

Phillips iU22 Intelligent Ultrasound System Fact Sheet

Challenge:

- The demand for imaging services is expected to grow by 200% in the next decade, according to industry forecasts.
- Hospitals and imaging centers are facing dramatic increases in demand for ultrasound exams while struggling with smaller budgets and fewer personnel
- 84% of sonographers have experienced work related pain and one in five sustains a career-ending injury
- There is a chronic shortage of ultrasound users trained in the “art” of sonography

Solution:

Philips Medical Systems has introduced the next generation of intelligent medical equipment with the Philips iU22 intelligent ultrasound system. In one ultrasound system, clinicians get exam efficiency, more automation and ease of use, and the most ergonomically compatible system available. The Philips iU22 system also delivers revolutionary performance with the latest breakthroughs in high definition imaging and diagnostic capability.

Innovative Features:

Breakthrough Ergonomics—The Philips iU22 is the first ultrasound system to provide the foundation for a nearly perfect ergonomic scanning environment. Every inch of the system—including its fully articulating control panel, its new, lighter transducer cables, its angled, easy-access transducer connectors, the iCOMMAND voice recognition and its one-button intelligent optimization—has been designed to reduce operator fatigue and injuries while improving exam workflow.

Flat Screen Display—The unique LCD flat screen technology, designed specifically for medical applications, provides a new level of high resolution, no distortion image display. Ultra-bright, flicker-less technology reduces eyestrain and the monitor can be easily adjusted to almost any viewing position to satisfy any scanning challenge and allow shared patient viewing.

High Performance Transducers—The new line of Explora high-performance transducers has been specially designed for maximum acoustic efficiency allowing greater penetration and resolution with minimal artifacts. A new, dramatically lighter and more flexible cable design reduces operator strain and fatigue while breakthrough array configurations and ultra-high frequencies (up to 17 MHz) allow users to image previously challenging patients. The ultra-high frequencies are also providing never-before-seen detail of small parts and suspicious breast lesions.

The Philips logo, consisting of the word "PHILIPS" in a bold, blue, sans-serif font.

Full Imaging Capabilities—A powerful image-former architecture, that processes multiple data streams in real time, makes this the only premium ultrasound system that can do the full array of ultrasound exams—2D, 3D, and real-time 4D.

Next Generation 4D Imaging—Extraordinarily fast image acquisition and image processing allow true, instantaneous, real-time 4D imaging. In addition, Philips' exclusive SonoCT with XRES technology provides new levels of clarity for 3D, 4D and MPR imaging. Philips xSTREAM architecture enables quick acquisition, manipulation and quantification of full-volume data sets. With the Philips iU22 system's unprecedented processing capability, clinicians can now explore new applications such as real-time 4D images of the fetal heart.

Voice Recognition—Exclusive Philips iCOMMAND voice recognition, based on the recognition engine of Philips Speech Magic technology, recognizes more than 2200 commands to eliminate awkward scanning positions, provide more imaging flexibility in tight locations and leave two hands available for scanning and patient manipulation or comfort. iCOMMAND is demonstrating its usefulness for vascular, pediatric and interoperative exams, as well as exams outside the radiology department (i.e. OR, ED, bedside). Unlike many other speech recognition technologies, iCOMMAND can provide accuracy of 95% at start-up for most native speakers and can be optimized for more challenging speech patterns with only a few minutes of training. Its exclusive Bluetooth wireless technology also allows hands-free exams to take place at the same time on different systems within close proximity without interference. Speech recognition on the Philips iU22 system is currently available in five different languages (English, French, German, Italian and Spanish).

Intelligent Automation—One of the most intriguing examples of the system's intelligence is its ability to dynamically adjust as many as 40 different controls, in a variety functions, with one button. This intelligent automation is designed to improve workflow and create more consistent results across operators with varying skill levels.

Philips iSCAN technology optimizes the adaptive gain compensation (AGC) and Time Gain Control (TGC) to reduce effects of common artifacts.

Using iFOCUS, the user can select an area of interest and the ideal beam focal characteristics are automatically calculated to give the best detail resolution and tissue uniformity.

With iOPTIMIZE technology the user can select any of four different functions, including specific tissue type, patient size, blood flow and resolution versus frame rate speed to optimize the image dataset on the fly. This technology dramatically reduces the time necessary to make fine adjustments and can be done by someone with little knowledge of the intricacies of acoustic science.

Patient Benefits:

Early clinical use by physicians indicates that the Philips iU22 intelligent ultrasound system may:

- Help patients better visualize and understand their condition
- Provide clearer ultrasound images of difficult-to-image (larger) patients
- Help identify the nature of suspicious breast lesions sooner
- Enhance the physicians diagnostic capability, thus reducing or eliminating the need for more expensive or invasive tests and procedures
- Guide catheters and needles in 3D space without radiation exposure
- Provide real-time views of fetal heart function and anatomy
- Reduce the time required for many exams