

**HITACHI**  
Inspire the Next



**ARIETTA 70**  
NEXT GENERATION ULTRASOUND SYSTEM  
For Neurosurgery

Ultrasound System for Neurosurgery



Ultrasound Solutions Clearly Defined™





# **ARIETTA 70**

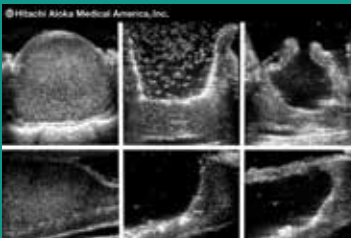
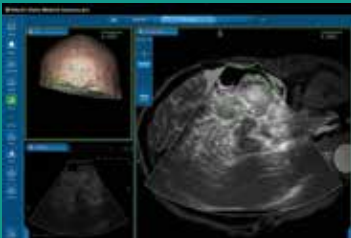
**NEXT GENERATION ULTRASOUND SYSTEM**  
**For Neurosurgery**

Today's ultrasound systems have progressed to become essential medical devices in operating rooms and other non-traditional locations. The Arietta 70 is a dedicated ultrasound solution for neurosurgeons in any clinical setting – Hospital, Clinic or Ambulatory Surgery Center. The Arietta 70 ultrasound system provides the ultimate in system reliability and high-resolution digital imaging of cranial and spinal structures with specifically designed neurosurgical transducers.

Hitachi Aloka understands that neurosurgeons demand the best technology, professional support and specialized transducers necessary to perform comprehensive real-time ultrasound imaging for superior patient care. The Arietta 70 continues our dedication and commitment to neurosurgeons by providing exceptional image quality, outstanding system reliability and intuitive use of cutting edge technology. Hitachi Aloka remains the standard in the field of neurosurgery.

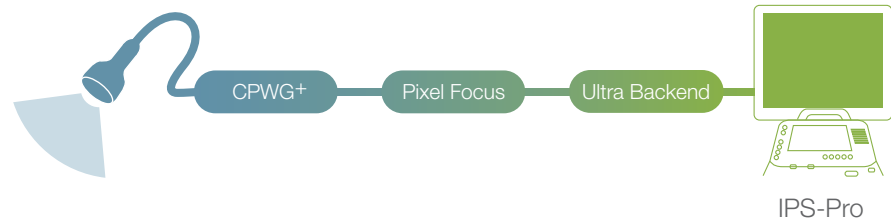


## STATE-OF-THE-ART DIGITAL ARCHITECTURE AND ADVANCED IMAGING FEATURES TO REDEFINE THE CAPABILITIES OF ULTRASOUND



### Symphonic Technology

Whether its source is a world class orchestra or advanced medical equipment, recording sound is an art form. It requires precision instrumentation to capture the most subtle details without introducing noise in the process. Arietta 70's Symphonic Technology optimizes data fidelity along the entire signal handling chain, from transducer to display monitor.



- **Multi-layered Crystal** - Using multiple layers of crystal within each element, Hitachi Aloka's probes minimize signal attenuation during transmit and receive to increase penetration.
- **Compound Pulse Wave Generator** - CPWG+ is a unique transmission technology that allows Arietta70 to generate pulses closer than ever before to the ideal theoretical waveform. As a result, the heat generation during electro-acoustical conversion is minimized. This allows the use of stronger pulses to improve penetration, contrast and spatial resolution, and signal-to-noise ratio.

### Real-time Tissue Elastography (RTE)

Real-time Elastography creates color images depicting relative tissue stiffness. Arietta 70 supports this function on a variety of curved, linear, and endocavity probes.

### Directional eFLOW (D-eFLOW)

D-eFLOW is a high-definition blood-flow imaging mode that combines the directional information and image stability of traditional color flow imaging with the high sensitivity and resolution of power Doppler. The resulting images provide exceptional detail of even the smallest vessels.

### Contrast Harmonic Imaging (CHI)\*

To improve understanding of blood flow information, Hitachi-Aloka offers harmonics enhanced imaging specifically designed for use with contrast agents. The low MI contrast imaging obtained improves signal-to-noise ratio.

### Dual CF

Real-time side-by-side display of a B-mode image and Color Doppler image assisting in easy anatomical interpretation of blood flow.

### Trapezoid

Trapezoidal display on linear transducers provides a wider diagnostic field of view.

\*In the USA, contrast-enhanced ultrasound has not been market cleared by the FDA for all imaging applications.





## ERGONOMICALLY DESIGNED TO MAXIMIZE FUNCTION AND FLEXIBILITY

The ever-evolving healthcare industry demands efficiency in all aspects of patient care. In ultrasound, exceptional image quality without equally exceptional simplicity and ergonomics is unacceptable. That is why the Arietta 70 was designed to provide maximum simplicity, user efficiency, and portability. From its compact footprint to its intuitive, time-saving user interface, the Arietta 70 was engineered for the increasing workloads of today's busy Neurosurgical environments.

### **Arietta 70 Ergonomics**

Arietta 70's ergonomics address every point of interaction between the ultrasound system and surgeon. In addition to its moveable control panel, adjustable monitor, and portable frame, the Arietta supports a set of lightweight, ergonomically-contoured and specifically designed surgical probes.

### **45% Lighter**

The Arietta 70 is 45% lighter than our previous premium class systems, making it easier to move from room to room or between floors.

### **User-friendly Operation Panel**

Two-way multi-rotary encoders enable the adjustment of multiple functions using a single control, significantly reducing repetitive motions. The large palm rest at the center of the operating console is designed to give optimum wrist support.

### **Adjustable Panel Height**

The panel height can be lowered to 70 cm, allowing the operator to perform lower extremity examinations with the control panel comfortably within reach.





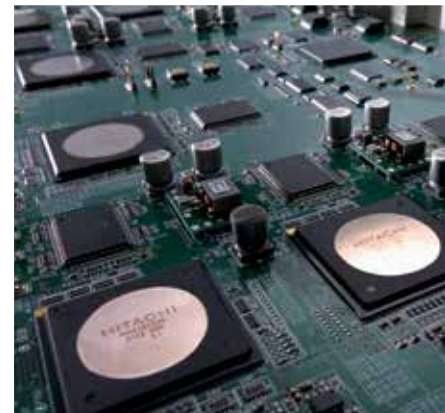
Ultrasound Solutions Clearly Defined™

## Utility and Efficiency

**A SYSTEM DEFINED BY THE NEEDS OF TODAY'S  
IMAGING PROVIDERS**



The Arietta 70 has many advanced features required for a variety of neurosurgical applications. It features Multi-Parametric imaging modalities including Real-time Tissue Elastography, Doppler, D-eFlow and Contrast Harmonic Imaging\*, which support detailed evaluations. The powerful Arietta 70 ultrasound system is equipped with Compound Pulse Wave Generator (CPWG), a broadband engine which enables these functions and provides neurosurgeons with superior imaging.





## SPECIALTY TRANSDUCERS

# ARIETTA 70

NEXT GENERATION ULTRASOUND SYSTEM

For Neurosurgery



S31KP

**Burr-Hole Guidance**

8 – 3 MHz | 90° FOV  
12 mm Insertion | Phased



C42K

**Cranial Guidance**

10 – 4 MHz | 65° FOV  
20 mm Radius | Convex



UST-5311

**Pituitary Guidance**

13 – 6.5 MHz | 10 mm Width | Linear



L53K

**Spinal Cord Guidance**

**Hockey-Stick Linear Array**  
15 – 3 MHz | 25 mm Width | Linear



UST-533

**Micro-Surgery Guidance**  
**Exclusive Linear Array**

13 – 4 MHz | 10 mm Width | Linear



C41

**Cranial Guidance**

13 – 4 MHz | 100° FOV  
12 mm Radius | Convex

# Why Hitachi Aloka for Neurosurgery?

**ARIETTA 70**  
NEXT GENERATION ULTRASOUND SYSTEM  
For Neurosurgery

Hitachi Aloka pioneered ultrasound for use by neurosurgeons and we continue to lead the way with major innovations. Recognized for our superior image quality, outstanding system reliability and advanced transducer technology, Hitachi Aloka remains the standard in the field of ultrasound for neurosurgeons.

Hitachi Aloka's commitment to and dedication to neurosurgery allows us to offer a wide range of consoles and specifically designed transducers to meet the needs of every neurosurgeon:

## **Largest selection of neurosurgery transducers including:**

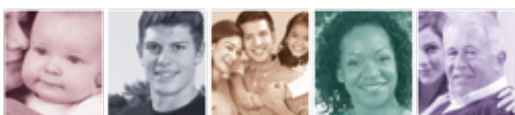
- Exclusive phased array burr-hole transducer
- Exclusive linear array micro-surgery transducer
- Exclusive linear array pituitary transducer
- Multi-frequency neuro convex transducers
- Multi-frequency linear array hockey-stick transducer

## **Hitachi Aloka's premium level neurosurgery systems provide:**

- Extraordinary high-resolution digital imaging of cranial and spinal structures with specifically designed neurosurgery transducers
- Real-time imaging that immediately provides valuable information necessary to assist in surgical planning and execution
- Guidance of biopsy procedures for more accurate placements of needles
- Real-time guidance to optimize shunt placements
- Instant feedback on tumor margin delineation
- Valuable information to guide tumor resections
- Assistance in achieving complete tumor resection
- Ability to visualize and map blood flow
- Minimally invasive pituitary imaging with transsphenoidal transducer
- Cervical spine evaluations
- Localization and orientation of relative anatomy
- Neuro navigation integration - blending and overlaying of CT/MR images
  - Medtronic
  - BrainLab

Recognized for our superior image quality, outstanding system reliability and intuitive use of cutting edge technology, Hitachi Aloka remains the standard in the field of neurosurgery.

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10 Fairfield Blvd., Wallingford, CT 06492  
www.hitachi-aloka.com | 800.872.5652

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 **Hitachi Healthcare Americas**

1959 Summit Commerce Park, Twinsburg, OH 44087  
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