

VAMC BATTLE CREEK, MI  
PO# 515-B40011

EQUIPMENT SUMMARY:

**AQUILION PRIME FAST WHOLE BODY  
CT SCANNER WITH AIDR 3D**

AQUILION PRIME HIGH CAPACITY  
EXTENDED COUCH

CT SCANNER AQUILION PRIME WITH  
HIGH CAPACITY EXTENDED COUCH

ACCESSORY KIT FOR HIGH CAPACITY  
COUCH

CT PHANTOM

CHAIR WITH ADJUSTABLE ARMS AND  
BACK (Qty 2)

CABLE CATEGORY 5E/RJ45 5M

CABLE CATEGORY 5E/RJ45 35M

CONSOLE DESK 65" X 36" X 30"

EQUIPMENT SUMMARY: (continued)

SERVICE MODEM CABLE (Qty 2)

FLOOR LEVELING EPOXY KIT

SURECONNECT DICOM CONNECTIVITY  
PACKAGE

DICOM 3 STORAGE SERVICE CLASS  
PROVIDER (SCP)

DICOM 3 MODALITY WORKLIST  
MANAGEMENT (MWM) SERVICE CLASS  
USER (SCU) SYSTEM

DICOM 3 PERFORMED PROCEDURE STEP  
SCU

DICOM 3 QUERY/RETRIEVE SCP

DICOM 3 QUERY/RETRIEVE SCU AQ/MP

DICOM 3 STORAGE COMMITMENT SCU  
SOFTWARE

PRESENTATION OF GROUPED  
PROCEDURES (PGP) AND EXAM HARD  
SPLIT

EPROTECT AUTHENTICATION AND  
MALWARE PROTECTION DEVICE

KIT,MINI ROUTER W/ ACCESSORIES

SYSTEM UPS 480 VOLT INPUT / 480 VOLT  
OUTPUT 125 KVA

BATTERY CABINET FOR ANY TIC VRDU

REMOTE STATUS ALARM PANEL

START UP 125 KVA

TOSHIBA POWER DISTRIBUTION UNIT

SURECARDIO WITH PHASEXACT &  
PROSPECTIVE GATING FOR AQUILION  
PRIME

ECG GATED SCANNING FOR AQUILION  
PRIME

ECG MONITOR, R WAVE CARDIAC  
TRIGGER 7800 WITH CHART RECORDER

PRIME DETECTOR UPGRADE KIT (40 TO 80  
DETECTOR ROWS)

ULTRA-FAST IMAGE RECONSTRUCTION  
KIT FOR AQUILION PRIME & VELOCT

CONEXACT DOUBLE SLICE KIT FOR PRIME  
80 TO 160 SLICE UPGRADE

CONEXACT DOUBLE SLICE KIT

TECH ASSIST LATERAL TABLE SLIDE FOR  
AQUILION PRIME HIGH CAPACITY (660 LB)  
COUCH

TECH ASSIST LATERAL SLIDE FOR AQ  
PRIME HIGH CAPACITY

SURESUBTRACTION FOR AQUILION

MEDRAD STELLANT OCS DUAL FLOW  
INJECTOR

ADDITIONAL CLINICAL APPLICATIONS -  
IRVINE, CA

ADDITIONAL VITAL IMAGES  
WORKSTATION TRAINING

VITREA WORKSTATION WITH CARDIO  
VASCULAR SOFTWARE PACKAGE

VITREA WORKSTATION, HARDWARE

VITREA WORKSTATION, MONITOR  
HARDWARE

VITREA WORKSTATION, TOSHIBA US  
CARDIOLOGY PKG

BIOMED TRAINING - TUITION, TRAVEL  
AND LODGING - AQ PRIME (10 CLASS  
DAYS)

TRADE-IN TOSHIBA AQUILION 16 SLICE  
EE# 119703

**(\*) Additional discount may apply based on further multi-unit or multi-modality negotiations at the VISN and/or VANAC.**

## Special Information & Terms

- This quotation/order will be subjected to the Agreement for Computed Tomography equipment products between Government and Toshiba America Medical Systems, Inc., Reference contract no. SPM2D1-09-D-8322/V797P-6033(b).
- Includes 12 Month Service Warranty.
- Single-Energy Metal Artifact Reduction (SEMAR utilizes a sophisticated reconstruction algorithm to reduce artifacts caused by metal while improving visualization of the implant, supporting bone and adjacent soft tissues\* for improved visualization. SEMAR can be applied to a routine low-dose scan, combined with AIDR 3D to achieve the best possible image quality without the need for additional exposure dose or a dedicated scan procedure. Toshiba will include SEMAR with each system as a value add. SEMAR is normally valued at \$50,000.

\* Bone structures near the metal-tissue interface may become distorted. Metal artifacts may not be completely removed in areas near the metal material. Comparison with the original images is suggested when performing diagnosis using SEMAR images.

Prerequisite: Requires Version 6.0 software. Not available on the Aquilion Large Bore or RXL.

- Toshiba will build and provide protocols to acquire dual energy scans on the Aquilion PRIME.
- Quotation includes a trade-in.

## **AQUILION PRIME FAST WHOLE BODY CT SCANNER WITH AIDR 3D**

The Aquilion PRIME Series, with Adaptive Iterative Dose Reduction 3D (AIDR 3D) is a scalable 40 to 160\*<sup>1</sup> & \*<sup>2</sup> slice with the technology of the Aquilion™ ONE built in. The speed and clinical accuracy of this technology offers significant benefits to patients – especially trauma, pediatric and critically ill patients. This technology enables physicians to more clearly visualize internal injuries and disease in less time.

*\*1-The coneXact double slice upgrade is required to obtain additional reconstructed slices in a single axial rotation.*

*\*2- The high coverage upgrade is required for 40 mm coverage at 0.5 mm*

It includes Aquilion's best-in-class, 0.5 mm detector elements with a new scalable quantum detector covering up to 40 mm of anatomy every 350 msec.

The Aquilion PRIME Series is capable of reconstructing 40, 80\*<sup>1</sup> or \*<sup>2</sup> or 160\*<sup>1</sup> & \*<sup>2</sup> unique slices with every rotation of the gantry and incorporates a host of ergonomic and automated features to streamline productivity and deliver the highest quality images while lowering radiation dose. Aquilion PRIME Series also achieves consistently superior image quality with industry-leading, low-contrast resolution of 2 mm at 0.3% and high-contrast resolution of 0.35 mm.

*\*1-The coneXact double slice upgrade is required to obtain additional reconstructed slices in a single axial rotation.*

*\*2- The high coverage upgrade is required for 40 mm coverage at 0.5 mm*

### **Ultra-Fast Workflow with Patient Comfort**

The Aquilion PRIME Series boosts productivity with fast scan and image reconstruction times while offering comfort features such as the wide bore (78 cm) and (optional) large table capacity (660 lbs) for patients of all sizes pediatric to bariatric.

Aquilion PRIME Series makes exams easier for all patients. The routine fast scans made possible by the quantum detector also mean short breath-holds for better patient compliance.

### **DOSE-REDUCTION FEATURES**

Aquilion PRIME Series reinforces Toshiba's guiding principle of ALARA for every patient. To achieve this, Aquilion PRIME Series has an array of adaptive and integrated dose-reduction strategies that are implemented at every stage, from patient registration to image reconstruction. In addition, patient dose reduction is integrated into the protocol software, so it activates prior to turning on the x-ray beam.

#### **Active Collimation**

Active collimation synchronizes the width of the x-ray beam at the ends of the scan range to the clinically useful area needed for image reconstruction. By eliminating exposure that is not used for diagnosis, patient dose is reduced.

#### **Adaptive Iterative Dose Reduction 3D (AIDR 3D)**

AIDR 3D is the third generation in the evolution of Toshiba's iterative reconstruction technology. AIDR 3D is an iterative algorithm intended to reduce pixel noise from the original data, the results analyzed, and the process repeated until the target level of noise-reduction is achieved. This iterative algorithm is superior in reducing background noise while preserving diagnostic information compared to non-iterative approaches.

AIDR 3D can be integrated into all acquisition modes for routine clinical use and is able to reduce pixel noise magnitude in a way that may result in dose reduction.

#### **SURE<sup>®</sup>Exposure3D (x, y, z automated mA modulation software)**

Toshiba's SURE<sup>®</sup>Exposure3D software automatically adjusts the mAs based on patient anatomy to adapt to and compensate for changes in attenuation level.

### **NEMA XR-25 Dose Check**

Aquilion PRIME Series includes the National Electrical Manufacturers Association (NEMA) XR-25 dose check software, which includes dose alert and dose notification.

### **DICOM IHE SR**

Aquilion PRIME Series also integrates with DICOM IHE SR software to allow patient-dose tracking.

### **COMPONENTS**

- Large-aperture 78 cm, slip-ring gantry
- High-power 72 kW x-ray generator and tube
- Ergonomic and scalable patient couch
- Ergonomic operator controls
- 3-D and 4-D software for display console
- High-capacity hard disks
- Image data transfer link
- Custom patient table pad and positioning accessories
- Operator manuals and quality-assurance phantoms

### **KEY FEATURES**

#### **Routine Fast Scanning**

The Aquilion PRIME Series is capable of reconstructing 40, 80<sup>\*1</sup> or <sup>\*2</sup> or 160<sup>\*1</sup> & <sup>\*2</sup> unique slices with every rotation of the gantry and incorporates a host of ergonomic and automated features to streamline productivity and deliver the highest quality images while lowering radiation dose. Aquilion PRIME Series also achieves consistently superior image quality with industry-leading, low-contrast resolution of 2 mm at 0.3% and high-contrast resolution of 0.35 mm.

Patients benefit from the extremely short exam times. Fast scan acquisition can also be used to meet the demands of helical CTA examinations for vascular imaging.

### **Optimal Space Utilization**

The Aquilion PRIME Series has only four main components: gantry, couch, console and transformer. The recommended minimum CT room size is only 14.8 square meters with the compact couch.

### **SURETechnologies**

Improve workflow with real-time imaging, which provides the ability to view a scan at 12 frames per second (512x512) during the acquisition. This allows the operator to rapidly assess if additional images are needed.

The following are standard features on Aquilion PRIME Series:

- SUREExposure – Dose modulation based on scanogram
- SUREStart – Real-time contrast detection at 12 fps. With SUREStart there is no need to perform a timing bolus, saving up to 30 cc's of contrast.

### **Easy Operation**

Aquilion PRIME Series is easy to operate using the 19-inch LCD monitor, mouse and ergonomic keyboard. Scan automatically by programming procedures with eXam Plan and vocal instructions through VoiceLink™.

## **EQUIPMENT COMPONENTS**

### **eVolution Gantry with iStation**

The philosophy behind eVolution is to build medical imaging equipment with less energy and more recycled materials leading to a much more environmentally 'green' platform.

### **iStation**

The iStation is a 12-inch LCD screen that uses video and voice prompts to ensure patient compliance during scanning. This is especially useful during pediatric scanning as the iStation displays a video of a small child that tells the patient when to raise their arms, when to hold their breath, and so on. These child-friendly instructions, coming from a child figure helps assure compliance. iStation also allows the user to visualize the patient's ECG waveform when acquiring ECG-gated exams.

### **eEvolution Gantry**

The eEvolution gantry is the world's most eco-friendly gantry design, built using 30% less energy than standard, multi-slice CTs.

- Hybrid slip-ring technology conserves unused electricity
- Gantry tilts  $\pm 30$  degrees
- Large aperture: 78 cm
- Five scan fields of view
- Wide range of scan times provides greater flexibility for optimal image quality
- eEvolution touch panel - many functions can be controlled in-room for quick setup and improved workflow

### **Console – Acquire and Display**

- Powerful, ergonomic console computer handles display, image feed, filming and transferring multi-planar reconstructions with the same interface used for axial images.
- InstaView - Full matrix real-time image review
- Capable of true simultaneous scanning, retrieving, archiving and filming without interruption using the optional second console. This is a genuine multi-tasking system for multi-slice and volume data sets.
- Powerful reconstruction tower with CPUs and hard drives with RAID 5 controllers.

- Includes user-friendly keyboard, mouse, monitor, CPU cabinet/reconstruction enclosure.

### **MegaCool™ X-ray Tube**

This compact, high-performance tube is designed to minimize tube-cooling delays with heavy patient loads at all scan times. It was built on the proven, anode-grounded, MegaCool tube technology used on every Aquilion multi-slice CT.

Other features include:

- Dual focal spots
- Anode capacity of 7.5 MHU
- Dissipation rate of 1,386 kHU per minute maximum

### **Quantum V Detectors and DAS**

- Unique Toshiba ceramic, solid-state detector array and DAS
- Ultra-fast DAS to acquire large-volume data
- Solid-state detector array with 0.5 mm detector elements
- Low-contrast resolution of 2 mm at 0.3% with 17.2 mGy (with AIDR 3D)

### **High-Power Generator**

Robust, high-voltage circuits generate 72 kW (500 mA) of power optionally scalable to 72 kW (600 mA). This provides support for the 7.5 MHU x-ray tube and allows helical scans of up to 100 seconds.

Multiple kV Selections: 80, 100, 120 and 135 kV.

### **NETWORKING**

- DICOM 3.0 Conformance Standards
- DICOM 3.0 Modality Worklist Management
- DICOM 3.0 Performed Procedure Step SCU
- DICOM 3.0 Enhanced CT Image Storage and Transfer

- DICOM 3.0 Presentation of Grouped Procedures (PGP) and Study Split
- DICOM 3.0 (Storage SCU)
- DICOM 3.0 Query/Retrieve Service Class Provider (SCP)
- DICOM 3.0 (Print SCU)

### HELICAL SCAN & FUNCTIONALITY

#### **MultiView**

Built into protocol for fast multi-planar reconstruction in batch mode specifically for multi-slice data sets. Coronal, sagittal and axial images are created and displayed for immediate viewing.

#### **3-D Imaging on Console**

Provides excellent image quality with surface-shaded renderings and volume-rendered 3-D images. Provides zooming and panning over the 3-D surface and performs distance measurements.

Other features include:

- Easy 3-D
- Bone removal
- Maximum intensity projection (MIP)
- Minimum intensity projection
- Intensity volume rendering

#### **Quantitative Analysis**

- Profile display of CT numbers along a selected line in the axial plane
- Distance measurement and display
- CT number display
- Histogram display

#### **eXam Plan Protocols**

- 600+ eXam plan protocols that can be adjusted while scanning

- Four preset reconstructions

#### **Archiving**

- Can be automated with each eXam plan
- Raw data and image data can be protected to prevent deletion

#### **Filming**

- Auto filming can be set as part of the eXam plan
- Images are displayed in 512x512 or 1024x1024

#### **CUSTOMER CARE SERVICES**

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

#### **InTouch Center®**

This centralized service facility provides applications and service support for customers 24 hours a day, seven days a week.

#### **Toshiba CT ePROTECT Authentication and Malware Protection Device**

eProtect is the quickest, simplest, and most secure protection for Toshiba equipment. eProtect is a specially configured network device designed to isolate Toshiba medical products from hospital network traffic. eProtect will control and limit traffic into and out of Toshiba Products to allow DICOM services like Modality Worklist, Storage to PACS and workstations, Query & Retrieve, etc.

At the same time, eProtect restricts unnecessary network traffic from reaching the medical device. This unnecessary network traffic could be, but is not limited to viruses, malware, and malicious attacks. Toshiba has found this to be the best form of malware protection for Toshiba imaging equipment. eProtect is provided *free of charge to Toshiba warranty and service agreement customers*. This feature, a \$20,000 value, is included in each Aquilion at no additional charge.

### **InnerVision™ Plus**

Remote system diagnostics are available around-the-clock to help identify problems and provide potential solutions before care is interrupted or an engineer can arrive. InnerVision Plus is included at no charge and connected while any CT is under warranty, or any service agreement including Full Service, In-House Support, Partnership and/or VISN Master Service Agreement

### **InTouch Agreements**

Based on customer needs, InTouch customer agreements can range from an a-la-carte approach to full-security agreements that provide complete system protection.

### **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.

### **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*

#### APPLICATION TRAINING

Each system includes three phases of education using a customized approach.

**Phase I Training:** Two vouchers for a one-week intensive course for core trainers at the Toshiba Institute of Advanced Imaging in Irvine, California, using the most advanced education approach in the industry.

- Two attendance vouchers good for course and travel expenses provided with each system. One technologist must attend prior to system installation. The second voucher is valid for six months following installation.
- Accredited for continuing education by the ASRT Education Foundation.
- Additional vouchers available for purchase.

**Phase II Training:** 32 hours (one week) of on-site training at the customer's facility by two applications specialists, one dedicated to technologists and the other to physicians.

- Training for up to four technologists.

- Technologist who attends the Phase I course must attend Phase II.

**Phase III Training:** 32 hours (one week) of follow-up training

- On-site at client facility
- Approximately 8-10 weeks after Phase II training
- Toshiba recommends follow-up training within 6 months of installation for maximum benefit

Applications support is available by phone on the toll-free ASSIST line.

## COMPONENT SUMMARY:

### **AQUILION PRIME HIGH CAPACITY EXTENDED COUCH**

### **CT SCANNER AQUILION PRIME WITH HIGH CAPACITY EXTENDED COUCH**

The PRIME High Capacity Extended Patient Couch provides uncompromised patient positioning while supporting the patient. The entire unit moves vertically and the top moves longitudinally. In an emergency, the couch top can be pulled out manually with very little effort. The couch top can also be lowered to a minimum height of 330 mm (12.99 inches) from the floor, facilitating transfer of the patient from a low bed or stretcher.

#### **COMPONENTS**

- 47 cm wide, metal-free couch top
- Horizontal stroke of 2,390 mm and a scanning range of 2,000 mm for tall patients
- High-precision couch-top positioning is possible from the integrated console or by manual operation from the control panel with clear digital readouts provided on the gantry.
- Large patient capability (660 lbs)

#### **ACCESSORY KIT FOR HIGH CAPACITY COUCH**

Includes each of the following items:

- Rolled Edge Foot Extension Pad
- Wide & Medium Security Straps
- Chin and Forehead Straps
- Adult Head Rest Pads (Medium and Large)
- Tilt Wedge
- Knee Support Wedge
- Coronal Head Support
- Table Pad

- Protective Table Covers (Box of Four)
- Detachable Rail 77"

### **CT PHANTOM**

Measures image quality to ensure compliance to Toshiba standards for:

- High-contrast resolution
- Low-contrast resolution
- Slice thickness
- Noise
- Contrast scale

### **CHAIR WITH ADJUSTABLE ARMS AND BACK (Qty 2)**

#### **CABLE CATEGORY 5E/RJ45 5M**

#### **CABLE CATEGORY 5E/RJ45 35M**

#### **CONSOLE DESK 65" X 36" X 30"**

Measures 65" x 36" x 30"

#### **SERVICE MODEM CABLE (Qty 2)**

#### **FLOOR LEVELING EPOXY KIT**

#### **SURECONNECT DICOM CONNECTIVITY PACKAGE**

This package is designed to meet the DICOM needs of most departments.

#### **COT-32D DICOM Modality Worklist Management**

Allows the CT system to receive patient demographic data from an HIS/RIS system in conformance with the DICOM 3.0 standard.

**COT-33D (MPPS)**

In combination with COT-32D (MWM), MPPS provides notification of the start and end of the examination back to an RIS that supports DICOM MPPS (SCP). Exam record and patient information can also be sent to the RIS.

**COT-35D Query/Retrieve (SCU) The Q/R Service Class User (SCU)**

Allows a device to initiate a request for patient, study, series and/or image information from the provider device in accordance with the DICOM 3.0 standard.

**COT-41D Storage Commitment**

Verifies image transfer and storage.

- Allows operator to determine if data is stored correctly at the PACS server, avoiding unintentional image deletion.
- Improves efficiency of image management operations.
- Provides fail-safe method to prevent image data from being deleted unintentionally even in the event of a communication failure (during image transfer or during a storage verification response).

**COT-44A PGP Study Split**

PGP is an Integrated Health Enterprise (IHE) standard designed specifically with multiple examination orders (Requested Procedures) that can be performed in single CT examination.

- Provides preset and automatic transfer solutions for multiple exams from a single CT exam.
- Facilitates clinical viewing of images and reporting of individual requested procedures.
- Use with PACS systems that are IHE PGP compliant.
- Use the study split option for PACS systems that are not yet IHE PGP compliant to physically split images into multiple examinations.

*Note: This option does not include a DICOM gateway for the HIS/RIS system.*

### **DICOM 3 STORAGE SERVICE CLASS PROVIDER (SCP)**

- Exchanges DICOM 3.0 compliant image objects on a network
- Allows the system to perform functions requested by a Storage Class User (SCU) device

### **DICOM 3 MODALITY WORKLIST MANAGEMENT (MWM) SERVICE CLASS USER (SCU) SYSTEM**

Allows the CT system to obtain details of patients and scheduled examinations electronically from the HIS/RIS system, avoiding the potential mistakes of manual entry.

*Note: This option does not include a DICOM gateway for the HIS/RIS system.*

### **DICOM 3 PERFORMED PROCEDURE STEP SCU**

In combination with COT-32D (MWM), MPPS provides notification of the start and end of the examination back to an RIS that supports DICOM MPPS (SCP). Exam record and patient information can also be sent to the RIS.

### **DICOM 3 QUERY/RETRIEVE SCP**

- Allows a Storage Class User (SCU) to query the SCP device
- Enables user devices to retrieve patient, study, series and/or image information in conformance with the DICOM 3.0 standard

### **DICOM 3 QUERY/RETRIEVE SCU AQ/MP**

Allows a device to initiate a request for patient, study, series and/or image information from the provider device in accordance with the DICOM 3.0 standard.

### **DICOM 3 STORAGE COMMITMENT SCU SOFTWARE**

Verifies image transfer and storage.

- Allows operator to determine if data is stored correctly at the PACS server, avoiding unintentional image deletion.
- Improves efficiency of image management operations.
- Provides fail-safe method to prevent image data from being deleted unintentionally even in the event of a communication failure (during image transfer or during a storage verification response).

### **PRESENTATION OF GROUPED PROCEDURES (PGP) AND EXAM HARD SPLIT**

PGP is an Integrated Health Enterprise (IHE) standard designed specifically with multiple examination orders (Requested Procedures) that can be performed in a single CT examination.

- Provides preset and automatic transfer solutions for multiple exams from a single CT exam.
- Facilitates clinical viewing of images and reporting of individual requested procedures.
- Use with PACS systems that are IHE PGP compliant.
- Use the study split option for PACS systems that are not yet IHE PGP compliant to physically split images into multiple examinations.

### **EPROTECT AUTHENTICATION AND MALWARE PROTECTION DEVICE**

**KIT,MINI ROUTER W/ACCESSORIES**

**SYSTEM UPS 480 VOLT INPUT / 480 VOLT OUTPUT 125 KVA**

**BATTERY CABINET FOR ANY TIC VRDU**

### **REMOTE STATUS ALARM PANEL**

Wall-mount shell with 120-VAC power supply adapter with battery back-up with internal batteries. Hard-wire with internal power supply.

### **START UP 125 KVA**

### **TOSHIBA POWER DISTRIBUTION UNIT**

The PDU is engineered to address common power problems found in the hospital environment and to isolate the CT system components to meet IEC 60601-1 Third Edition requirements. This is important to assure optimal reliability and performance of CT systems. Customer is responsible for complying with Toshiba's site specifications for electrical power.

This device provides most of the electrical site preparation requirements of Toshiba CT systems. The PDU contains a low impedance isolation step-down transformer with a shielding plate between primary and secondary.

#### **Voltage Conversion**

Wiring costs are significantly reduced since the PDU accepts a single, 480V delta input, supplying 200V to the generator and the various other parts of the system.

#### **Distribution**

The PDU comes prepackaged with the distribution breakers needed for each system feed. Having all system breakers in one location also makes it easier for service personnel to remove power.

#### **Installation**

Installation is much faster, more predictable, and less expensive with a factory-assembled and tested system.

### **SURECARDIO WITH PHASEXACT & PROSPECTIVE GATING FOR AQUILION PRIME**

Provides a comprehensive package of hardware and software for advanced cardiac imaging, including phaseXact and prospective/retrospective gating for ultra-low-dose coronary imaging.

#### **SURECardio with Prospective Gating**

Provides low dose to the patient for evaluation of calcified plaque. Prospective cardiac CTA mode offers further flexibility to the Target CTA low-dose protocol.

#### **SURECardio with phaseXact**

Eliminates the need for unnecessary multiple reconstructions by automatically selecting the cardiac phase with the least motion. With the combinations of 350 msec rotation time and up to five SURECardio adaptive segmented reconstructions, the temporal resolution can be as low as 35 ms.

In addition:

- The reconstructed images for specific (cardiac) phases are generated (by raw data processing) from the Aquilion PRIME scan data acquired simultaneously by the ECG-gated scan system.
- Real-time beat control monitors R-R interval to assure diagnostic cardiac images even with challenging patients.

#### **SURECardio's Automated Feature Set**

Simplifies cardiac protocol setup and improves workflow.

### **ECG GATED SCANNING FOR AQUILION PRIME**

Acquires images for specific cardiac phases. Includes:

- ECG-gated helical scanning and reconstruction with dose modulation and arrhythmia rejection.
- phaseXact: automatically detects cardiac phases with minimal motion to perform reconstruction.
- SURECardio Prospective: sets helical pitch and ECG dose modulation based on ECG/heart rate.

*Prerequisites: MODEL-3000T-B or MODEL-3000TR-B ECG monitor with trigger.*

### **ECG MONITOR, R WAVE CARDIAC TRIGGER 7800 WITH CHART RECORDER**

Cardiac ECG Trigger Monitor Model 7800 with integrated chart recorder. Monitor is used with CT hardware and software to measure skin impedance to help ensure reliable scanning.

- Compact ECG monitor with fast gated trigger output for R-wave synchronization applications
- High & Low Heart Rate Limits
- 6.5" Color LCD Display (TFT Active Matrix)
- Integrated ECG simulator to test the integrity of the patient cables, lead wires, and electronic circuitry.

### **PRIME DETECTOR UPGRADE KIT (40 TO 80 DETECTOR ROWS)**

This Toshiba PRIME upgrade kit will expand the Aquilion PRIME Quantum 40 row detector to the full 80 detector row capability of generating 80 x 0.5 mm slices per rotation.

This upgrade allows a number of operational and clinical applications that enhance workflow and increase examination throughput.

#### **Benefits of upgrading the Aquilion PRIME S-Series CT Scanner:**

The Aquilion PRIME with 80 slice capability includes Aquilion's best-in-class, 0.5 mm detector 80 channel quantum detector covering up to 40 mm of anatomy every rotation.

The speed and clinical accuracy of this technology offers significant benefits to patients - especially trauma, pediatric and critically ill patients. This technology enables physicians to more clearly visualize internal injuries and disease in less time.

### **Ultra-Fast Workflow with Patient Comfort**

The Aquilion PRIME Series with 80 detector row capability boosts productivity with fast scan and image reconstruction times while offering comfort features for patients of all sizes. The routine fast scans made possible by the 80-row detector also mean short breath-holds for better patient compliance.

### **ULTRA-FAST IMAGE RECONSTRUCTION KIT FOR AQUILION PRIME & VELOCT**

With up to 60 fps, this high-speed reconstruction kit ensures that the images are ready for evaluation at the earliest possible time.

The high scanning speed also reduces motion blur, thus reducing the amount of contrast required.

### **CONEXACT DOUBLE SLICE KIT FOR PRIME 80 TO 160 SLICE UPGRADE**

This upgrade kit adds coneXact double slice technology to the Aquilion PRIME platform, enabling 160 unique images reconstructed per axial scan.

#### **Key Enhancements**

Utilizing Toshiba's proprietary coneXact algorithms developed for the Aquilion ONE Dynamic Volume CT, this double slice reconstruction package enables volume reconstruction in double density, effectively creating 0.5mm slices at every 0.25mm. The coneXact algorithm achieves this by first reconstructing data sets as a volume, and then using information from oblique cone angle projections to extract distinct axial slices in between detector planes without resorting to interpolation or upsampling.

A summary of benefits includes:

- More true-to-original reconstruction in MPR and 3-D rendered images
- Increased detail in the z-direction - ideal for IAC and extremities
- Reduction of partial volume effects leading to more detailed images while maintaining superior low contrast detectability

*Requires CGS-55A/1B PRIME Detector Upgrade Kit (40-80 Detector Row)*

### **CONEXACT DOUBLE SLICE KIT**

### **TECH ASSIST LATERAL TABLE SLIDE FOR AQUILION PRIME HIGH CAPACITY (660 LB) COUCH**

### **TECH ASSIST LATERAL SLIDE FOR AQ PRIME HIGH CAPACITY**

Toshiba's exclusive Tech Assist Lateral Table Slide, improves technologist safety by automating the adjustment of patients on the table. In addition, it improves access for interventional procedures and accommodates precise off-center imaging. It provides the ability to move the table an infinitely variable 8.4 cm (4.2 cm on each side). This exclusive lateral movement of 8.4 cm improves image quality, minimizes patient dose and provides better access for interventions and emergency patients.

With the Aquilion CT Systems, ergonomics and patient access have evolved to an unprecedented degree with the eVolution couch and gantry. Offering greater comfort and convenience, they increase operator efficiency for faster throughput while improving patient compliance to ensure higher quality exams.

*Note: Available only on High-Capacity (660 lb) Couch for Aquilion PRIME-S*

### **SURESUBTRACTION FOR AQUILION**

This neurovascular CT digital subtraction angiography (CT DSA) software, with <sup>SURE</sup>Subtraction Carotid, improves workflow and enhances diagnostic accuracy through greater image clarity. This fully automated non-rigid registration algorithm digitally subtracts bone from the intra- and extra-cranial vessels including carotid vessels providing superior clinical images in a fraction of the time required for manual subtraction.

Enhanced Diagnostics

- Subtraction volume is completely free of bone, providing unsurpassed subtraction CTA studies of the brain and neck
- <sup>SURE</sup>Subtraction Carotid- provides superior visualization of the vertebral arteries internal and external carotids
- Easily achieves arterial and venous segmentation
- In just seconds, creates 3DVR and MIP images with 360° left-to-right and head-over-heels tumble views

#### Enhanced Workflow

- Less than 5 minutes to load, process and display images
- Subtracted dataset is still in DICOM format
- Maximize productivity with programmable features
- Streamline patient throughput with a simple 3-step process
- No special head immobilization required

*Note: <sup>SURE</sup>Subtraction Carotid requires V4.74 or later*

## **TRADE-IN**

### **MEDRAD STELLANT OCS DUAL FLOW INJECTOR**

Ceiling mounted Stellant D CT injector with Injector Synchronization is a full-featured, dual syringe injection system that enables clinicians to perform the most critical contrast enhanced CT exams.

#### **Stellant D CT injector**

Key features:

- Dual-syringe design for the most complicated protocols such as CTA and cardiac CT
- Effective contrast utilization
- Saline test injection for more precise control of contrast delivery
- Saline flush, following the injection, chases contrast from peripheral veins directly into the heart

### **Dual Flow Injection**

Key features:

- Designed with CTA exams and Cardiac CT
- Effective contrast utilization
- Inject contrast and saline at a measured ratio through simultaneous plunger motion.
- This means a more uniform enhancement of both the right and left sides of the heart with reduced artifacts.

### **ADDITIONAL CLINICAL APPLICATIONS - IRVINE, CA**

On-site training at Toshiba's Education Center in Irvine, California. The Education Center's full complement of classrooms and labs are equipped with advanced products. Accredited courses are taught in CT, MR and Vascular.

- This four-day intensive course is held Monday through Thursday, 8 a.m. to 5 p.m.
- Cost is \$3,500 per student including airfare, lodging, meal coupons, and transportation to and from the hotel and education center.

### **ADDITIONAL VITAL IMAGES WORKSTATION TRAINING**

This two day course provides an in-depth education on the ViTAL workstation. Customers will experience uninterrupted, quality, hands-on training analyzing a variety of clinical case studies. Classes are offered for both physicians and technologists.

- One participant
- Two day training course held at ViTAL Images in Minnesota

The following expenses are included:

- Domestic coach round-trip airfare
- Lodging for two nights
- Transportation to and from the course daily
- Breakfast and lunch during training

## **VITREA WORKSTATION WITH CARDIO VASCULAR SOFTWARE PACKAGE**

Vitreia® fX is a premier visualization and analysis application with advanced hardware. Vitreia fXworkstations provide outstanding image quality and clinical flexibility to help users rapidly view, evaluate, and communicate their findings to referring physicians. Designed with workflow in mind and compatible with DICOM compliant imaging devices, Vitreia workstations offer the following capabilities:

### **Vitreia Cardiac & CFA Software**

The CT Cardiac option allows clinicians to non-invasively survey a patient's coronary arteries to determine the presence and extent of obstructive disease. It also includes the ability to perform Cardiac Functional Analysis including Polar Map Display.

*Prerequisite: ECG gated scan package and ECG gated reconstruction package.*

### **Endovascular Stent Planning**

A vascular tool for automation of segmentation of the aorta and accessory vessels for the planning of Abdominal Aortic Aneurysm device placements. This tool can also be used for the stent planning of Thoracic Aortic Aneurysms.

*Prerequisite: Vitreia Version 5.1 or better*

### **Vitreia Vessel Probe Software**

A vascular analysis tool to visualize and analyze stenosis in contrast enhanced CT and MR studies. Vessel Probe provides clinicians with quick access to vessels and automatically segments vessels in MPR, measures stenosis and evaluates vessels outside of the heart with one mouse click

Diameter of the vessels must lie in the range of 0.5 - 18.0 mm

### **Vitreia VScore Software**

For coronary artery calcium scoring

Includes advanced training at Vital Images Headquarters Training Academy

### **VitreiaACCESS™**

VitreiaACCESS enables the Vitrea® license to be accessed from another Vitrea capable workstation (non-simultaneously). This enables a facility to share its access to Vitrea from one workstation to another, giving the entire facility flexibility in how and where it uses its Vitrea license.

- Each Vitrea license allows only one access point at a time, but VitreaACCESS allows that point to change from one Vitrea workstation to another.

**Note that each Vitrea license may include a variety of software.**

### **VitreiaACCESS Remote**

VitreiaACCESS™ -Remote option gives a clinician use of the Vitrea workstation and associated software through a remote PC or other computer via a Virtual Private Network (VPN) or other existing connection. This allows after-hours and distance-viewing and analysis of studies.

VitreiaACCESS-Remote also provides conference capabilities between the remote user and the facility.

### **Vital U Education**

Eight Vital U units are included with each Vitrea workstation.

**VITREA WORKSTATION, HARDWARE**

**VITREA WORKSTATION, MONITOR HARDWARE**

**VITREA WORKSTATION, TOSHIBA US CARDIOLOGY PKG**

**BIOMED TRAINING - TUITION, TRAVEL AND LODGING - AQ PRIME  
(10 CLASS DAYS)**

This training course is for the Bio-Medical/Hospital Engineers experienced in CT and diagnostic imaging who will have the responsibility to provide preliminary support for the Aquilion PRIME CT scanners. The training course will focus on the theory of operation, maintenance and repair of the Aquilion PRIME scanner. This course will be conducted with a blend of instructor led classroom discussions and laboratory hands-on practice.

This course will be conducted with a blend of instructor-led classroom discussions and laboratory hands-on practice.

As part of the requirements to pass this course, all biomed students will be required to pass a practical demonstration of comprehension with a score of 80% or better. There will also be various lab exercises during the class that will be used to check comprehension of various course modules.

***Prerequisites***

- Introduction to CT (CT122)
- Aquilion Large Current Slip Ring Cleaning Video & Quiz (SUPR-CT0094)
- DAS Theory of Operation Aquilion 64 (CT105)

Students must bring notebook computers equipped with Pentium-class CPUs, 1GB of available hard disk space, Windows 98, 2000 or XP, Office 97 or later, CD-ROM drive, serial port RS232, serial cable, and network connectivity. Laptops are not available to borrow or rent during class. Virus Scanning: Laptops used at the Center must have the latest virus scanning software and update definitions before being permitted to connect into the TAMS Training network. All laptops will be checked on the first day of class.

***This course is all inclusive: tuition, airfare (booked by Toshiba) and lodging.***