# PACS Viewing Stations

## Improving Workflow in the Operating Room

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a **Progility** company

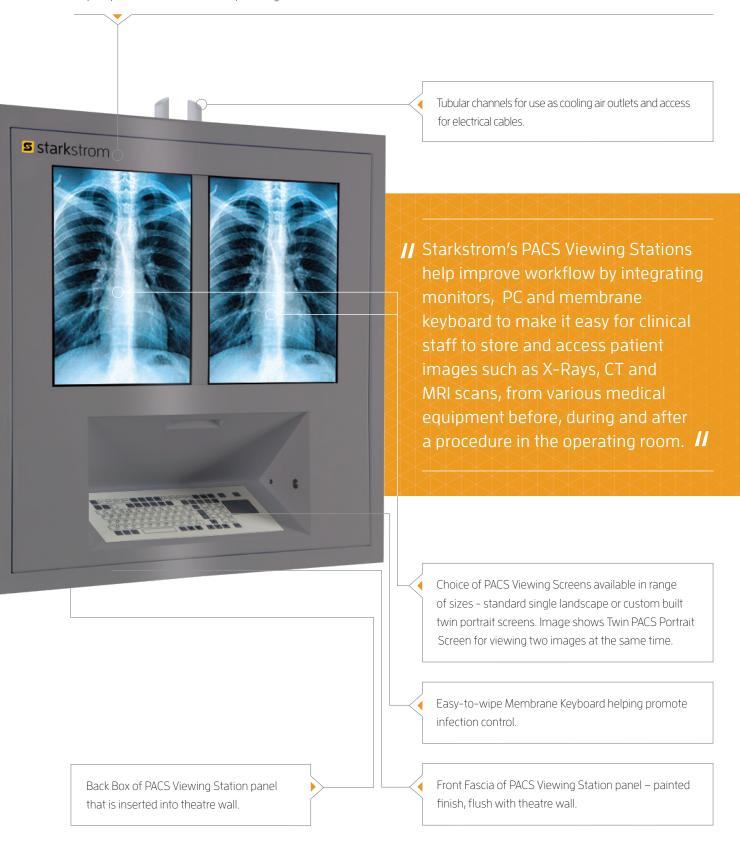*Powering Healthcare*

# Starkstrom's PACS Viewing Stations

Designed to enhance safety and improve ergonomics in the operating room environment, Starkstrom's PACS Viewing Stations (sometimes called Workstations) can be designed to almost any configuration to meet customers' needs and help improve workflow in the operating room.

Tubular channels for use as cooling air outlets and access for electrical cables.

// Starkstrom's PACS Viewing Stations help improve workflow by integrating monitors, PC and membrane keyboard to make it easy for clinical staff to store and access patient images such as X-Rays, CT and MRI scans, from various medical equipment before, during and after a procedure in the operating room. //

Choice of PACS Viewing Screens available in range of sizes - standard single landscape or custom built twin portrait screens. Image shows Twin PACS Portrait Screen for viewing two images at the same time.

Easy-to-wipe Membrane Keyboard helping promote infection control.

Back Box of PACS Viewing Station panel that is inserted into theatre wall.

Front Fascia of PACS Viewing Station panel – painted finish, flush with theatre wall.

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# What is a PACS Viewing Station?

A picture archiving and communication system (PACS) is a medical imaging system which provides digital storage and access to images from multiple modalities such as X-Ray, CT, MRI and Audio Visual equipment. Electronic images and reports are transmitted digitally via PACS eliminating the need to manually file, retrieve or transport film jackets and reducing the risk of information being misplaced by patients and hospital staff.  A PACS consists of four major components: (I) image sources, (2) secured network for the transmission of patient information, (3) viewing stations (or workstations) for interpreting and reviewing images, (4) archives for the storage and retrieval of images and reports.

A Starkstrom PACS Viewing Station is typically a wall mounted, flush metal enclosure containing monitors, PC, keyboard and other interfaces (e.g. optical drives, card readers). It enables clinical staff to access and review patient information and images in an ergonomic and convenient manner.

Wall-Mounted PACS          Flush Mounted PACS

# Improved Workflow

Starkstrom's PACS Viewing Stations can help improve the ergonomics and process flow in an operating room environment and do not take up valuable floor space.

- **Ease of Use** – PACS screens are flush mounted on operating walls at about I600mm above floor level, giving a comfortable eye line for most users. The integral membrane keyboard allows easy access of archived patient images before, during and after a procedure.

- **Rear and Front Access** - can be designed to be accessed from front panel within the operating room or through rear doors from an unsterile corridor. Rear access helps maintain the cleanliness of the theatre during maintenance access and is generally preferable.

- **Compatibility with AV Systems** – internal infrastructure can be designed to either duplicate the PACS information on a screen within the clinical field (typically, a monitor arm of the operating light suspension system) or display a video feed from another source on the PACS Viewing Station.

# Enhanced Safety

Starkstrom's PACS Viewing Stations have been designed to enhance safety and security in the operating room environment.

- **Infection Control** - a single, toughened glass fascia is used to cover the monitors and integrate the IP66 membrane keyboard and trackpad, allowing the surface to be wiped clean without being hindered by multiple recesses or other dirt traps.

- **Prevention of Trips and Falls** – with a flush, wall mounted PACS Viewing Station there are no trailing cables helping prevent patients and hospital staff from trips and falls.

- **Equipment Security** – the monitor, PC and keyboard are locked onto the stainless steel fascia helping prevent removal of these devices.



# Bespoke Solutions

Starkstrom is an experienced medical infrastructure supplier with in-house R&D, design and manufacturing capability. This means that Starkstrom can respond quickly to design requests, meet almost any configuration and offer lead times to suit the tightest building programmes.

- **Metal Finish** – painted finish provides a modern look to suit the state-of-the-art hospitals of today.

- **Panel and Screen Sizes** – large number of panel sizes available ranging from 900 to 1200mm in width for 24" to 46" screens, respectively. They can be configured to suit the hospital's needs.

- **PC Specifications** – three options (standard, mid, high) are available based on what processing the PC is required to do, including powering multiple screens and integrating with other equipment.

- **Optional Features** – available to improve digital security, storage and integration with other systems: user access card reader, DVD writer, external communications port.

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# Technical Specification

## Screen Specification

All monitors are supplied with a preset DICOM gamma curve, offering hospital wide DICOM compliant reviewing.

| Feature | 24" | 27" | 30" | 40" | 46" |
|---|---|---|---|---|---|
| Visible Area (mm) | 325.5 x 519.5 | 337.5 x 599 | 401.5 x 642.5 | 500 x 887 | 574 x 1020 |
| Resolution @ 60Hz | 1920 x 1200 | 2560 x 1440 | 2560 x 1600 | 1920 x 1080 | 1920 x 1080 |
| Brightness (cd/m²) | 360 | 300 | 340 | 500 | 500 |
| Contrast Ratio | 1000:1 | 1000:1 | 1000:1 | 3000:1 | 3500:1 |
| Aspect Ratio | 16.10 | 16.9 | 16.10 | 16.9 | 16.9 |
| Response Time (ms) | 8 | 7 | 7 | 8 | 8 |
| Pixel Pitch (mm) | 0.27 | 0.233 | 0.251 | 0.461 | 0.53 |

## PC Specification

A choice of three different PC specifications are available; the most suitable one will be dependent on what processing the PC will be required to do.

| Feature | Standard | Mid | High |
|---|---|---|---|
| CPU | Intel (R) Core™ i3-3220T | Intel (R) Core™ i5-3570T | Intel (R) Core™ i7-3770T |
| CPU Pass Mark | 3725 | 5483 | 8729 |
| RAM | 4GB | 4GB | 8GB (2 x 4GB) |
| HDD | 500Gb | 500Gb | 500Gb |
| USB Ports | 4 | 4 | 4 |
| Ethernet Ports | 2 x Gb | 2 x Gb | 2 x Gb |
| RS232 Ports | 2 | 2 | 2 |
| Operating System | Windows (R) 7 Pro 64 bit | Windows (R) 7 Pro 64 bit | Windows (R) 7 Pro 64 bit |

## PACS Panel Sizes

The following are dimensions of Standard PACS Viewing Stations, listed by screen size.

| Back Box | 24" | 27" | 30" | 40" | 46" |
|---|---|---|---|---|---|
| Height (mm) | 1000 | 1000 | 1000 | 1000 | 1300 |
| Width (mm) | 900 | 900 | 900 | 1200 | 1200 |
| Depth (mm) | 230 | 230 | 230 | 230 | 230 |

| Fascia | 24" | 27" | 30" | 40" | 46" |
|---|---|---|---|---|---|
| Height (mm) | 1040 | 1040 | 1040 | 1040 | 1340 |
| Width (mm) | 940 | 940 | 940 | 1240 | 1240 |

## PACS Panel Weights

The following are approximate weights for fully assembled Starkstrom PACS Viewing Stations.

| Weight | 24" | 27" | 30" | 40" | 46" |
|---|---|---|---|---|---|
| Front Access | 100Kg | 105Kg | 120Kg | 125Kg | 175Kg |
| Rear Access | 105Kg | 110Kg | 125Kg | 130Kg | 180Kg |

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# Standards & Guidelines

## S-equiP™ Turnkey Solution

The *S-equiP™* Turnkey Solution is for critical areas in hospitals to improve patient outcomes and workflow efficiencies. By partnering with Starkstrom, you will be supported with a wide range of experts who will design, build, equip, commission and service care area facilities such as Hybrid ORs to meet the needs of stakeholders. To find out more about the *S-equiP™* Turnkey Solution, please contact us.

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