



NxtGate SmartArray

Brochure



NxtGate SmartArray. Smart Ways for Your Storage Needs

Intended Use

The *NxtGate SmartArray* is your first step towards a full digital department or even enterprise solution!

NxtGate SmartArray is designed with ease of scalability and decoupling of hardware reliance in mind. It is developed with the next generation HTML5 technology and is aligned with the advancement in virtualization technology. The design approach simplifies storage expansion requirements and reduces concerns with exchange of hardware devices or storages.

For a start, *NxtGate SmartArray* can be deployed as a simple storage solution connected to one or even more modalities. This is your typical DICOM digital storage solution at the minimum. Unlike common storage devices, the *NxtGate SmartArray* supports flexible storage addition and expansion, thus overcoming major limitations of storage scalability.

The path to scalability does not stop with storage expansion. *NxtGate SmartArray* provides the growth path to complement existing digital PACS which does not support true zero footprint or mobile client applications. The HTML5 technology embedded in the Image Reading function enables a zero-footprint client deployment such that image viewing can be performed on standard workstations as well as mobile devices!

NxtGate SmartArray is offered as part of *NxtGate* suite of product and can be ordered as "vmware-only" package. Hardware components already existing at the customer site can be used provided they meet the minimum requirements. Turnkey solution is recommended to realize immediate deployment outcome and be productive from the first day!



Stay In Front of the Trend; Protect Your Investment

Stay abreast of the latest development in information technology. Maximize your IT infrastructure investments. Ensure that your next decision in imaging application solution stays relevant with the advancement of technology evolution. Stay ahead of the curve and take advantage of the cutting-edge software development technology can be brought to your facility and your patients.

NxtGate SmartArray provides the correct fit of solution to address your daily challenges today and provides a growth path for your requirements tomorrow.

Challenges in Today's Environment

Storage Size Constraints – The typical DICOM storage devices provide specific storage capacity. Storage expansion may not be necessarily easy. Some devices may not be able to serve multiple modalities. Multiple storage devices may need to be considered which leads to unnecessary reinvestment in device hardware (eg, additional workstations or servers need to be deployed for each new storage device VS simply add new storage hard disks).

Data Migration – When the decision is taken to deploy a PACS, data from the existing storage(s) will need to be archived into the PACS. This process can be time-consuming and prone to errors. Data lost may be resulted due to ineffectiveness in the process. The issue is amplified when more storage devices are existent.

Functional Limitations – Easy access to patients' examination images from anywhere within the hospital on any Windows-based workstation. And remember, no software installation required!

Solutions for Today's Challenges

Flexible Storage Size – The goal of *NxtGate SmartArray* is to provide flexible storage sizing that according to your requirements. In addition, its design enables expansion of storage capacity with ease. Moreover, the increased storage capacity also enables connectivity and storage capability of additional modalities. Henceforth, a single *NxtGate SmartArray* solution would be able to replace the heterogeneous storage landscape.

Virtualization – The *NxtGate SmartArray* is built on virtualization technology, thereby paving the foundation to be hardware independent. The system design facilitates transition of hardware with ease, while preserving the stored data. The ability of the solution to offer PACS features means that no data migration is required.

Feature Rich – The *NxtGate SmartArray* supports growth path into a PACS, providing image reading features. Eventually, it can even be expanded to be an Enterprise-wide Vendor Neutral Archive solution to include storage of non-DICOM Data.



Maximize Your Investment; Ensure Scalability, Adaptability and Relevance

It is essential that the information technology investment is maximized. *NxtGate SmartArray* is designed to provide maximum utilization of your hardware investment, while avoiding unnecessary re-investments in additional hardware etc while expanding the storage deployment. Apart from scalability, adaptability of the solution towards the growing requirements of the institution is equally important. *NxtGate SmartArray can be easily upgraded to provide PACS functionalities. All initial data are preserved such that no data migration is required. At the enterprise level, NxtGate SmartArray can even be scaled further to become a Vendor-Neutral-Archive (VNA) solution which can receive both DICOM and non-DICOM data. All non-DICOM data types such as PDF file (eg, Laboratory Report etc), JPEG file (eg, picture taken on patient's injury etc), FLV file (eg, surgery videos) and MPEG file (eg, short video etc) etc can be archived into NxtGate Array. A patient-centric web-based browser enables the viewing of stored data. Industry standard applications (eg, Acrobat Reader etc) are used to play back the data. The approach ensures that the original data is preserved without the need for any conversion, hence no data lost occurs.*

From the start: Modality Image Storage

Easy Administration – The storage solution is managed centrally through the Administrator Portal. Modality configurations are made through the Administrator Portal. Patients' examinations are managed through the same portal. The module includes an image viewer for small scale image distribution purpose. The HTML5-based image viewer does not require any software installation. It can be used right out-of-the-box – with just a simple web link.





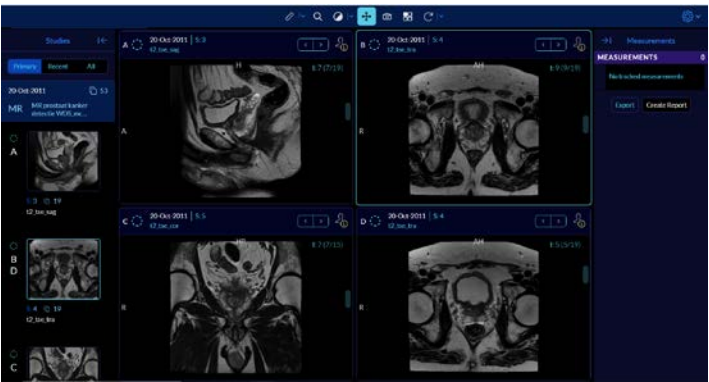
Upgrade to Enterprise Archive Solution

The storage module is easily scalable to provide enterprise-grade system performance and archival requirements. All functionalities remain available while the performance is boosted with expanded storage capacity.

True Zero Footprint – Avoid the hassles of installing applications onto your workstation. With a standard browser supported by your standard Windows-based Workstation, access to information is instantly available. The zero footprint architecture eliminates the hassles of deploying the application. Software updates and upgrades are deployed instantly, even without the user noticing it!

User Friendly GUI – The Graphical-User-Interface (GUI) is designed to be extremely user friendly. Users would be able to effectively use the application with minimum orientation. The design philosophy allows quick user acceptance of the solution. It also enhances positive user experiences on the application.

Easy Access to Images – Easy access to patients' examination images from anywhere within the hospital on any Windows-based workstation. And remember, no software installation required!





Essential Tools Profile

Following tool-sets are made available for ease of use and access:

- Measurement Tools
 - Length Tool: Calculates the linear distance between two points in mm
 - Bidirectional Tool: Creates a measurement of the longest diameter (LD) and longest perpendicular diameter (LPD) in mm
 - Annotation: Used to create a qualitative marker with a freetext label
 - Ellipse: Measures an elliptical area in mm² and Hounsfield Units (HU)
- Window Level

The Window/Level tool enables manipulating the window level and window width of the rendered image. Click on the tool to enable freeform adjustment, then click and drag on the viewport to freely adjust the window/level.
- Pan and Zoom

With the Zoom tool selected, click and drag the cursor on an image to adjust the zoom. The magnification level is displayed in the image display.
- Image Capture

Click on the Camera icon to download a high quality image capture using common image formats (png, jpg)
- Layout Selector
- Reset View: Resets all image manipulation such as position, zoom, and W/L
- Rotate Right: Flips the image 90 degrees clockwise
- Flip Horizontally: Flips the image 180 degrees horizontally
- Stack Scroll: Links all viewports containing images to scroll together
- Magnify: Click on an image to magnify a particular area of interest
- Invert: Inverts the color scale
- Cine: Toggles the Cine player control in the currently selected viewport. Click the x on the Cine player or click the tool again to toggle off.
- Angle: Measures an adjustable angle on an image
- Probe: Drag the probe to see pixel values
- Rectangle: Measures a rectangular area in mm² and HU

