ELEVATE YOUR DIAGNOSTIC EXPERIENCE

APERIO eSLIDE MANAGER WITH WEBVIEWER AND LIS CONNECTIVITY



Advancing Cancer Diagnostics Improving Lives



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The number of pathology service requests arriving each week is rising, while the number of properly trained professionals is barely keeping pace. The tools your diagnostic laboratory needs to stay ahead of this increasing workload must evolve beyond optical instruments invented 400 years ago. Fast forward to your future.

Begin your digital pathology journey with high-quality whole slide images, obtained from high-throughput Aperio scanners, and retain precision quality with Aperio eSlide Manager image management software with WebViewer interface. Designed to optimize digital pathology processes for pathologists, laboratory professionals and IT managers, this high-quality image management solution is integrated directly into your existing workflow with the Aperio LIS Connectivity module.

Aperio software elevates your diagnostic experience using the power of digital pathology – manifesting the potential of universal case access and borderless professional collaboration.



For In Vitro Diagnostic Use. The clinical use claims described for the products in the information supplied have not been cleared or approved by the U.S. FDA or are not available in the United States.

ENRICH YOUR IMAGE QUALITY

START WITH QUALITY – STAY WITH QUALITY **TO PROMOTE BETTER RESULTS**

High quality digital scans deserve an image management system that detects, stores and delivers whole slide images and metadata exactly where and when needed for diagnosis:

- Synchronizations can be done with past and current cases at the same time, in the same window.
- The conference functionality within the Aperio eSlide Manager platform enables pathologists to collaborate and share their knowledge and medical opinions.



ENHANCE YOUR IMAGE MANAGEMENT

METADATA CAPTURE SUPPORTS OPERATIONAL EFFICIENCY

The LIS worklist is your entry point into an Aperio curated case space:

- Aperio eSlide Manager works in the background, using barcoded metadata to auto-assemble Whole Slide Images into LIS-designated cases.
- WebViewer launches directly from the LIS based on the metadata in Aperio eSlide Manager.
- Advanced searching of slide metadata facilitates case management with retrieval of images from past cases, for comparison purposes.

EXTEND LIS-DRIVEN WORKFLOW

A PRACTICAL DIGITAL PATHOLOGY WORKFLOW

REQUIRES REAL-TIME, VALUE-ADD LIS INTEGRATION

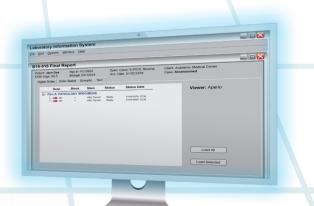
The LIS Connectivity module unites our Aperio eSlide Manager workflow with your specific LIS-based administrative process to improve the pathologist's diagnostic experience.

- Once Aperio eSlide Manager has been integrated with your LIS, the pathologist is able to operate from an LIS worklist and launch WebViewer directly to consolidate their "case space."
- Both systems are kept in sync with industry standard HL7 Communication protocols.

* The LIS Connectivity module is available for Aperio eSlide Manager, but it is a separate product and additional costs are associated with it.

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APERIO eSLIDE MANAGER WITH WEBVIEWER AND LIS CONNECTIVITY

YOUR FUTURE IN FOCUS

We have a clear vision of future pathology workstreams which will be aided by a wealth of artificial intelligence applications, but we know our success is about helping laboratories execute brilliantly now.

A COMPREHENSIVE DATA MANAGEMENT SYSTEM THAT YOU CONTROL

- Easily reconfigure the default data fields to capture valuable metadata unique to your organization and customize page layouts
- Customized configurations of metadata and streamlined workflow that you create is retained even through software updates
- Tag any data field that you might use later as a filter and your savable search criteria becomes as unique as you need it to be
- · Ensure that the right images get to the correct people with a robust user permission structure

Consolidate Your **Case Space**

Aperio eSlide Manager

- Flexible image transfer & storage architecture
- Robust user access control and authentication
- Case auto-assembly using scanned barcodes
 - Advanced search to find similar historical cases

Bidirectional exchange of case data Serve up images and metadata of current and past cases

LIS Connectivity

Access patient data

- Customized to your specific LIS
- Image-enhanced, LIS-driven workflow
- Admin process for case review/sign-out

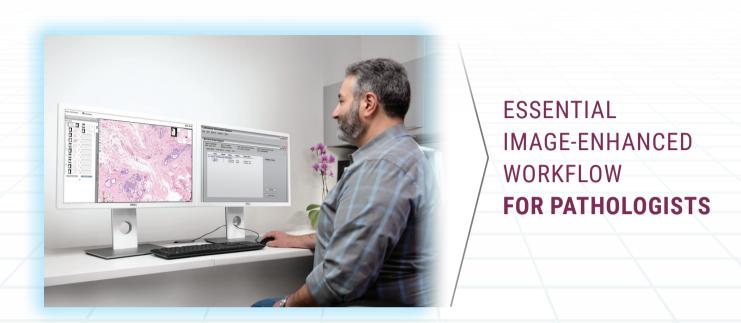
Case Space

Launch WebViewer from your LIS WebViewer

 Image navigation with pin drops

- Image magnification and rotation
- Synchronized comparison of multiple images within same window
- Real time collaboration and sharing

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The Aperio eSlide Manager WebViewer serves the pathologist as both a browser-based digital whole slide Image viewer and as a portal into the Aperio eSlide Manager, the epicenter of the Aperio digital pathology solution. This dynamic, diagnostic tool securely connects to a gateway Data Server that controls access to metadata and scanned images located on a scalable Image Server infrastructure.

Advantages for Pathologists:

CONFIDENCE

- Compare current case with past patient cases to provide needed context, with the ability to synchronize image magnification and rotation of multiple images within the same window.
- Corroborate your diagnosis with colleagues and consulting sub-specialists using advanced communication features.
- Streamline slide navigation for professional quality presentations using handy Pin Drops.

EFFICIENCY AND FLEXIBILITY

- WebViewer launches directly from the LIS worklist based on the metadata in Aperio eSlide Manager
- Variable magnification (from image fit to highest scan resolution) and 360° rotation
- · Annotations delineate areas for a special stain or a harvest zone for ancillary studies



ONE VENDOR, TOTAL SOLUTION FOR LABORATORY PROFESSIONALS

The advantages of working with one end-to-end digital pathology partner increase as the number of slides processed per day ramps up. The Aperio consulting and implementation services can help you navigate even the most complex deployments involving multiple system integrations and components, ensuring you have a single point of contact and resolution.

Advantages for the Laboratory Professional:

QUALITY

• Maintain your lab as a center of excellence in digital pathology

EFFICIENCY

- Streamlined workflow keeps histotechnicians and pathologists motivated and productive
- · Keep track of metadata created in histology procedures such as grossing and embedding

REPUTATION

• Sustain an exemplary reputation for your lab in the areas of high-quality diagnoses and turnaround time

EASY TO MANAGE

- One vendor helps you manage the entire digital pathology workflow from specimen capture to final report
- LIS integration keeps lab staff and pathologists happy and efficient, gives you peace of mind, and reduces redundant data entry



SECURE, SCALABLE ARCHITECTURE FOR IT MANAGERS

Aperio eSlide Manager offers a fast, secure, and flexible IT architecture. Scanner hardware can be near histotechnicians and image servers near case reviewers – all connected to a flexible image repository supporting a center of pathology excellence and teaching. Aperio eSlide Manager is also a proven robust data management solution that can handle hundreds of thousands of multi-gigabit image files and their metadata, as well as tracking and responding to a heavy stream of event messages.

Advantages for the IT manager:

SCALABLE

- Hub and spoke network architecture
- Modular application design
- Supports 150 concurrent users simultaneously accessing the database (Aperio eSlide Manager Performance Pack)

SECURE

- Single gateway for users across multiple locations
- Enhanced cybersecurity: PHP v7, updated Apache, OpenSSL for Data Encryption between browser and system web pages, and complex passwords
- In-app user authentication and authorization ensure that the right people have access to the right functionality and data

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Server Requirements

| Component | Server Minimum Requirements | Server Recommended Requirements | | Performance Pack Server Requirements | Specific Reference Hardware* | |
|-----------------------------------|---|--|--|---|---|--|
| CPU speed | Two dual-core or one Quad-core Intel 2.4GHz or faster | 8-core processors 2.0GHz or faster recommended | | CPU 1 Recent Generation 12-Core 2.3 GHz CPU | Intel Xeon Gold 5118 2.3G, 12C/24T, 10.4GT 2x 8GB RDIMM, 2666MTs | |
| Hard disk space | 1TB DAS, NAS, or SAN Storage (recommended) RAID for redundancy | 5TB DAS, NAS, or SAN Storage (recommended), RAID for redundancy 100GB | | | | |
| | (recommended) KAID for redundancy | | | RAM 16 GB | | |
| Available C: or OS drive space | 100GB | | | Hard Drive 2x 240GB | Dell BOSS controller | |
| Memory | 4GB RAM | 16GB RAM | | Mirrored SSD Hard Drives for OS and | card + with 2M.2 Sticks 240G | |
| Network card | 1GB network card | Dual 1GB network cards | | applications | | |
| Power supply | Redundant power supplies (recommended) | Redundant power supplies | | Network Card 10GB | Broadcom 57416 2-Port 10Gb Base-T + 5720 2-Port 1Gb | |
| Media input | Not required | DVD (optional) | | OS Windows Server | OS Windows Server | |
| Operating system | WIndows Server 2016 minimum | Windows Server 2016 | | 2016 | 2016 | |

Monitor Specifications

| | | | Viowing Work | station | | | |
|---|--|---|---------------------|---|--|--|--|
| | Feature | Specification | Viewing Workstation | | | | |
| | Display technology | LED | Feature | Specification | | | |
| _ | Resolution | 1920 x 1200 pixel minimum | CPU speed | 4 Core @ 3.6 GHz minimum | | | |
| | Screen Size (measured diagonally) | 609.7 mm / 24.0 inches minimum | Hard disk | 80 GB free disk space | | | |
| | Contrast Ratio | 1000:1 minimum | space | minimum | | | |
| | Color Gamut | 99% sRGB minimum | Memory | 8GB or more recommended | | | |
| | Display Mode | sRGB | Network card | 1Gigabit network card or faster | | | |
| | Brightness (also called luminance) | 180 cd/m ² minimum | Video card | 2GB, 64-bit, 32GB/sec, 256 Cores minimum | | | |
| | Display Colors | 16.7M colors minimum | | | | | |
| | Connectivity | Digital interface (such as HDMI, DisplayPort, | Browser | Firefox, Chrome | | | |
| | | or USB-C) | Operating | Windows 10 Enterprise 64 bit | | | |
| | Response Time | 15ms maximum | System | | | | |
| | Viewing Angle | 178 degrees minimum | | | | | |
| | Non-reflective coating (may be listed as Glare Screen) | Yes | | <u>\</u> | | | |
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* Recommended when expanding to more than 25 concurrent users

** Requirements are optional and only necessary if you need to support concurrent users greater than 25 (and up to 150) For In Vitro Diagnostic Use. The clinical use claims described for the products in the information supplied have not been cleared or approved by the U.S. FDA or are not available in the United States.

Leica Biosystems is an international company with a strong network of worldwide customer services. For detailed contact information on your nearest sales office or distributor please visit our website: LeicaBiosystems.com Leica Biosystems is a global leader in workflow solutions and automation. As the only company to own the workflow from biopsy to diagnosis, we are uniquely positioned to break down the barriers between each of these steps. Our mission of "Advancing Cancer Diagnostics, Improving Lives" is at the heart of our corporate culture. Our easy-to-use and consistently reliable offerings help improve workflow efficiency and diagnostic confidence. The company is represented in over 100 countries. It has manufacturing facilities in 9 countries, sales and service organizations in 19 countries, and an international network of dealers. The company is headquartered in Nussloch, Germany. Visit LeicaBiosystems.com for more information.

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