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## **APLIO 500 ULTRASOUND IMAGING SYSTEM**

Toshiba's flagship ultrasound system, the Aplio™ 500, features industry-first, technological developments that provide premium image quality and operator effectiveness never before available.

**High-density beamformer** architecture uses the most advanced digital signal-processing technology and forms the foundation for advanced, real-time imaging applications and breakthrough technologies to see more and do more in the diagnosis and treatment of patients.

**High density rendering** enables comprehensive 3-D/4-D imaging to extend diagnostic capabilities, delivering unrivaled detail and resolution.

**iStyle™+** Productivity Suite features the industry's most customizable user interface, along with numerous other workflow automation tools designed for operator comfort, efficiency and effectiveness.

### STANDARD COMPONENTS

- Aplio 500 Ultrasound Imaging System
- Tissue Doppler Imaging (TDI)
- ApliPure+™
- Differential Tissue Harmonic Imaging (D-THI)
- Precision Imaging
- Quick Start Presets
- Quick Scan
- Trapezoid Imaging
- Advanced Dynamic Flow™ (ADF)
- Tissue Specific Optimization (TSO)
- Auto-Intima Media Thickness (A-IMT)
- 19" LCD monitor with articulated arm and handle
- Built-in DVD/CD drive with writer
- 5 USB Ports

### KEY FEATURES

#### **Extraordinary Image Quality**

Toshiba's new image architecture - **High-Density Beamformer** - provides unprecedented image resolution and detail. This enables Aplio to deliver information quickly and reliably through an array of unique imaging technologies, including the following:

#### **Next-Generation Precision Imaging**

A multi-resolution signal-processing technique that enhances the definition of structures and sharpens borders to separate clinical information from clutter and noise for a more accurate representation of patient anatomy.

**Differential Tissue Harmonic Imaging (D-THI)**

An exclusive Toshiba patented technology, D-THI works with BT technology transducers. It provides improved visualization and definition of lesions, cysts and subtle tissue characteristics while scanning at increased depth and on difficult-to-image patients.

**ApliPure™**

The next generation of real-time compound-imaging technology. ApliPure uses simultaneous spatial and frequency compounding to deliver images of outstanding clarity and detail.

**Tissue Specific Optimization (TSO)**

Automatically corrects for the speed of sound through different tissues; particularly helpful for difficult-to-image patients.

**Advanced Dynamic Flow**

Provides high-resolution color imaging of micro-vessels within tumors and organs. Provides superior resolution compared to conventional color or power Doppler by applying the same ultra-high bandwidth normally used in grayscale to Doppler signal processing.

**High Density Rendering**

3-D/4-D volume imaging provides an ultra-high-level of 3-D detail and resolution. Captures volume data sets at high-volume rates for shorter exam times and greater productivity.

**Auto-IMT**

Provides a measurement of the intima-media thickness of the arterial wall to detect the presence and track the progression of atherosclerotic disease.

**Outstanding Operability**

iStyle+ Productivity Suite automates workflow and optimizes ergonomics.

### **Customizable User Interface**

The main panel and touch-control screen (TCS) is fully customizable. Virtually all keys can be reassigned to meet individual needs, reduce learning curves and operator fatigue, and enhance workflow.

### **Quick Start Presets**

Streamline workflow with the fully programmable sub-presets menu, which allow you to optimize image quality and color flow for a specific clinical target with a single touch of a button.

### **Quick Scan**

Optimize 2-D image quality in all modes with a single touch. Equalizes thousands of image points, forming an image with balanced tissue brightness throughout the field-of-view.

### **Reliance Technology Protection Program**

This quotation includes the Reliance Technology Protection Program for a full 36 months from the time of purchase.

Included in the plan is one software update per year to keep customers at the latest technology level. Hardware upgrades and options not covered. Whenever possible, installation will coincide with the preventive maintenance.

### **GENERAL HARDWARE DESCRIPTION**

#### Display

- 19" LCD monitor with articulated arm and handle
- Programmable, touch-command screen restores preset adjustments with one touch

### **Main Panel**

- Fully adjustable to provide ideal interaction whether sitting or standing.  
Moves:
  - Up and down
  - In and out
  - Side to side
- Functions grouped around central palm controller
- Customizable to application demands and user preferences
- Programmable main panel, screen layout and touch-control screen menu
- Advanced imaging and application presets

### **Transducers**

- Ergonomic, lightweight transducers with innovative shapes and super-flexible cables designed for superior image quality
- Six probe holders eliminate transducer changeover time
- Four active ports provide convenient transducer access for faster exams and increased throughput

### **Connectivity**

Extensive communication and data management capabilities enable seamless integration into hospital and research environments including the following DICOM functions:

- Media Storage
- Verification
- Storage
- Print
- Storage Commitment
- MULTI FRAME (Network Transfer)
- MWM (Modality Worklist Management)
- Query/Retrieve
- MPPS (Modality Performed Procedure Step)
- Structured Reporting

### **Image Maker Express**

The Image Maker Express is an online marketing resource designed exclusively for Toshiba customers that helps create outreach programs to generate awareness about imaging services.

- Includes positioning and messaging guides to help strategize communications efforts and tactics
- Contains product information, ready-to-use collaterals and ideas for creating custom materials to promote new imaging capabilities

Image Maker Express provides access to:

- Product images
- Clinical images
- PowerPoint presentations
- Sample brochures
- Sample press releases
- Marketing strategy tutorials
- Tips on effective presentations
- Updates at [www.imagemaker.toshiba.com/express](http://www.imagemaker.toshiba.com/express)

\*Offerings may vary per product

### **APPLICATIONS SUPPORT**

Developed with customer input, Toshiba's innovative support programs have resulted in increased customer satisfaction. These include the following:

#### **Technical Assistance**

Customer support specialists are available 24/7 to help resolve technical issues in real time. Application support specialists are also available to assist staff with protocol and image-quality issues.

### **Local Customer Teams**

A single call mobilizes a local team of Toshiba customer engineers. With an average of 10 years of Toshiba experience and 105 hours of specialized training, they can resolve almost any performance issue.

### **Parts Support**

A complete inventory of product parts is ready for shipment when and where they are needed, any time of day or night.

### **Training**

Included with the purchase of Aplio is training conducted by Toshiba applications specialists registered with the American Registry of Diagnostic Medical Sonographers (ARDMS).

Training includes:

- Two days of on-site applications training
- One day of on-site follow-up applications training

### **Clinical Education Program**

Toshiba customers receive access to the CME resources on SonoWorld via SonoBucks vouchers. Toshiba makes the SonoBucks vouchers available as an add-on to equipment and service sales, allowing customers to make a one-stop purchase of both products and education.

### **Additional On-Site Training**

**Available for purchase.**

## COMPONENT SUMMARY:

### **APLIO™ 500 ULTRASOUND IMAGING SYSTEM**

#### **DICOM**

Supports a variety of timed and gated multi-frame DICOM capabilities including:

- Verification SCU/SCP
- Storage SCU
- Modality Worklist Management SCU to support operations with HIS/RIS systems
- Storage SCU to allow studies to be stored to Aplio from remote systems such as Storage Commitment SCU and MPPS SCU workflow management and data

#### **RELIANCE TECHNOLOGY PROTECTION PROGRAM**

#### **ULTRASOUND ADVANTAGE TRADE-IN PROMO**

#### **MULTI-FREQUENCY CONVEX TRANSDUCER**

Specifications:

- 192 elements; 70 degree FOV; 50 mm radius
- Imaging frequencies:  
6.0/5.0/4.0/2.8/1.9/T6.0/T5.5/T5.0/T4.0/T3.0 MHz
- D-THI frequencies: 5.0 MHz
- Doppler frequencies: 3.6/3.1/3.0/2.5/2.2/1.8

## **MULTI-FREQUENCY MICRO CONVEX TRANSDUCER**

With PS-THI and differential tissue harmonic imaging for:

- Abdominal
- OB/GYN

Specifications:

- 128 elements, 80 degree FOV, 20 mm radius
- Fundamental B-mode frequencies: 5.5/4.5/3.7/2.5/1.8 MHz
- PS-THI frequencies: T5.0/T4.4/T3.8/T3.4/T2.8 MHz
- Doppler frequencies: 3.6/3.1/3.0/2.5/2.2/1.8 MHz
- D-THI frequency: 5.0 MHz

**Prerequisite: Aplio SW Version 5.5 or Higher, Xario Version 3.0 software**

## **SMART FUSION IMAGING PACKAGE FOR APLIO 500**

Displays volume data obtained by another modality in synchronization with the ultrasound image for increased confidence in diagnoses and interventional procedures.

- Reads 3-D DICOM data sets from CT systems
- Browse area of interest simultaneously in real-time ultrasound and pre-acquired volume data
- Displays corresponding image next to live ultrasound image
- Magnetic position sensor has sub-millimeter accuracy for precise spatial correlation of different imaging modalities in real-time

## **SMART FUSION MOUNTING KIT**

Includes magnetic sensor.

## **SMART FUSION IMAGING KIT**

Smart Fusion imaging software.

### **PANORAMIC VIEW**

- Allows for the evaluation of vessels, organs and anatomy in a large field-of-view.
- Provides for the collection of more comprehensive data sets for evaluating or identifying enlarged masses, soft tissue abnormalities and foreign bodies.
- Scans at a continuous speed without the need for probe attachments.

### **HV POWER UNIT**

Enables dynamic Micro-Slice capabilities with PLT-1204BX, multi-frequency linear transducer.

### **DYNAMIC MICRO-SLICE SOFTWARE**

Matrix array technology for fine beam forming focuses not only in the lateral and axial planes, but also in the depth or elevation plane.

**Prerequisite: UIHV-A500A**