

# Specifications

**SNTRYPACS™**  
Medical PACS Archive Appliance



SYSTEM FEATURES		
Capacity (Raw)	• From 1 to 2 TB	• From 2 to 96 TB
Drive	• Max 2 drives (hot swappable)	• Max 6 drives (hot swappable)
Model #	<ul style="list-style-type: none"> <li>• QPACS – 2000/01: 1 TB (2 x 500 GB)</li> <li>• QPACS – 2000/02: 1.5 TB (2 x 750 GB)</li> <li>• QPACS – 2000/03: 2 TB (2 x 1 TB)</li> </ul>	<ul style="list-style-type: none"> <li>• QPACS – 6000/01: 2 TB (4 x 500 GB)</li> <li>• QPACS – 6000/02: 3 TB (6 x 500 GB)</li> <li>• QPACS – 6000/03: 3 TB (4 x 750 GB)</li> <li>• QPACS – 6000/04: 4.5 TB (6 x 750 GB)</li> <li>• QPACS – 6000/05: 4 TB (4 x 1 TB)</li> <li>• QPACS – 6000/06: 6 TB (6 x 1 TB)</li> </ul>
RAID	• RAID 1	• RAID 5
Built-in Storage	• CD-RW/DVD ROM	• CD-RW/DVD ROM
Setup and Configuration	• Web Based user interface for system administration	• Web Based user interface for system administration
Storage Management	<ul style="list-style-type: none"> <li>• Policy based tiered storage management</li> <li>• Integrated support for on, near, and off line data management</li> <li>• Policy based data retention and deletion</li> </ul>	<ul style="list-style-type: none"> <li>• Policy based tiered storage management</li> <li>• Integrated support for on, near, and off line data management</li> <li>• Policy based data retention and deletion</li> </ul>
Network Connection	<ul style="list-style-type: none"> <li>• Dual port auto-sensing gigabit NIC</li> <li>• Automatic IP address assignment</li> <li>• Supports DHCP, ARP</li> </ul>	<ul style="list-style-type: none"> <li>• Dual port auto-sensing gigabit NIC</li> <li>• Automatic IP address assignment</li> <li>• Supports DHCP, ARP</li> </ul>
Interface	<ul style="list-style-type: none"> <li>• Fibre card (optional)</li> <li>• iSCSI Standard</li> <li>• Adaptec 29320 SCSI PCI Express Adapter</li> </ul>	<ul style="list-style-type: none"> <li>• Up to 6 expansion storage units with 15 drives (hot swap)</li> <li>• Fibre card (optional)</li> <li>• iSCSI support</li> <li>• Adaptec 29320 SCSI PCI Express Adapter</li> </ul>
CPU	<ul style="list-style-type: none"> <li>• Intel Dual Core Xeon Processor</li> <li>• Up to 4 MB DDR RAM</li> </ul>	<ul style="list-style-type: none"> <li>• Intel Dual Core Xeon Processor (supports up to two)</li> <li>• Up to 4 MB DDR RAM</li> </ul>
RAM (Included)	• 2 GB upgradable to 32 GB	• 2 GB upgradable to 32 GB
Graphics	• Integrated ATI ES1000 controller with 16MB of SDRAM	• Integrated ATI ES1000 controller with 16MB of SDRAM

SPECIFICATIONS		
Agency Certifications	<ul style="list-style-type: none"> <li>• CAN/CSA C22.2 No. 60950-1, CSAus, FCC Class A, CE IHE, VCCI, BSMI, C-Tick Class A, SABS, Class A, CCC Class A, MIC Class A, UL 60950-1, EN 60950-1, IEC 60950-1</li> </ul>	<ul style="list-style-type: none"> <li>• CAN/CSA C22.2 No. 60950-1, CSAus, FCC Class A, CE IHE, VCCI, BSMI, C-Tick Class A, SABS, Class A, CCC Class A, MIC Class A, UL 60950-1, EN 60950-1, IEC 60950-1</li> </ul>
Physical	<ul style="list-style-type: none"> <li>• 1U Rack-mountable chassis</li> <li>• Width: 16.7" (42.6cm)</li> <li>• Height: 1.67" (4.26cm) with bezel attached</li> <li>• Depth: 30.4" (77.2cm)</li> <li>• Weight: 35.8 lbs (16.3 Kg), maximum configuration</li> </ul>	<ul style="list-style-type: none"> <li>• 2U Rack-mountable chassis</li> <li>• Width: 17.5" (44.43cm)</li> <li>• Height: 3.4" (8.64cm) with bezel attached</li> <li>• Depth: 29.31" (74.4cm)</li> <li>• Weight: 50.71 lbs (23 Kg), maximum configuration</li> </ul>
Power	• AC configuration with standard single or redundant 750W hot-plug auto-switching universal 110/220V AC power supplies	• AC configuration with standard single or redundant 750W hot-plug auto-switching universal 110/220V AC power supplies
Operating Environment	<ul style="list-style-type: none"> <li>• Operating Temperature: 10° C to 35° C (50° F to 95° F)</li> <li>• Operating Relative Humidity (non-condensing twmax=29C): 20% to 80% non-condensing</li> <li>• Operating Vibration: 0.26G at 5Hz to 350Hz for 2 minutes</li> <li>• Operating Shock: 1 shock pulse of 41G for up to 2ms</li> <li>• Operating Altitude: -16 to 3,048m (-50 ft to 10,000 ft)</li> </ul>	<ul style="list-style-type: none"> <li>• Operating Temperature: 10° C to 35° C (50° F to 95° F)</li> <li>• Operating Relative Humidity (non-condensing twmax=29C): 20% to 80% non-condensing</li> <li>• Operating Vibration: 0.26G at 5Hz to 350Hz for 2minutes</li> <li>• Operating Shock: 1 shock pulse of 41G for up to 2ms</li> <li>• Operating Altitude: -16 to 3,048m (-50 ft to 10,000 ft)</li> </ul>
Non-operating Environment	<ul style="list-style-type: none"> <li>• Storage Temperature: -40° C to 65° C (-40° F to 149° F)</li> <li>• Storage Relative Humidity: 5% to 95% non-condensing (twmax=38C)</li> <li>• Maximum humidity gradient: 10% per hour, operational and non-operational conditions.</li> <li>• Storage Vibration: 1.54Grms Random Vibration at 10Hz to 250Hz for 15 minutes</li> <li>• Storage Shock: 6 shock pulses of 71G for up to 2ms</li> <li>• Storage Altitude: -16m to 10,600m (-50 ft to 35,000 ft)</li> </ul>	<ul style="list-style-type: none"> <li>• Storage Temperature: -40° C to 65° C (-40° F to 149° F)</li> <li>• Storage Relative Humidity: 5% to 95% non-condensing (twmax=38C)</li> <li>• Maximum humidity gradient: 10% per hour, operational and non-operational conditions.</li> <li>• Storage Vibration: 1.54Grms Random Vibration at 10Hz to 250Hz for 15 minutes</li> <li>• Storage Shock: 6 shock pulses of 71G for up to 2ms</li> <li>• Storage Altitude: -16m to 10,600m (-50 ft to 35,000 ft)</li> </ul>



**QStar Technologies, Inc.**  
2175 West Highway 98  
Mary Esther, FL 32569  
Phone: 850-243-0900  
Fax: 850-243-4234  
Info@qstar.com

**QStar Technologies Europe**  
Viale Italia, 12 - 20094  
Corsico - Milano (Italy)  
Phone: +39 0245171.1  
Fax: +39 0245101745  
Info@qstar.it



Rev.5

**QSTAR**  
TECHNOLOGIES

SECURING THE FUTURE OF YOUR DATA®

**SNTRYPACS™**

Medical PACS Archive Appliance



In medical imaging, picture archiving and communication systems (PACS) are computers or networks dedicated to the storage, retrieval, distribution and presentation of images. The medical images are stored in an independent format. The most common format for image storage is DICOM (Digital Imaging and Communications in Medicine).

QStar is changing the way imaging centers function with a PACS appliance solution that seamlessly integrates all modalities within the radiology department. SntrypACSTM is a fully integrated PACS/DICOM server, image router, web viewer, support for all the diagnostic viewer DICOM compliance and storage appliance designed for receiving images directly from any DICOM modality.

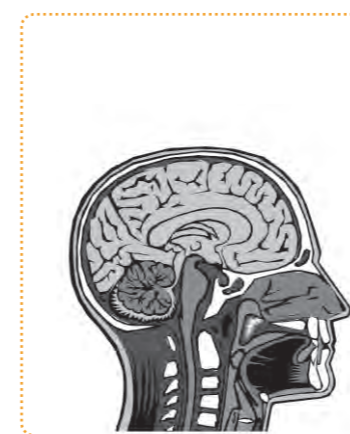
With SntrypACSTM, the actual capture process for any radiology instrument doesn't change. Digital images from all the modalities are captured and directly pushed into the integrated SntrypACSTM DICOM server; in addition, non-DICOM images can be converted to be stored in DICOM on the archive server. SntrypACSTM has an independent work list module of its own, but can also plug into an existing hospital information system.



Medical PACS Archive Appliance

## SntrypACSTM key Benefits

- 1 > Store, retrieve and manage all image types
- 2 > Plug and play installation for immediate and simple deployment
- 3 > Scalable RAID 5 storage which can expand from 2TB to 96TB
- 4 > Web based viewer or compatible with most DICOM viewers
- 5 > Integrated support for both tape and optical archive hardware
- 6 > Web based diagnostic viewer included
- 7 > Modality work list or integration with 3rd party work lists
- 8 > IHE compliant
- 9 > MPPS support – Modality Performed Procedure Step
- 10 > Self diagnostic & reporting



# SNTRYPACS®

Medical PACS Archive Appliance

## Faster and More Efficient Reporting Process

Radiology units using SntryPACS can dramatically improve the speed of the reporting process. Every radiologist can have a private workstation with extensive viewing and processing tools at their disposal. This enables much quicker reporting and improves overall efficiency.

- **Select, mark and type** – Simple annotation
- Improve **brightness** or **contrast quality**
- Gain **instant access** to Hounsfield values

Radiologists can connect to the SntryPACS DICOM Server from any remote viewing location to access patient information, reports and images. Image processing features can be used to analyze data from any source.

## Facility Wide Image Distribution

Images can be distributed and viewed by consultants across the entire facility based on access rights defined through the SntryPACS interface.

### Integration Made Easy

- Integrated, easy-to-use appliance
- Installs in minutes into existing networks
- High performance server and router
- Data Center reliability, serviceability and availability

## Intuitive Interface

SntryPACS has an intuitive interface that makes it quick and easy to enter patient demography information and schedule studies from a range of imaging modalities.

QPACS-6000



QPACS-2000



## Image Acquisition

The SntryPACS has a robust, scalable architecture that supports all relevant DICOM 3.0 functions. It's a DICOM server, database server and web server – all rolled into one!

## Acquisition From DICOM Sources

Your DICOM modalities can seamlessly push patient image studies to the SntryPACS server, where the study information and images are sorted and stored in a database.

## Acquisition From Non-DICOM Sources

SntryPACS DICOM converter component supports DICOM query and work list functions for associating images with the right patient information.

## Routing

SntryPACS routing component provides for an intelligent rule-based system to route patient images and studies to other workstations and PACS systems.

## Archiving

SntryPACS has preconfigured built in support for the following archive solutions: RAID, CAS, DAS, MOD, Blu-ray, UDO, DVD, CD, and Tape libraries and drives



# Q<sup>VU</sup> VIEWER

## Q<sup>VU</sup> Dicom Viewer

### Making life simpler:

Q<sup>VU</sup> offers viewing options for SntryPACS across the healthcare enterprise to help you access patient studies, images and reports both locally and over the network. Incorporated with a feature rich 2D & 3D viewer with a powerful template based reporting module, Q<sup>VU</sup> is the ideal diagnostic workstation.

Q<sup>VU</sup> supports multiple study distribution options including a customizable DICOM print composer and an intuitive CD/DVD writing functionality that can interface with an automatic disc publishing system. Q<sup>VU</sup>'s highly customizable GUI empowers Radiologists with an easy-to-use application that is essential for their day-to-day operations. With a built-in industry standard rule-based routing functionality, Q<sup>VU</sup> can also be used in a Teleradiology environment.

### Reporting:

A powerful template-based reporting module allows you to create customized templates for all different study types, and lets you add images as part of your reports.

### Study Reporting Manager:

Q<sup>VU</sup>'s reporting module provides the user with pre-stored multiple reporting templates based on Study Type. With multiple report layouts available, the radiologist can choose from preparing reports with images only or text and image combination providing more clarity to the report. The report can be saved and retrieved from the study manager at a later point of time for making alterations if necessary. The report can also be finalized to prevent further alterations. The entire report can be printed through Windows™ based printers on standard A4 sheets thus improving turnaround time for providing patient reports.

### Study Distribution:

### DICOM Print Composer:

Q<sup>VU</sup> has a DICOM print composer allowing the radiologist to select and organize images from across multiple studies in a highly customizable print layout that is determined by the user. Radiologists can also configure multiple DICOM printers to choose from and select film size and orientation. Selective processing tools including Window Leveling, zoom, pan, and image shutter are available in the printer composer.

### Image Router:

A rule-based routing functionality is built into Q<sup>VU</sup> that is easy to setup and functions in an automated manner. Essential for a Teleradiology environment, rules can be setup based on AE title, IP address, modality, study date range, DICOM attributes, etc.

## FEATURES

### Rendering

Q<sup>VU</sup> provides fast high-quality volume rendering that may be viewed and manipulated using a highly interactive user-interface. Volume rendering algorithms include Color, Grey scale and Maximum-Intensity Projection.

### Multi Planar Reformat

The MPR (Multi Planar Reformat) Module includes a powerful suite of tools for generating MPR sections. These include Oblique and Double-Oblique Sections, 3D Correlation Volume Display, a Multi-MPR Tool for generation of multiple sections along a chosen orientation, an MPR-Slab Tool for visualizations of desired thickness and Slab Modes for Blending. Maximum Intensity Projection and Minimum Intensity Projection.

### MIP

Q<sup>VU</sup>'s MIP (Maximum Intensity Projection) module includes a fast high-quality MIP display with thresholding to exclude unwanted intensities and MIP-Radials for incremental rotated MIPs.

### Region Segmentation

Regions within the volume may be define by pointing and clicking in the 3D or MPR displays. Volume measurements are displayed for the selected region. Regions can also be deleted from the volume.

### Cutaway Viewing

Volume-interiors are easily visualized using the Cutaway-Viewing tool. A Cut-Plane is used to slice through the volume, revealing the interior regions. The cut-plane can be easily positioned and oriented using the mouse. The VOI (Volume-of-Interest) tool allows interactive, real-time Volume-of-Interest display. The user can isolate and view sub-volumes of interest very easily and real-time.