A with Prestige is built upon the successes of Samsung technologies. The S-Vision architecture together with features such as S-Harmonic and HQ Vision delivers diagnostic confidence when diagnosing challenging patients.

S-Vue transducer (Single-crystal technology)
RS80A with Prestige incorporates the next-generation single-crystal technology. Employing an innovative crystal design, S-Vue transducers provide more efficient piezoelectric properties, resulting in wider bandwidths that enable better penetration and higher quality resolution on even the most challenging of patients.

S-Vision beamformer
The S-Vision beamformer demonstrates a clearer image that receives returning signals through a sophisticated digital filtering system resulting in reduced side lobes, less noise and artifact. It enhances the image quality with better clarity and consistent results.

S-Vision imaging engine
With the S-Vision imaging engine built into RS80A with Prestige, the digital signals produce clear, detailed resolution and tissue uniformity for various types of applications in general imaging.

S-Harmonic
This new harmonic technology provides greater image uniformity from near to far field while reducing signal noise. Combined with S-Vue transducers and S-Vision imaging engine, S-Harmonic improves the image quality of RS80A with Prestige.

HQ Vision
HQ Vision is new, advanced technology for visualizing anatomical structures. With improved image clarity, this feature helps make a reliable diagnosis quickly.
CEUS+ technology uses the unique properties of ultrasound contrast agents. When stimulated with low acoustic pressure, the oscillating microbubbles reflect both fundamental and harmonic frequency signals. In addition, Samsung’s latest technologies, VesselMax and FlowMax, provide a clear visualization of vessels and blood flow for a more informed and confident diagnosis.

**VesselMax (Improved vessel visualization)**

- Kidney without FlowMax
- Liver without VesselMax
- Kidney with FlowMax
- Liver with VesselMax

**FlowMax (Improved blood flow visualization)**

**S-Shearwave**

S-Shearwave detects the speed of the shearwave propagated through the targeted lesion and displays the numerical measurement of stiffness in kPa or m/s together with a Reliable Measurement Index (RMI)*. A graphic profile provides an intuitive Variation Range (VR) to depict uniformity of tissue stiffness within the Region of Interest (ROI). S-Shearwave is non-invasive, helping you to measure liver stiffness easily.

*S Reliable Measurement Index (RMI): An indicator that computes the reliability of the calculated stiffness to support the selection of optimal measurements.

With advanced technologies like CEUS+ and S-Shearwave, the number of biopsies can be reduced, lesions become visible and examinations are easier to perform.
Outstanding tools for interventional procedures

Samsung continues pushing the boundaries of ultrasound technology with leading technologies including S-Fusion and S-Tracking for increased accuracy when performing interventional procedures.

S-Fusion

S-Fusion enables simultaneous localization of a lesion using real-time ultrasound in conjunction with other 3D volumetric imaging modalities. Where the image fusion method faces challenges such as relatively slow and inaccurate registration, Samsung offers a quicker and more precise registration process. S-Fusion allows precise targeting during interventional procedures. With S-Fusion, your system is ready for many advanced clinical procedures.

S-Tracking

S-Tracking increases accuracy during interventional procedures by providing a simulated needle path and target mark within the live ultrasound image. Clear Track, one of two functions provided by S-Tracking, ensures accuracy by using a specialized needle with a sensor tip. S-Tracking also includes Virtual Track utilizing conventional needles to provide both accuracy and economic benefit.

Clear Track

Respiration Auto

When performing fusion imaging of real-time US and previously recorded CT images, the difference of respiratory phase can cause registration gaps between the images. Samsung’s Respiration Auto feature minimizes these registration differences by generating a CT image of exhalation based on the acquired image of inhalation. This respiration compensation technology makes the registration faster, helping eliminate fusion inaccuracy.

Positioning Auto registration

S-Fusion with CEUS+

Overlay with US and CT images without Respiration Auto

Overlay with US and CT images with Respiration Auto

NeedleMate™

NeedleMate™ ensures precise needle targeting when performing commonly used interventional procedures.

Beam Steer

Identifying the location of needles (needle guidance & needle tips), Beam Steer provides the high level of efficiency and safety in needle placement.

Thyroid with NeedleMate™
### Advanced cardiovascular diagnosis

The comprehensive suite of tools enables advanced cardiovascular diagnosis.

#### Arterial Analysis (Advanced detection of functional changes of vessels)
Arterial Analysis detects functional changes of vessels, providing measurement values such as the stiffness, intima-media thickness and pulse wave velocity of the common carotid artery (CCA). Since the functional changes occur before morphological changes, this technology supports the early detection of cardiovascular disease.

- **Augmentation index**
- **Measurement table**
- **S-3D Arterial Analysis screen**

#### Auto IMT+™
Auto IMT+™ is a screening tool to analyze a patient’s potential risk of cardiovascular disease. It allows easy intima-media thickness measurement of both the anterior and posterior wall of the common carotid by the click of a button. This simple procedure enhances exam productivity and adds diagnostic value.

#### Strain+
Strain+ quantitatively displays a Bull’s Eye which shows left ventricular motion and dyssynchrony at a glance.

#### Stress Echo
The Stress Echo package includes wall motion scoring and reporting. It includes exercise Stress Echo, pharmacologic Stress Echo, diastolic Stress Echo and free programmable Stress Echo.

#### S-3D Arterial Analysis (Innovative volume measurement of arterial plaque)
S-3D Arterial Analysis simplifies volume measurement of arterial plaque, providing 3D vessel modeling. With Samsung’s S-3D Arterial Analysis, obtaining information on the arterial plaque volume is surprisingly fast and easy even on difficult patients. In addition, it allows you to track the morphological changes of the artery.

- **Auto IMT+™ screen**
- **Strain+**
- **Stress Echo**
- **S-3D Arterial Analysis screen**
**E-Breast™**

E-Breast™ is a technology that calculates the strain ratio between the selected target and surrounding fatty tissues. Unlike conventional ultrasound elastography, E-Breast™ requires only one ROI to be selected by the user. This simplified process enhances consistency and reduces the chance of error by eliminating the step of manual selection of the surrounding fatty tissue region.

**E-Strain**

E-Strain is designed to enable quick and easy calculation of the strain ratio between two regions of interest for day-to-day practice. Simply by setting the two targets, you can receive accurate, consistent results and make informed decisions in many types of diagnostic procedures.

**E-Thyroid™**

E-Thyroid™ provides an assessment of thyroid lesions by incorporating an index for suspicious areas. E-Thyroid™ images are generated using pulsations from the adjacent Carotid Artery, eliminating the need for manual transducer compression and offering greater consistency.

**S-Detect™ for Breast**

S-Detect™ for Breast employs *BI-RADS® scores for standardized analysis and classification of suspicious lesions. It provides the characteristics of displayed lesion and a recommendation on whether the lesion is benign or malignant by adopting advanced detection algorithm. With 3 selectable sensitivity modes, S-Detect™ for Breast can help users perform a breast biopsy with confidence. Such technology assists in a more accurate diagnosis, while reducing the time users spend in repetitive tasks.

* *BI-RADS®:* Breast Imaging-Reporting and Data System (2013)

- **High Sensitivity:** Detecting any lesions that have a small chance of being malignant.
- **High Accuracy:** Providing higher accuracy in classifying whether a lesion is benign or malignant, compared to other modes (Default).
- **High Specificity:** Detecting suspicious lesions that have a higher chance of being malignant.

**S-Detect™ for Thyroid**

S-Detect™ for Thyroid uses the advanced technology based on *K-TIRADS, RUSS and ATA guideline* in detecting and classifying suspicious thyroid lesions semi-automatically. This state-of-the-art technology helps you diagnose your patients with confidence and ease, providing accurate, consistent results and an automatic reporting feature.

* *K-TIRADS, RUSS, ATA:* American Thyroid Association

**ElastoScan™**

ElastoScan™ is a technology that calculates the strain ratio between the selected target and surrounding fatty tissues. Unlike conventional ultrasound elastography, E-Breast™ requires only one ROI to be selected by the user. This simplified process enhances consistency and reduces the chance of error by eliminating the step of manual selection of the surrounding fatty tissue region.

For a better ultrasound assessment, Samsung offers a wide range of useful imaging and quantitative tools.
Enhanced workflow for greater throughput

Advanced QuickScan™
Advanced QuickScan™ technology provides intuitive optimization of gray scale and Doppler parameters. One touch of the QuickScan™ button maximizes workflow by adjusting functions including color gain and color box location.

EZ-Exam+
EZ-Exam+™ transforms multiple ultrasound investigation steps into a streamlined process. It enables users to build a fast and convenient diagnostic environment by storing optimized, preferred protocols with the EZ-Exam+™ function control.

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

CCA Doppler without QuickScan™
CCA Doppler with QuickScan™

ROI Positioning
Sample Volume Setting
Angle Rotating

Samsung Ultrasound RS80A with Prestige

Pushing the boundaries
Bowel
Kidney transplantation
Thyroid nodule
Thyroid nodule
Pediatric spine
Finger ganglion
Wrist ganglion
Quadiceps
Breast mass
Carotid artery
Panoramic
4 Chambers
Leading edge design for your convenience

Folding monitor
The folding monitor enables safe and secure transport.

13.3-inch tilting touch screen
The tilting touch screen adjusts to accommodate user viewing preference in any scanning environment.

6 way adjustable control panel
The RS80A with Prestige’s 6 way adjustable control panel optimizes work environment to reduce repetitive stress. When off-mode, the control panel returns to home position for easier mobility.

23-inch LED display
The RS80A with Prestige features a 23-inch high definition LED display delivering excellent contrast resolution, image clarity and vibrant color in any lighting condition.

Simplified console design
The simplified control panel including 3D Navigator and intuitive grouping of console buttons streamlines system interaction for efficient patient scanning.

Swivel lock
A single pedal controls a swivel lock mechanism to conveniently secure console in place and accommodates efficient movement during a variety of scanning procedures.
### Comprehensive selection of transducers

#### Curved array transducers

<table>
<thead>
<tr>
<th>Transducer</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA3-10A</td>
<td>abdomen, obstetrics, gynecology</td>
</tr>
<tr>
<td>CA1-7A</td>
<td>abdomen, obstetrics, gynecology, contrast</td>
</tr>
<tr>
<td>CA2-8A</td>
<td>abdomen, obstetrics, gynecology</td>
</tr>
<tr>
<td>CF4-9</td>
<td>pediatric, vascular</td>
</tr>
</tbody>
</table>

#### Linear array transducers

<table>
<thead>
<tr>
<th>Transducer</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM4-15B</td>
<td>small parts, vascular, musculoskeletal</td>
</tr>
<tr>
<td>LA4-18B</td>
<td>small parts, vascular, musculoskeletal</td>
</tr>
<tr>
<td>L3-12A</td>
<td>small parts, vascular, musculoskeletal</td>
</tr>
<tr>
<td>LA3-16A</td>
<td>small parts, vascular, musculoskeletal</td>
</tr>
<tr>
<td>LA2-9A</td>
<td>small parts, vascular, musculoskeletal, abdomen</td>
</tr>
<tr>
<td>L7-16</td>
<td>small parts, vascular, musculoskeletal</td>
</tr>
<tr>
<td>LA3-16AI</td>
<td>musculoskeletal</td>
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</table>

#### Volume transducers

<table>
<thead>
<tr>
<th>Transducer</th>
<th>Application</th>
</tr>
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<tbody>
<tr>
<td>CV1-8A</td>
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<tr>
<td>V5-9</td>
<td>obstetrics, gynecology, urology</td>
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<tr>
<td>V4-8</td>
<td>abdomen, obstetrics, gynecology</td>
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<tr>
<td>LV3-14A</td>
<td>musculoskeletal, small parts, vascular</td>
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#### Phased array transducer

<table>
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<th>Transducer</th>
<th>Application</th>
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<tbody>
<tr>
<td>PM1-6A</td>
<td>cardiac, TCD, abdomen</td>
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<tr>
<td>PA3-8B</td>
<td>cardiac, pediatric, abdomen</td>
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<tr>
<td>PA4-12B</td>
<td>cardiac, pediatric</td>
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</table>

#### CW transducer

<table>
<thead>
<tr>
<th>Transducer</th>
<th>Application</th>
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</thead>
<tbody>
<tr>
<td>CW6.0</td>
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<tr>
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<tr>
<td>MMPT 3-7</td>
<td>cardiac</td>
</tr>
<tr>
<td>E3-12A</td>
<td>obstetrics, gynecology, urology</td>
</tr>
</tbody>
</table>

* Some of the transducers may not be available in some countries.