654-B69012
VAMC RENO, NV

# Cios Alpha

**All items listed below are included for this system:** *(See Detailed Technical Specifications at end of Proposal.)*

| Qty | Item Description |
|-----|------------------|

**1**       **Cios Alpha**

Cios Alpha is a high-end X-ray C-arm system with a dynamic flat panel detector for fluoroscopy and single image mode.

The compact, mobile system was developed for use in, e.g. cardio/vascular surgery, gastroenterology, urology, emergency surgery, orthopedics, and general surgery.

**1**       **FD 30x30**

High-resolution, dynamic flat panel detector with indirect converter technology (amorphous silicon) having a size of 30 cm x 30 cm, with a matrix of 1536 x 1536 pixels.

**1**       **Single Tank w. 25kW**

High-voltage generator with 25 kW (IEC) and rotating anode, including integrated active refrigeration system

**1**       **Dose measuring chamber**

System-integrated dose measuring chamber for displaying the dose area product or air kerma value.

The cumulative dose area product is displayed for the current patient and saved under the patient data.

The cumulated dose is automatically transferred to a radiation summary report and can be retrieved at any time.

For each patient a cumulative value is saved in the patient database.

Alternatively: Display of air kerma values

**1**       **Basic chassis motorization w. position m**

C-arm base unit with motorization of orbital and angular movement. The attached control module for motorized

movements includes position storage keys for storage of 2 orbital and angular positions with corresponding collimator values.

**1**       **Monitor trolley w. flex plus column**

Mobile workstation including monitor column with motorized height adjustment and 210°vertically rotatable monitors (-30°to +190°) for flexible positioning of the TFT displays with integrated cable routing and fold-up function for transport and park position.

| Qty | Item Description |
|---|---|

**1**

**2 x 19" b/w High bright TFT monitor**

Two 19" TFT displays with high luminance for live and reference image display.

**1**

**HD Video Manager**

HD video manager for emitting video signals, e.g. on external monitors, or for feeding in video signals for display on the reference monitor (monitor B), e.g. endoscopy

**1**

**CAT-DVI Option**

Cable set for connecting video outputs (live or reference) of the SmartView - HD VideoManager (14436363) to the OR monitors.

Note: The main power supply cable is delivered with a standard plug for Europe.
If necessary, replace the main cable with the version required locally.

**1**

**Remote control unit including holder**

Touch-based remote control unit for operating the C-arm from within the sterile work area. Includes the holder to attach to the side of the OR table (RoW and USA).

**1**

**Controller module motorized remote cont.**

Control module for operating the motorized orbital and angular movement and position storage keys

**1**

**Multi function foot switch**

Ergonomic multifunctional foot switch for radiation release, control of radiation functions, and storing.

**1**

**2D measurement function**

Measurement of angles and distances.

**1**

**Vascular software premium**

Subtraction angiography to display vessels as a subtraction series or roadmap, with extended function for postprocessing of images and scenes in Subtraction/Roadmap mode, including pixel shift, remask, landmark, dual-channel function, live graphic overlay.

Contrast medium: iodine or CO2.

**1**

**Stenosis quantification**

Quantification program for determination of degree of stenosis.

**1**

**DICOM Send/Storage Commitment (StC)**

Digital, unidirectional image transfer of single images or complete folders to a network in DICOM format. Feedback from the image archive (Storage Commitment).

**1**

**DICOM Print**

For sending and printing of images by means of a virtual filmsheet to a DICOM laser camera or printer. Provision of DICOM Print service for connection to a laser camera or a network printer (postscript-capable).

**1**

**DICOM Worklist/MPPS**

Import of patient/examination data from an external RIS/HIS patient management system with DICOM MWL (Modality Worklist) as well as feedback on the examination status with DICOM MPPS (Modality Performed Procedure Step).

**1**

**DICOM Query/Retrieve**

Retrieval of archived images (DICOM Query/Retrieve - Service as SCU) from a digital archive or a workstation. The images must have a DICOM XRF (X-Ray Radiofluoroscopy)/XA (X-Ray Angiography), CR (Computed Radiography), or SC (Secondary Capture) format.

**1**

**USA/Canada WLAN Client**

WLAN Client module with Ethernet connection for wireless transmission of DICOM image data, e.g. to a PACS (Picture Archiving and Communication System).

| Qty | Item Description |
|---|---|
| 1 | **HIPAA**<br>The SW option enables enhanced security features including user management and audit trail functionality.<br>In compliance with HIPAA law in the U.S. |
| 1 | **Spacer**<br>Single-tank spacer |
| 1 | **Grounding cable**<br>5 m ground wire with two snap-in locks. |
| 2 | **Transparent sterile cover single tank**<br>One-piece Cios Alpha sterile disposable cover for the single tank made of transparent plastic film. Hood with elastic band |
| 1 | **Addit Set Accompanying Documents** |
| 1 | **Additional Set of operator manuals** |
| 1 | **Initial onsite trng 24 hrs**<br>Up to (24) hours of on-site clinical education training, scheduled consecutively during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours.  This educational offering must be completed (12) months from install end date.  If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund. |
| 1 | **C-Arm drape/peel-away (10)**<br>Sample case of c-arm drapes (quantity of 10) for the Siemens C-Arms product portfolio.  The drape was designed by Siemens and has a pull-away section to accommodate the outer section of the C-arm to allow arm movement while maintaining a sterile environment.<br><br>Drapes are individually packaged and sterile.<br><br>Drape reorders will be sold in case of 20 and use Siemens part CF31772. |

**Incidental Services for Cios Alpha on Quote Nr. 1-C0YC9V Rev. 5**

Airfare for Complimentary Biomed Training for one engineer from RNO - RDU          roundtrip

This cost represents the typical direct expense to Siemens to pay for travel and lodging to attend training at the Siemen Cary, NC training facility.  All arrangements must be arranged through Siemens designated travel agency. The precis expense may vary, depending upon the timing of the travel schedule and changes to airfare and hotel rates.  Should th expense to Siemens exceed this cost, Customer will not be charged for the difference; should the expense be less tha this cost, Siemens will not refund the difference.

# OPTIONS for Cios Alpha

**All items listed below are OPTIONs and will be included on this system ONLY if initialed:** *(See Detailed Technical Specifications at end of Proposal.)*

| Qty | Item Description |
|---|---|
| 1 | **Printer installation kit**<br>Installation kit for connecting Sony UP D 89x, UP 97x, and 99x printers |
| 1 | **Sony UP991AD printer - film and paper**<br>Black & White Hybrid Graphic Printer.<br><br>The UP-971AD is a black and white HYBRID graphic printer that supports both analog and digital applications. The UP-971AD has both an analog video input as well as a USB 2.0 high speed interface for digital printing. The UP-971AD offers a resolution of 325 dpi and print speed of about 8 seconds.   * Dimensions: 12.4 x 5.2 x 12.0 inches.  * Print Media: 210mm width roll.  * Print Size: 10.5 x 7.87 inches (Digital/MAX).  * Printing Method: Thermal Printing.  * Resolution: 325 dpi.<br><br>Includes one year warranty through Sony. |

# XP Warranty Information for XP RF / XP WH / XP SU

| Product (New Systems and "ECO" Refurbished Systems Only) | Period of Warranty[1] | Coverage | |
|---|---|---|---|
| X-Ray System (not including consumables) | 12 months | Full Warranty (parts & labor) | |

| **Following parts will include warranty as listed below:** | | | |
|---|---|---|---|
| Image Intensifier Tubes (Sirecon, Optilux) | First 12 months<br><br>Months 13 through 24 | Prorated credit given to customer against replacement cost, parts only | |
| Flat Panel Detectors (e,g, Pixium, PaxScan, Canon, LMAM) | First 12 months<br><br>Months 13 through 36 | Prorated credit given to customer against replacement cost | |
| General Diagnostic tubes (Opti, Optitop)<br><br>Mammography tubes (P40/single tank unit)<br><br>Single tank tubes (Polyphos,P125-135, (Sirephos, SR) | 12 months | | |
| Single tank x-ray tubes (Powerphos) | Prorated to a maximum of 80,000 SLU[2] or 12 months whichever occurs first | Prorated credit given to customer against replacement cost | |
| Control Triodes for Generators | Prorated to a maximum of 12 months | Prorated credit given to customer against replacement cost | |
| TV Camera tubes (exposure tubes) and cathode-ray tubes (CRT) | Prorated to a maximum of 12 months | Prorated credit given to customer against replacement cost | |
| Consumables | Not covered | | |

| **Post-Warranty (after expiration of system warranty) – Replacement parts only!** | | | |
|---|---|---|---|
| Items above | As described above, but parts only | As described above, but parts only | |
| Spare parts | 6 months | Parts only | |

# Detailed Technical Specifications

## Cios Alpha

| / Product | Description |
|---|---|
| **Cios Alpha** | The mobile C-arm system with its compact design is equipped with a high-resolution digital 1.536k x 1.536k imaging system including a continuous digital imaging chain and a touch-based user interface. The FD-based system with 3 image input formats and the available high-voltage generator guarantees an optimum fluoroscopy result. In the case of pulsed fluoroscopy, an acquisition speed of up to 30 p/s can be achieved; in single image mode power levels of 12 kW to 25 kW are possible depending on the selected system configuration. EASY (Enhanced Acquisition System) automatically adjusts dose, contrast, and brightness, to deliver brilliant images in every situation, regardless of the object's position within the beam projection. In addition, the ergonomic and functional design of the user interface and software supports an optimized workflow in the OR.<br><br>A hard disk with a storage capacity of up to 100,000 images, USB interfaces, and a DVD-R/CD-ROM read/write drive incl. DICOM 3.0 offline media format enable flexible data management. Loading and display of images from the same or other modalities (CT, MR, XA, US).  DICOM 3.0 services can be used via the integrated DICOM 3.0 interface. The mobile workstation can optionally be equipped with the Flex monitor column (with 210° vertically rotatable monitors) or the Flex Plus column (monitor column with motorized height adjustment, with 210° vertically rotatable monitors and TFT displays that fold in towards each other for easier maneuverability during transport and protection of the displays when they are not used). The monitor columns are provided with integrated cable routing for flexible positioning of the TFT displays. The uninterruptible power supply (UPS) provides maximum data security. Efficiency and flexibility are ensured by upgrade options which allow the system to meet long-term requirements. |
| **FD 30x30** | The digital flat panel detector enables distortion-free imaging with a high spatial resolution and excellent contrast.<br><br>The dynamic flat panel detector with integrated removable grid is especially suitable for fulfilling the requirements of general and interventional applications.<br><br>Semi-conductor material: Amorphous silicon (a-Si) with CsI-scintillator<br><br>- Size 30 cm x 30 cm<br><br>- Pixel size: 194 µm<br><br>- Matrix size: 1.536 x 1.536 pixels<br><br>- Acquisition depth: 16 bits<br><br>Usable input formats:<br><br>Mag 0: 30 cm x 30 cm<br><br>Mag 1: 20 cm x 20 cm<br><br>Mag 2: 15 cm x 15 cm |
| **Single Tank w. 25kW** | Single-tank high-frequency generator<br><br>The microprocessor-controlled high-voltage generator operates at an inverter control frequency of 18 kHz - 50 kHz and automatic line voltage compensation (100 V - 240 V ± 10%, 50/60 Hz ± 1 Hz).<br>High resolution is achieved by a dual-focus rotating anode tube with focal spots of 0.3 and 0.5 mm. The integrated active refrigeration system, thermal monitoring, and automatic pulse frequency adaptation ensure long-term |

| / Product | Description |
|---|---|
| *(Continued)*<br><br>**Single Tank w. 25kW** | availability during extended fluoro times.<br><br>The following operating modes are supported:<br>- Single image: 40 kV to 125 kV (3 mA - 250 mA)<br>- Fluoroscopy: 40 kV to 125 kV (3 mA - 250 mA) with 0.5 - 30 F/s, min. pulse width 5 ms |
| **Dose measuring chamber** | Resolution of the dose area product and air kerma value display<br><br>- Display of the dose area product in 0.01 cGycm²<br>- Display of air kerma in 0.1 cGycm²<br>- Display of the cumulated air kerma value in 0.1 mGy<br>  The cumulated air kerma value is identified by a preceding dot.<br><br>Depending on country-specific regulations, the display can be changed by SIEMENS Service from the dose area product to the air kerma value and the cumulated air kerma value. |
| **Basic chassis motorization w. position m** | The compact, counterbalanced design of the C-arm chassis provides a high degree of convenience and user-friendliness. It features good mobility even in the smallest, busiest environments. Furthermore, all castors have cable deflectors. The C-arm design has been optimized for maximum projection angles, allowing optimum patient access and flexible use in the OR. (Immersion depth: 73 cm, free space between tube and FD 85 cm, focus-FD distance: 110 cm, orbital movement 148°(-51.5°; +96.5°), angulation ± 225°, swivel range ± 12°, horizontal movement 20 cm). The C-arm is completely counterbalanced. It can easily be adjusted in its vertical position by means of a motorized vertical travel (45 cm).<br><br>The color-coded electromagnetic brakes with control buttons on all control consoles and on the flat panel detector housing facilitate fast and safe C-arm positioning.<br><br>An easily accessible handle on the flat panel detector allows for effortless positioning from within the sterile area without restricting patient access.<br><br>The easy-to-clean touch-based control panel is attached to the C-arm by means of the horizontal carriage and has the same function as the control panel on the mobile workstation.<br>The following functions can also be controlled:<br>- Brakes for all directions of movement<br>- Vertical movement<br>- Emergency STOP<br><br>The motorization package includes an additional control module which is attached to the remote control unit and provides functionalities to operate the motorized orbital and angular movement.<br><br>The clear display of the angular and orbital angles- on the control panel simplifies positioning.<br>The additional control module includes position storage keys for storage and retrieval of 2 orbital and angular positions with corresponding collimator values. |
| **Monitor trolley w. flex plus column** | The mobile workstation is equipped with a central locking brake and cable deflectors on all castors as well as an easy-to-clean, ergonomically designed touch-based control panel and optical mouse. With a storage compartment for the mouse and a mouse pad surfaces which is suitable for both left- and right-handers. Flexible vertical positioning of the TFT displays irrespective of the trolley position through freely rotatable monitor column with integrated cable routing<br><br>- Motorized height adjustment for adaptation to the viewing angle depending on the examiner's height and position<br><br>- Reduction of ambient light interference through optimized viewing angle |

| Product | Description |
|---|---|
| *(Continued)*<br><br>**Monitor trolley w. flex plus column** | - 240 degree rotating monitor column combined with a cable-free mobile workstation allows for optimal patient-side positioning of the monitors.<br><br>TFT displays fold in towards each other for easier maneuverability during transport and to protect the monitors when they are not in use. |
| **2 x 19" b/w High bright TFT monitor** | With anti-glare coating for displaying live and reference images.<br>- Screen size 19" (48 cm)<br>- Image display with 1280 x1024 pixels<br>- Large horizontal and vertical viewing angles of >=170°<br>- Typical/Maximum brightness <=1000 typ. cd/m² |
| **HD Video Manager** | Interface for display of external video signals such as endoscopy on the right-hand TFT color display on the unit. Supports HD (High Definition) endoscopy.<br><br>Has connections for DVI-I (2x), RGB, YPrPb, Y, S-Video (2x), Composite, SD/HD-SDI (2x), VGA, offers 150 pre-programmed timings and supports PAL and NTSC up to 1080p (1920 x 1080, 50/60 Hz, interlaced/progressive).<br><br>Additional DVI output for transferring live X-ray images in DVI-D format, e.g. for connecting an additional external monitor.<br><br>Additional DVI output for transfering reference X-ray images or external image sources (e.g.endoscopy) connected with VideoManager in DVI-D format, e.g. for connecting an additional external monitor.<br><br>A video signal connected via VideoManager (e. g. endoscopy or ultrasound) can be grabbed as an image in DICOM format and stored in the same patient record together with all patient images acquired. |
| **CAT-DVI Option** | The CAT-DVI cable set allows connection over long distances (cable length is 17.3 m) of the video outputs of the SmartView – HD VideoManager on the monitors in the OR.<br>The output signal is routed over the CAT7 Ethernet patch cable (RJ45) and converted to DVI-D format (1280x1024 @ 60 Hz). A CAT-DVI converter, which requires a separate power supply, is included in the delivery for this purpose.<br><br>Please note that each video output requires one cable set. |
| **Remote control unit including holder** | C-arm functions that previously could only be controlled from within the non-sterile area, are now accessible from within in the sterile area via the remote control unit.<br><br>This includes all functions of the touch control panel plus:<br><br>- Brakes for all directions of movement<br><br>- Control of vertical movement<br><br>- Emergency STOP<br><br>The remote control unit enclosed in sterile packaging is attached directly to the railing of the OR table by means of a special holder. The robust cable connection of the system ensures an ever reliable control. |
| **Controller module motorized remote cont.** | The motorization package includes control module which is attached to the remote control unit. Function and storage keys on the control module allow two orbital/angular motorized positions to be stored and retrieved easily. These so-called position memories also store the collimator values associated with the selected positions. |

| Product | Description |
|---|---|
| **_(Continued)_**<br><br>**Controller module motorized remote cont.** | |
| **Multi function foot switch** | The following functions can be performed with the multifunctional foot switch:<br><br>Pedal functions:<br>- Radiation release for fluoroscopy<br>- Radiation release for selected operating modes (single image and depending on the options SUB, ROAD)<br><br>Switch functions:<br>- Selection of operating mode (single image, fluoroscopy, and depending on the options SUB, ROAD)<br>- Selection of the Video source at reference monitor (e.g x-ray image or endoscopic image, depending on the option SmartView – HD video manager)<br><br>- Store (LIH, LSH) |
| **2D measurement function** | 2D measuring function with integrated calibration to determine the scale for the measured distances in the X-ray image. When measuring angles, the sides of an angle can be changed independently. Complementary angle (=180° - measured angle) can be displayed by changing the angle's direction. |
| **Vascular software premium** | - Image acquisition and subtraction angiography (SUB) and roadmap (ROAD).<br><br>- Acquisition rates of 0.5 to 30 f/s, storage frequency is configurable.<br><br>- Automatic request for contrast medium injection following acquisition of the mask image. Display of dynamic changes during the contrast medium flow.<br><br>- Adding of the anatomical background (landmark) from 0% to 100%. Simultaneous display of the corresponding precontrast images on the right monitor. Peak opacification for iodine contrast (MaxOpac) and $CO_2$ contrast (MinOpac).<br><br>- Recalculation of contrast-medium-filled image through manual adjustment of the corresponding subtraction series.<br><br>- Ability to reuse one of the contrast-filled images generated in a study for roadmapping.<br><br>Compared to the regular vessel visualization software, the premium package offers additional functions to improve the quality of contrast-filled images and to reduce the amount of contrast medium administered.<br><br>Additional processing functions:<br><br>- Pixel shift<br><br>- Remask |

| / Product | Description |
|---|---|
| *(Continued)*<br><br>**Vascular software premium** | - Live graphic overlay<br><br>- Reuse of contrast-filled image<br><br>- Roadmap technique for easy catheter guidance, dilatation, and stent implantation |
| **Stenosis quantification** | Calculation of the degree of vessel stenosis. Automatic vessel analysis and display of the minimum value in relation to a defined reference value. Geometrical and densitometrical determination of the value.<br>- |
| **DICOM Send/Storage Commitment (StC)** | Note concerning DICOM interface(s)<br>The description in the "DICOM Conformance Statement" downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).<br><br>Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility. Such validation can be done on a time and material basis.<br><br>A modification of the interface that might be required is not included in the offer; e.g. for the rare case, that available configurations are not sufficient.<br>With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply |
| **DICOM Print** | Note concerning DICOM interface(s)<br>The description in the "DICOM Conformance Statement" downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).<br><br>Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility. Such validation can be done on a time and material basis.<br><br>A modification of the interface that might be required is not included in the offer; e.g. for the rare case, that available configurations are not sufficient.<br>With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply |
| **DICOM Worklist/MPPS** | Note concerning DICOM interface(s)<br>The description in the "DICOM Conformance Statement" downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).<br><br>Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility. Such validation can be done on a time and material basis.<br><br>A modification of the interface that might be required is not included in the offer; e.g. for the rare case, that available configurations are not sufficient.<br>With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply |
| **DICOM Query/Retrieve** | Note concerning DICOM interface(s)<br>The description in the "DICOM Conformance Statement" downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).<br><br>Functionalities across system borders with/between partner systems require explicit validation, since the interpretation of the interface by the partner/target system is not part of the product's responsibility. Such validation can be done on a time and material basis.<br><br>A modification of the interface that might be required is not included in the offer; e.g. for the rare case, that |

| / Product | Description |
|---|---|
| **(**<br><br>**DICOM<br>Query/Retrieve** | available configurations are not sufficient.<br>With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply |
| **USA/Canada WLAN Client** | WLAN Client module with Ethernet connection for wireless transmission of DICOM image data, e.g. to a PACS (Picture Archiving and Communication System).<br><br>- Supported WLAN standards: 802.11 a/b/e/g/h/i/n<br>- Supported Frequency bands: 2.4 / 5 GHz<br>- Security / Authentication: 802.11 i, 802.1x, WPA/WPA2. WPA2 Enterprise supplicants EAP-TLS, EAP-TTLS (MSCHAPv2), EAP-PEAP (MSCHAPv2). Supports certificates and private key upload / storage (multiple)<br>- Data encryption: TKIP, AES<br>- Supports DHCP-client<br><br>This module follows United States/Canada regulations regarding available frequencies. |
| **HIPAA** | SW license to support enhanced user management, including:<br>- user authentication to prohibit unauthorized access.<br>- privileges to define user/role-based functionality.<br>- permissions to control data access.<br>- audit trails to log system and data access. |
| **Spacer** | For increasing the minimum source-skin distance to 30 cm |
| **Transparent sterile cover single tank** | The single tank is covered with a plastic hood with elastic band.<br>Due to the transparent material, the disposable cover is also suitable for use with the laser aimer.<br><br>Package contains 25 pieces. |