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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.

### **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
- Quick Assist Protocols
- 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
- Support of Windows 7

## **KEY FEATURES**

### **Extraordinary Image Quality**

**Toshiba's new image architecture - High-Density Beamformer - provides superb 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 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 . 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.

#### **Quick Assist Protocols**

Enables a new generation of automated workflow when performing complex ultrasound exams. Featuring one-click operation, Quick Assist helps increase consistency and maintain standards from start-to-finish and patient-to-patient.

#### Auto-IMT

Provides a measurement of the intima-media thickness of the arterial wall to assist in detecting the presence and aide in tracking 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, if available, 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**

Image Maker Express is an online marketing resource that helps Toshiba customers build demand for imaging service by growing their referring physician and patient relationships. Image Maker Express includes:

- Easy-to-use marketing resources and tools developed exclusively for Toshiba customers to bring together effective marketing strategies and tactics.
- A wealth of collaterals and content to create high-quality brochures, print ads and more to help market the Toshiba customer's new imaging capabilities.

Image Maker Express Materials available include:

- Product images and logos
- Clinical images and videos
- PowerPoint presentations and promotional videos
- Brochure samples
- Customizable press releases and media tips
- Marketing strategy tutorials

*\*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

**QUICK ASSIST PROTOCOLS**

Enables automated workflow when performing complex ultrasound exams. Featuring one-click operation, Quick Assist helps increase consistency and maintain standards from start-to-finish and patient-to-patient.

**RELIANCE TECHNOLOGY PROTECTION PROGRAM**

**MULTI-FREQUENCY WIDE FOOTPRINT LINEAR TRANSDUCER**

Multi-frequency linear transducer with wider field of view (58 mm) for:

- Breast/Small parts/MSK
- Small parts
- Musculoskeletal

Imaging Frequencies : 12.0/10.0/7.0/T11.0/T9.0/T7.0 MHz  
D-THI Frequencies : 14.0/10.0 MHz  
Color Frequencies: 7.0/6.0/5.0 MHz  
Doppler Frequencies : 7.0/6.0/5.0 MHz

*Prerequisite: V3.0 or later*

#### **DYNAMIC MICRO-SLICE KIT**

Produces highly enhanced detail resolution by electronically focusing the ultrasound beam in the elevation plane.

Used in conjunction with the 1.5D array transducer PLT-1204BX, multi-frequency linear transducer with Micro-Slice.

#### **MULTI-FREQUENCY LINEAR TRANSDUCER WITH MICRO-SLICE**

High frequency 1.5D linear array transducer for superb detail resolution

**Model:** PLT-1204BX

**Applicable systems:** SSA-790A in which UIHV-790A V3.0 or later and USMS-790A V3.0 or later are installed

**Imaging frequencies:** 14.0/12.0/9.3/8.0/7.2/T14.0/T12.0/T10.0/T8.0/T7.0/

**D-THI:** 18.0/14.0/13.0 MHz

**Doppler Frequencies:** 10.0/8.9/8.8/7.3/7.2/6.2/6.1/5.3 MHz

**Applicable modes:** B/PS-THI/D-THI/CDI/TDI/ADF/PWD/  
ApliPure/ ApliPure+

**Biopsy adapter:** Same as for PLT-1204AX: CIVCO 680-088 (TG-4)

#### **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*

### **HV POWER UNIT**

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

### **MULTI-FREQUENCY LINEAR TRANSDUCER**

Imaging for:

- Carotid artery
- Peripheral vascular Doppler
- Imaging Frequencies: 9.2/8.2/6.7/5.0/4.0/T7.6/T6.6/6.2/5.8 MHz
- D-THI Frequencies : 8.0 MHz
- Doppler Frequencies : 6.2/5.3/5.0/4.4/4.0 MHz

### **MULTI-FREQUENCY LINEAR TRANSDUCER**

7.5MHz linear transducer for vascular imaging providing high resolution and sensitivity.

- Multifrequency: 11.0/10.0/8.6/6.2/4.8/T8.4/T7.6/T7.2/T6.6/T6.2 MHz
- D-THI Frequency : 9.0/8.0 MHz
- Doppler Frequencies : 8.0/7.2/6.1/5.3/4.7/4.4 MHz
- Field Width: 38 mm

### **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*

### **MULTI-FREQUENCY CONVEX ENDOVAGINAL TRANSDUCER (Qty 3)**

- Imaging Frequencies:  
8.8/7.3/5.8/4.7/3.6/T8.0/T7.2/T6.6/T6.0/T5.6 MHz
- D-THI Frequencies: 7.0/6.0 MHz
- Doppler Frequencies: 6.6/6.2/5.0/4.2/3.6/3.3 MHz

## **MICRO-FREQUENCY ENDOCAVITARY TRANSDUCER**

High-frequency endocavitary transducer for 3-D and 4-D endovaginal and transrectal applications. This transducer delivers unsurpassed bandwidth and sensitivity while increasing penetration and spatial resolution.

Specifications:

- Imaging frequencies:  
8.8/7.3/5.8/4.7/3.6/T8.0/T7.2/T6.6/T6.0/T5.6 MHz
- D-THI frequencies: 7.0/6.0 MHz
- Doppler frequencies: 6.7/6.6/6.2/5.0/4.2/3.6/3.3 MHz
- Scan angle: 160 degrees

*Prerequisite: UIMV-A500A*

## **MECHANICAL 4-D KIT / MD-TEE KIT**

A motor-control board required to run the 4-D transducers and motorized multi-plane transesophageal echocardiography package (PET-512MC).

## **ELASTOGRAPHY SOFTWARE**

Real-time elastography technology provides a visual representation of the elasticity of lesions following manual compressions.

## **SUPERB MICROVASCULAR IMAGING (SMI)**

Superb Microvascular Imaging (SMI) provides visualization of hemodynamics when imaging low velocity microvascular flow.

### **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.

### **OPERATION MANUAL**

To complement the electronic manual.

### **GEL WARMER**