Cios Alpha

Description

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.

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.

The digital flat panel detector enables distortion-free imaging with a high spatial resolution and excellent contrast.

The dynamic flat panel detector with integrated removable grid is especially suitable for fulfilling the requirements of general and interventional applications.

Semi-conductor material: Amorphous silicon (a-Si) with CsI-scintillator

-        Size 30 cm x 30 cm

-        Pixel size: 194 µm

-        Matrix size: 1.536 x 1.536 pixels

-        Acquisition depth: 16 bits

Usable input formats:

Mag 0: 30 cm x 30 cm

Mag 1: 20 cm x 20 cm

Mag 2: 15 cm x 15 cm

Single-tank high-frequency generator

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).
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

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availability during extended fluoro times.

The following operating modes are supported:
- Single image: 40 kV to 125 kV (3 mA - 250 mA)
- Fluoroscopy: 40 kV to 125 kV (3 mA - 250 mA) with 0.5 - 30 F/s, min. pulse width 5 ms

Resolution of the dose area product and air kerma value display

- Display of the dose area product in 0.01 cGycm²
- Display of air kerma in 0.1 cGycm²
- Display of the cumulated air kerma value in 0.1 mGy
  The cumulated air kerma value is identified by a preceding dot.

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.

The compact counterbalanced design of the C-arm chassis means 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). It can easily be adjusted in its vertical position by means of motorized vertical travel (45 cm).

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.

An easily accessible handle on the flat panel detector allows for effortless positioning from within the sterile area without restricting patient access.

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.

The following functions can also be controlled:

- Brakes for all directions of movement

- Vertical movement

- Emergency STOP

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

- Motorized height adjustment for adaptation to the viewing angle depending on the examiner's height and position

- Reduction of ambient light interference through optimized viewing angle

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- 240 degree rotating monitor column combined with a cable-free mobile workstation allows for optimal patient-side positioning of the monitors.

TFT displays fold in towards each other for easier maneuverability during transport and to protect the monitors when they are not in use.

With anti-glare coating for displaying live and reference images.
- Screen size 19" (48 cm)
- Image display with 1280 x1024 pixels
- Large horizontal and vertical viewing angles of >=170°
- Typical/Maximum brightness <=1000 typ. cd/m²

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.

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).

Additional DVI output for transferring live X-ray images in DVI-D format, e.g. for connecting an additional external monitor.

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.

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.

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.
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.

Please note that each video output requires one cable set.

The following functions can be performed with the multifunctional foot switch:

Pedal functions:
- Radiation release for fluoroscopy
- Radiation release for selected operating modes (single image and depending on the options SUB, ROAD)

Switch functions:
- Selection of operating mode (single image, fluoroscopy, and depending on the options SUB, ROAD)
- Selection of the Video source at reference monitor (e.g x-ray image or endoscopic image, depending on the option SmartView – HD video manager)

- Store (LIH, LSH)

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

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(=180° - measured angle) can be displayed by changing the angle's direction.

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.

Note concerning DICOM interface(s)
The description in the "DICOM Conformance Statement" downloadable from the Internet is exclusively binding for the functionality of the DICOM interface(s).

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.

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.
With regard to expenses for interface configurations that might be required, the agreements on maintenance/service of the product apply

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

- Supported WLAN standards: 802.11 a/b/e/g/h/i/n
- Supported Frequency bands: 2.4 / 5 GHz
- 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)
- Data encryption: TKIP, AES
- Supports DHCP-client

This module follows United States/Canada regulations regarding available frequencies.

SW license to support enhanced user management, including:

- user authentication to prohibit unauthorized access.
- privileges to define user/role-based functionality.
- permissions to control data access.
- audit trails to log system and data access.

For increasing the minimum source-skin distance to 30 cm

The single tank is covered with a plastic hood with elastic band.
Due to the transparent material, the disposable cover is also suitable for use with the laser aimer.

Package contains 25 pieces.