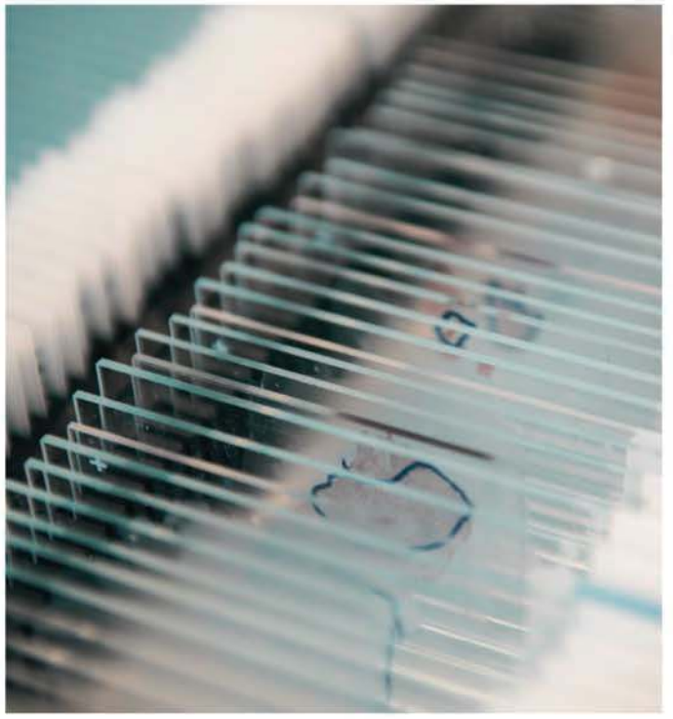
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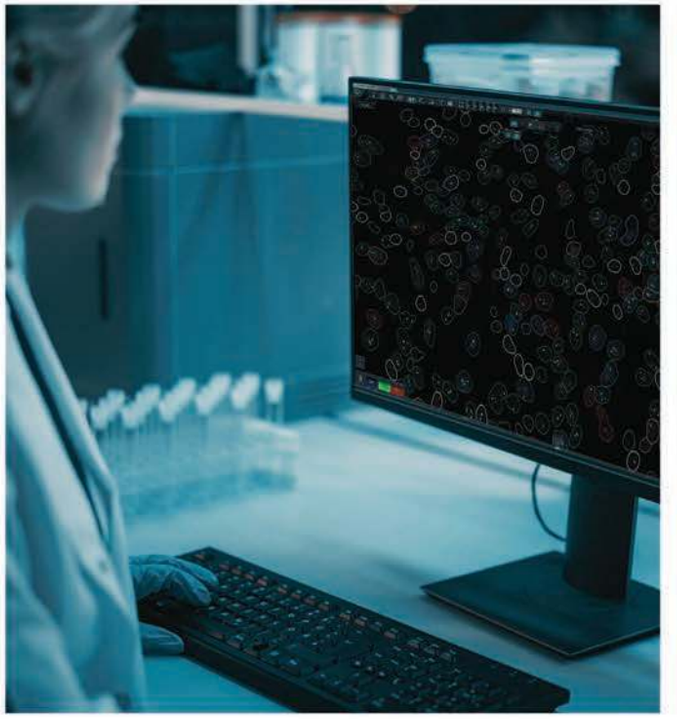
Pannoramic

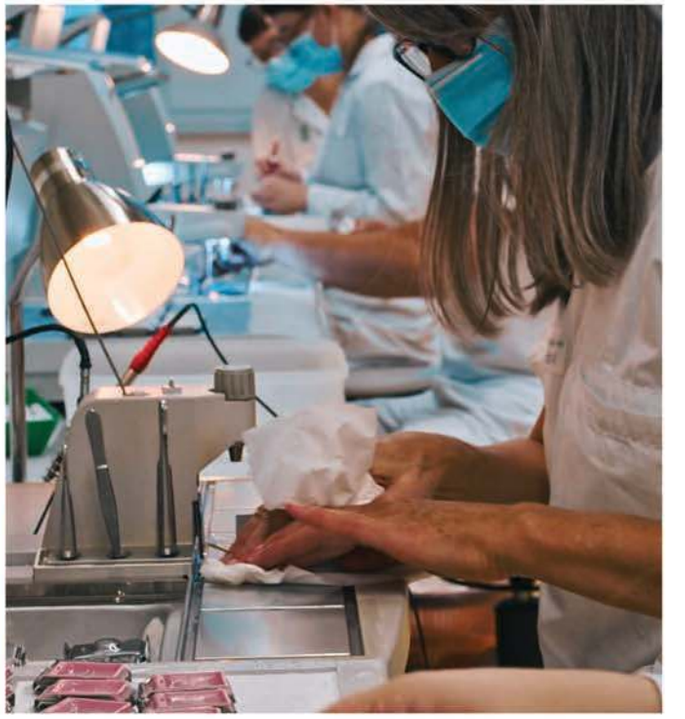
DIGITAL PATHOLOGY PORTFOLIO



Meeting The Needs of Every Market







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(Regulatory disclaimer: Not all applications are available in all markets. Contact our sales team for details or send an inquiry to info@3DHISTECH.com)

Precision Focused

3DHISTECH - Hungarian Innovation in Action

We drive innovation in diagnostics and research with advanced imaging and automation technologies. Our expertise includes the digitization of pathology slides, tissue microarray imaging with molecular applications, and micro-computed tomography, supported by integrated hardware, software, and modules for every stage of the imaging and analysis workflow.

With multidisciplinary proficiency—from high-resolution optics to precision engineering—we provide high-performance, customizable products and solutions. Collaborating closely with pathologists and researchers, we ensure our technologies meet the evolving demands of modern laboratories, delivering scalability, accuracy, efficiency, and adaptability across diverse applications.

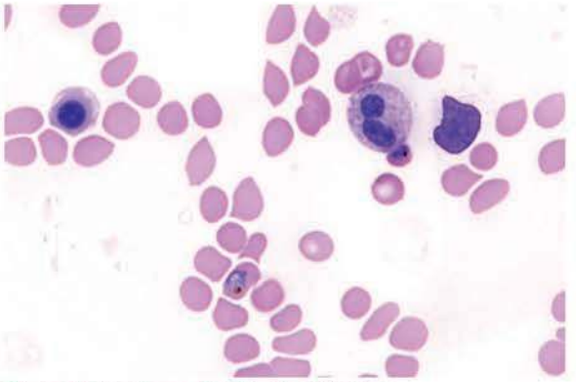


In Focus

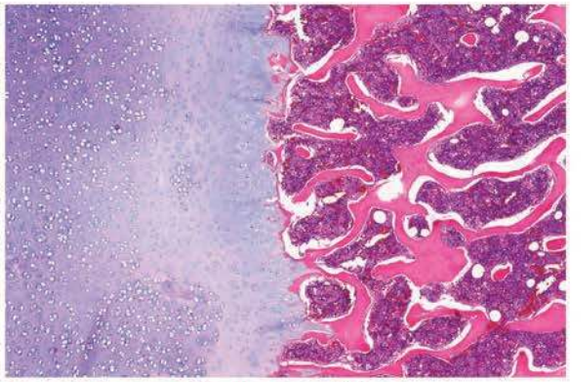
Diagnostic Solutions



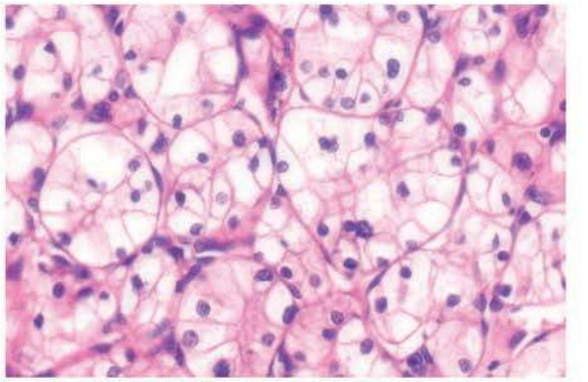
Clinical Applications of Diagnostic Digital Pathology



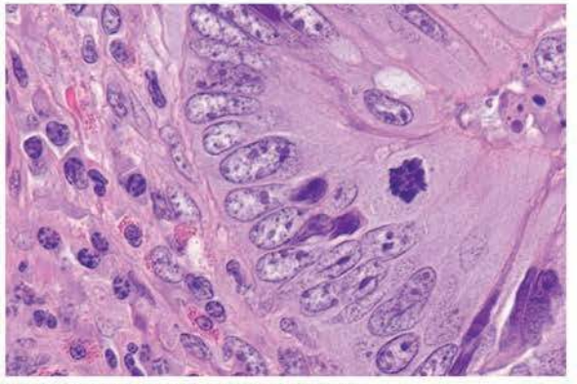
Clinical Pathology in Medical Institutions
Blood smear from malaria infected patient, Giemsa
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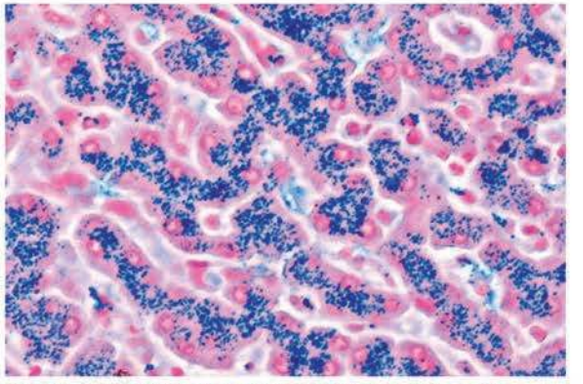
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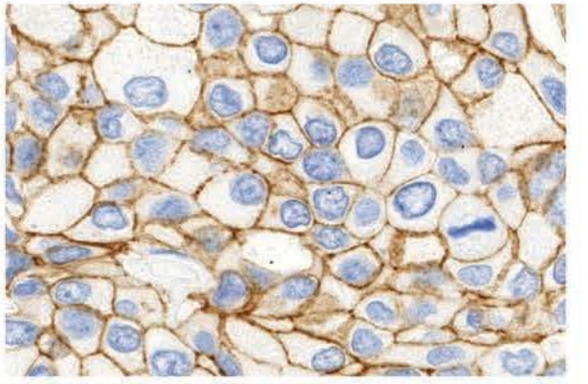
Oncology Pathology for Cancer Diagnostics
Clear cell renal cell carcinoma, H&E
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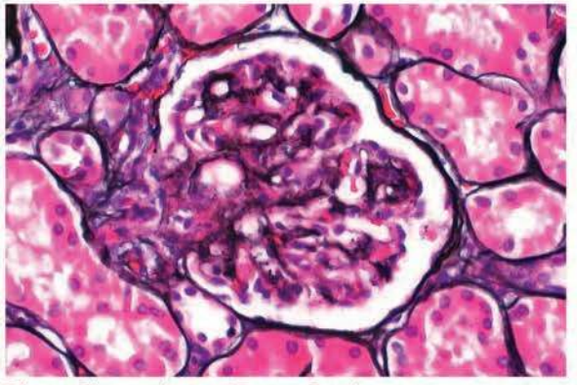
Gastrointestinal and Liver Pathology
Colorectal adenocarcinoma, H&E
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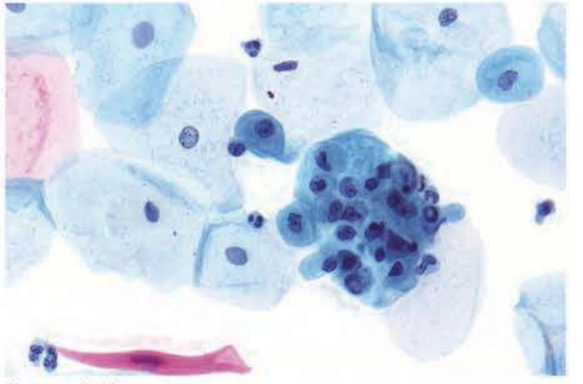
Diagnostic Toxicologic Pathology / Neuropathology
Iron accumulation in liver, Perls Prussian Blue
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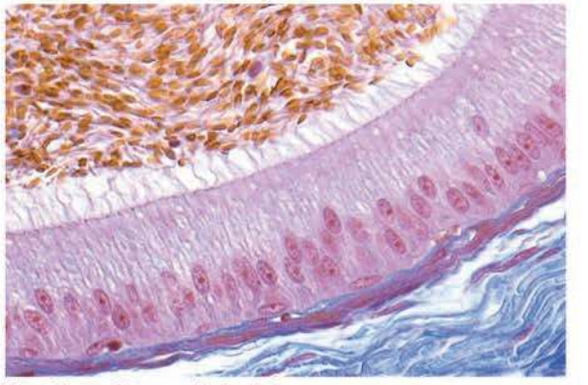
Diagnostic Immunohistochemistry
HER2 Immunostaining in breast cancer
With the Pannoramic Flash Desk DX Solution



Biopsy Diagnostics and Frozen Sections
Glomerulus, Jones Stain
With the Pannoramic Flash Desk DX Solution



Cytopathology
Serous papillary adenocarcinoma of the uterus, Pap Stain
With the Pannoramic 250 Flash III DX Solution



Veterinary Diagnostic Pathology
Cat epididymis, Mallory's Trichrome Stain
With the Pannoramic Flash MIDI DX Solution

Solution Components

Each solution includes a **Pannoramic DX Digital Scanner**, a high-performance **All-in-one PC with Virtual Server (not a medical device),** a **Touchscreen Monitor (not a medical device)** for intuitive and ergonomic user interface, and comprehensive diagnostic **DX Software and Modules**, as well as complementary research **RX Software and Modules. (Diagnostic Applications Module not available in all markets where 3DHISTECH is present. Contact our Sales team for details.)**

Select the **Pannoramic DX Digital Scanner** that best suits your laboratory's specific requirements.



	Pannoramic 250 Flash III DX Digital Scanner	Pannoramic 150 DX Digital Scanner	Pannoramic 75 DX Digital Scanners	Pannoramic MIDI III DX Digital Scanner	Pannoramic Flash Desk DX Digital Scanner
Capacity	up to 300 slides	150 slides	75 slides	12	1
Speed	up to 60 slides / hour	up to 25 slides / hour	up to 25 slides / hour	up to 30 seconds/slide	up to 30 seconds/slide
Ideal Laboratory Type	Mid to Large Volume	Mid Volume	Mid Volume	Low Volume / Specialty Use	Specialty Use
Objective	20x (NA 0.8); 40x (NA 0.95)	20x (NA 0.8); 40x (NA 0.95)	20x (NA 0.8); 40x (NA 0.95)	20x (NA 0.8); 40x (NA 0.95)	20x (NA 0.8) or 40x (NA 0.95)
Image Capture Magnification	50x 100x / 57x 113x / 41x 82x	50x 100x	50x 100x	40x / 80x	50x 57x 41x or 100x 113x 82x
Resolution (µm/pixel)	0.2 0.1 / 0.18 0.09 / 0.24 0.12	0.2 0.1	0.2 0.1	0.24 0.12	0.2 0.18 0.24 or 0.01 0.09 0.12
Supported Racks	3DH	3DH	3DH	3DH	3DH
Brightfield Scanning	Yes	Yes	Yes	Yes	Yes
Flash Scanning	Yes	LED-based	LED-based	LED-based	Yes
Doublewidth Slide Compatible	-	-	-	-	Yes
IVDR Certification	Yes	Yes	Yes	Yes	Yes
Dimensions in cm (w x d x h)	67 x 75 x 58	67 x 69 x 55	67 x 69 x 55	67 x 47 x 60	38 x 31 x 25
Weight	46 kg	46 kg	46 kg	30 kg	12 kg



All-in-one PC with Virtual Server

A centralized server solution, this component delivers high-performance local and server storage, database management, and processing capabilities. It ensures operational efficiency while guaranteeing the integrity and security of your digital pathology data.

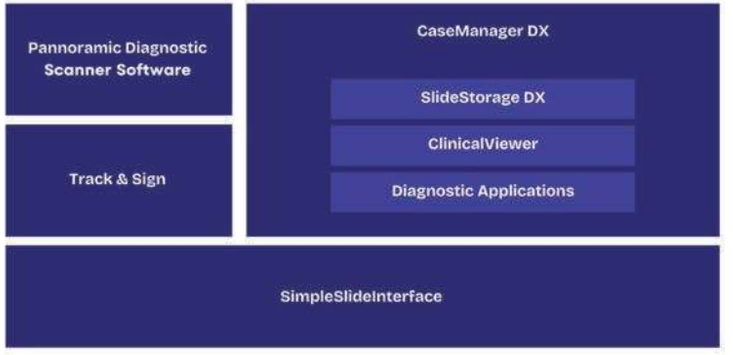


Touchscreen Monitor

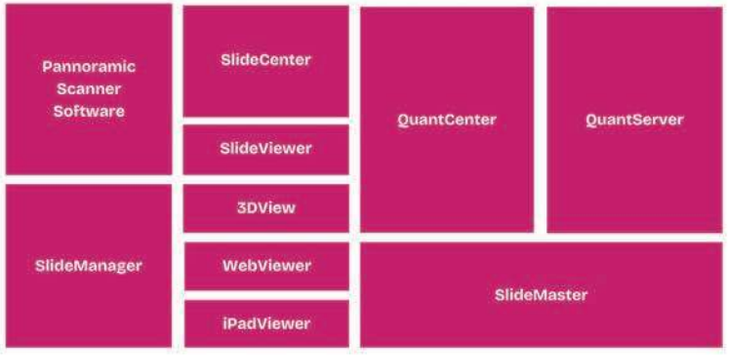
The high-resolution touchscreen provides intuitive control over the entire scanning process. Its responsive interface enhances user interaction with both the scanner and software suite, allowing for efficient operation and smooth navigation across applications.

Regulatory Disclaimer: Diagnostic Applications Module is a field-of-view-based image analysis platform tailored for rapid, targeted quantification, with automated cell counting for diagnostic workflows and specialized modules for key biomarkers. This module is not available in every country 3DHISTECH is present, e.g. Canada.

Diagnostic DX Software & Modules Included in The Solution



Research RX Software & Modules Included in The DX Solution



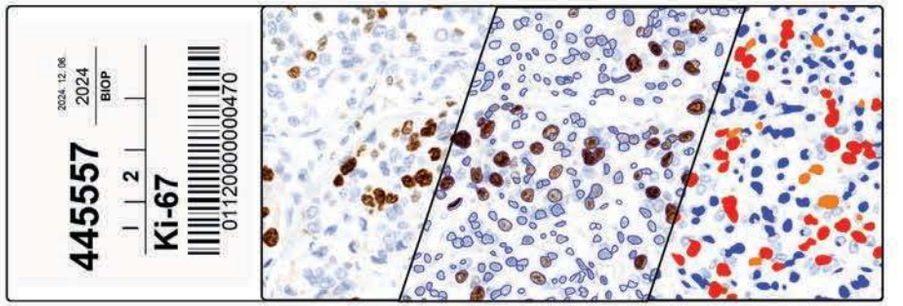
Service & Support

24/7 Online Remote Maintenance
Round-the-clock remote support ensuring any technical issues are promptly addressed to guarantee the seamless operation of your digital pathology systems throughout the entire warranty period.

Software Upgrade License for 2 Years
Keep your system up to date with the latest software innovations and enhancements, ensuring ongoing performance optimization and feature expansion.

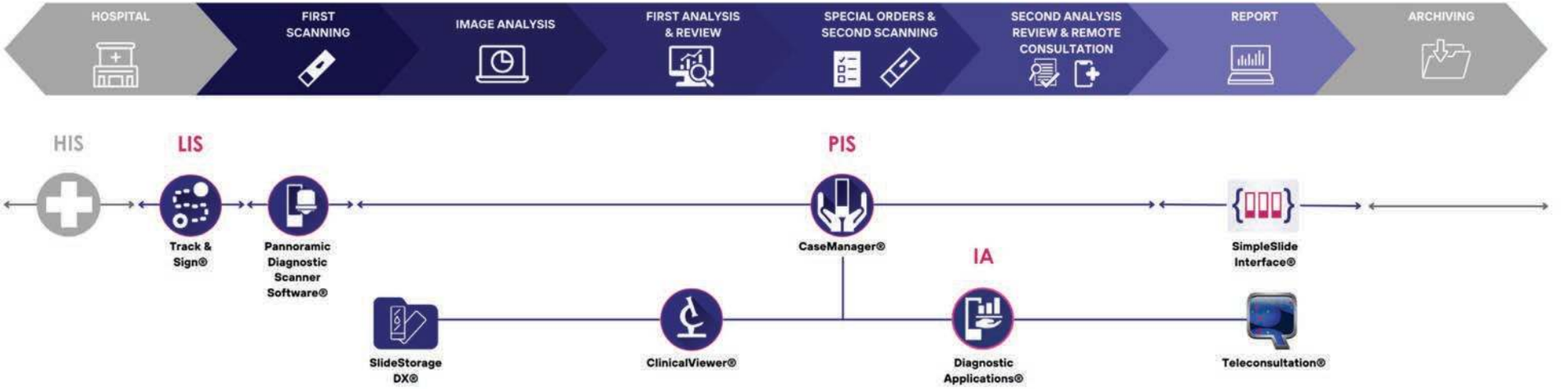
Sign-out Ware

DX Software & Modules support the entire digital pathology workflow at each stage, from sample tracking and slide digitization to diagnosis and reporting. Powered by AI, our intelligent software delivers tailored insights equipping pathologists with precise data for diagnostic precision and optimize productivity throughout the process.



Ki-67 Quantification Module is now IVDR-Certified

DIAGNOSTIC DIGITAL PATHOLOGY WORKFLOW



(Regulatory Disclaimer: Diagnostic Applications (Optional) is available in specific product variants and may not be available in every country 3DHISTECH is present, e.g. Canada)

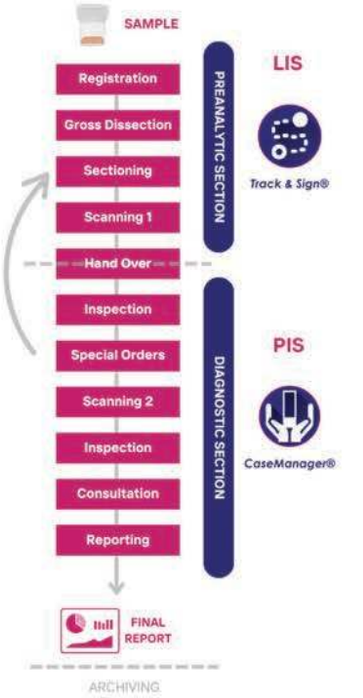
Track & Sign

3DHISTECH's advanced **laboratory information system**, designed to simplify sample management and support pathology department workflows. With Track & Sign, the entire digital pathology workflow--from case registration to the final report--is cohesively integrated, reducing turnaround times and boosting performance. Optional HL7 integration enables secure, standardized communication with third-party hospital information systems for exchange, identification, storage, and management of electronic health records, including patient and case data. When combined with the SlideStorage DX within CaseManager DX, and ClinicalViewer, T&S creates a collaborative environment throughout the digital pathology workflow, covering case registration, slide management, storage and reporting. Designed for use by healthcare professionals in laboratory and clinical settings, T&S links electronic health records with sample data--such as surgical pathology, cytology slides, digital sections from FFPE tissue specimens, and cytology samples--within a centralized database.

Key Features

- **Barcode-based sample tracking** from registration through scanning and handover
- **Advanced user and permission management**
- **Comprehensive workflow control**, with management of each phase
- **Built-in voice recorder** for audio notes with cases during the gross dissection phase
- **Integration with CaseManager DX** for automated slide scanning and case assignment and capability to receive special examination requests.
- **HL7 API for HIS Integration:** Facilitates secure communication with third-party hospital information systems, ensuring sensitive case and patient information remains protected during data transmission.
- **Enhanced Sensitive Data Protection**
- **LDAP/Active Directory integration** for streamlined user import





Pannoramic Diagnostic Scanner Software



This advanced software offers precise control and monitoring of the 3DHISTECH IVDR-compliant medical device scanners, ensuring consistent and optimized performance in clinical diagnostics.

Indicator	Description
	The slide is not yet processed, or there is no slide at the specified position in the rack.
	Indicates that the slide has successfully been loaded and further processes are being performed.
	Conversion to MRXS / DICOM format is finished.
	Preview image is recorded.
	Slide scanning is in progress.
	Slide was scanned successfully, but with warning. For instance, the focus quality did not match the expected result.
	Slide scanning is failed. The error message is displayed at the end of the bar.
	The slide was scanned successfully.

Key Features

- **Barcode Reading Software** for streamlined sample tracking.
- **Z Stack with Extended Focus** to capture multiple layers of the tissue, providing detailed and focused image analysis.
- **Optional DICOM Output** to ensure seamless interoperability with DICOM PACS image archives.
- **Central Log Service Application**, offers central log collection and remote monitoring for the Scanners and CaseManager DX for administrative and regulatory purposes.

CLS

CaseManager DX

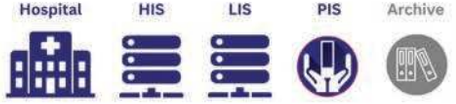
Our **Pathology Information System**, controlled by CaseManager DX, has been engineered to unify the entire digital pathology workflow, from comprehensive data management to effortless integration with electronic health records (EHR). For optimal 3rd party Laboratory Information System (LIS) integration, the platform utilizes an HL7 interface, ensuring secure and efficient communication across systems. This also allows for the integration with 3rd party image analysis systems. CaseManager DX includes multiple modules:

- **SlideStorage DX**
- **Clinical Viewer**
- **Diagnostic Applications** (Optional)

CaseManager DX offers a range of functionalities designed to enhance user experience. Its customizable report form allows for the creation of tailored reports for various case types, while the ability to assign cases to specific pathologists or workgroups improves workflow efficiency. The Focus View functionality consolidates all case details onto a single screen for quick and comprehensive review. For slide management, CaseManager DX includes robust archiving capabilities, allowing slides to be stored in PACS using DICOM format, with options to delete archived slides to optimize storage. Additionally, automatic deletion settings can be configured based on a specified time frame, with the option to safeguard critical slides from removal. Central Control further enhances the system by enabling users to customize scanning parameters for different tissues or stains, with centralized management of scanner settings through CaseManager DX.

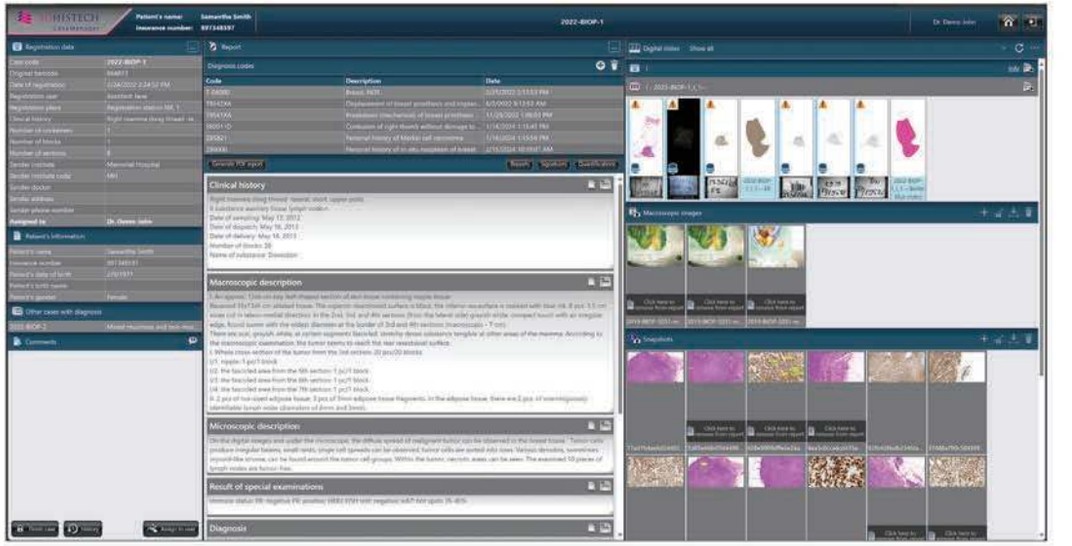
Integration

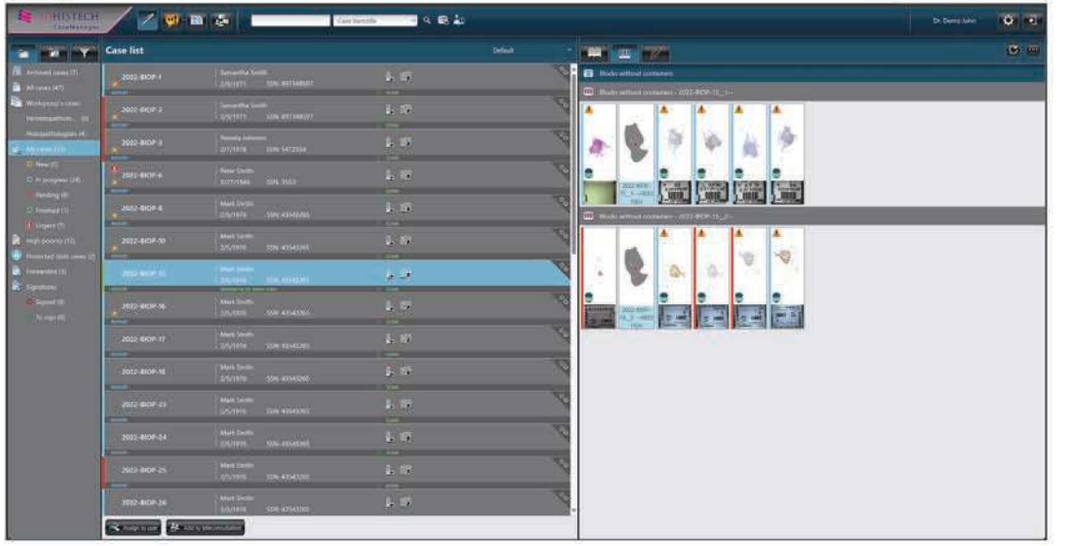
CaseManager DX integrates effortlessly with existing hospital information systems (HIS) and laboratory information systems (LIS), ensuring smooth and reliable communication. This allows CaseManager DX to connect the entire pathology workflow--from case registration through slide management, storage, and viewing--all the way to the final report. The CaseManager Application allows users to archive microscopic whole slide data either to their own system or to a third-party archiving solution, providing flexible and secure data management options.



Key Features

- **Comprehensive Workflow Support:** Collects and integrates all clinical data for histopathology and cytology, streamlining the diagnostic workflow and final reporting process.
- **Case View Interface:** Displays all case details on a single screen, including patient data, related cases, diagnosis codes, digital slides, attachments, and reports.
- **Integrated Image Management:** Utilizes SlideStorage DX for efficient storage and management of digitized slides.
- **ClinicalViewer Integration:** Seamlessly displays patient and staining data directly within the viewer's interface.
- **Teleconsultation Capability:** Supports online consultations with internal and external users for collaborative case reviews.
- **Special Examination Requests:** Enables direct communication with 3DHISTECH's Track&Sign LIS for special examination orders.
- **CentralLogService Integration:** Logs user and system activity for audit and compliance purposes.
- **HL7 API for LIS Integration:** Facilitates secure communication with third-party laboratory information systems, ensuring sensitive case and patient information remains protected during data transmission. Utilizes encryption and compliance with healthcare standards for secure data exchange.
- **Advanced User Management:** Offers robust user and permission controls.
- **Built-in Voice Recording:** Allows audio notes to be attached to cases during gross examination.
- **Data Security:** Ensures protection of sensitive patient information, with strict access controls and end-to-end encryption, particularly when interfacing with external systems like LIS via HL7.
- **User Import via LDAP/Active Directory:** Streamlines user onboarding and management.

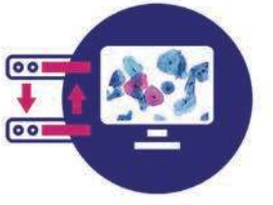




In today's medical landscape, the demand for second opinions is higher than ever. The **Teleconsultation** feature with CaseManager DX, allows for swift and secure sharing of digital slides globally, it facilitates real-time diagnostics and consultations, allowing pathologists and specialists worldwide to collaborate, bringing clarity and precision to every diagnosis no matter where you are.



SlideStorage DX - a digital slide storage module that ensures efficient image transfer and management for diagnostic review and analysis



ClinicalViewer

ClinicalViewer is an intuitive, IVDR-compliant digital microscope software. Fully integrated with CaseManager DX and SlideStorage DX, it is purpose-built to provide an interface for qualitative review and interpretation of digital slides, featuring advanced capabilities such as Z-stack viewing and extended focus. ClinicalViewer offers pathologists a powerful toolset, and support for the entire diagnostic workflow including a quick and customizable annotation toolbar, multi-user teleconsultation, and high-resolution snapshot capabilities. The application's multiview feature allows single-click access to parallel slide viewing, automatic alignment of serial sections, and integrated image analysis.

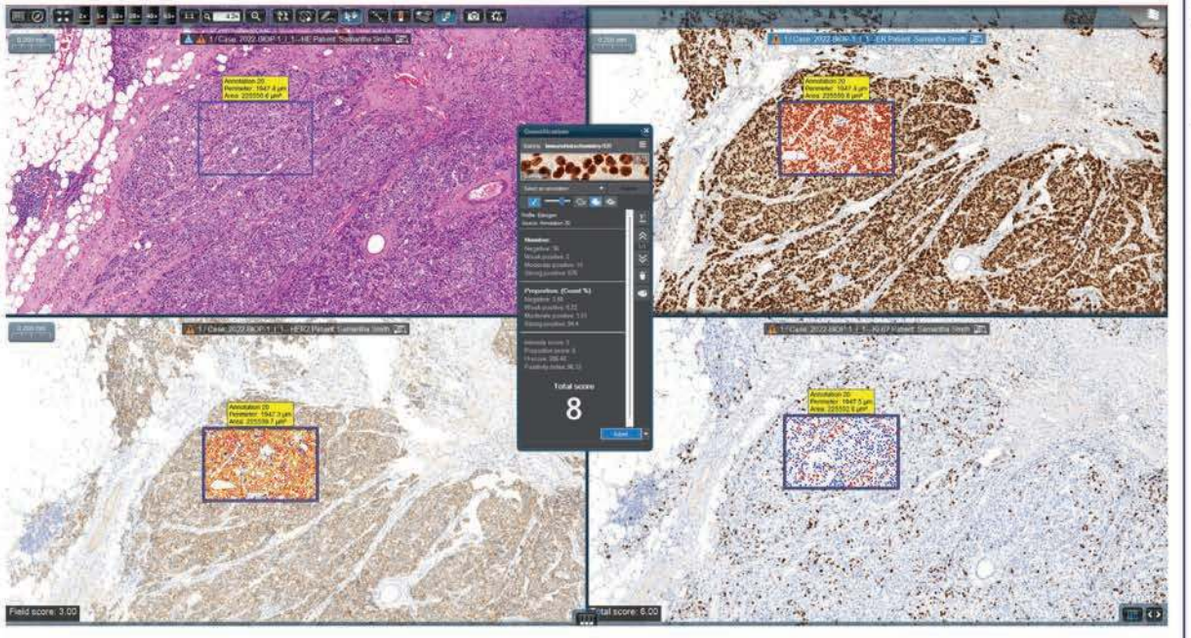
ClinicalViewer supports 3D Connexion SpaceMouse, SlideDriver, and touch screen interfaces for an enhanced user experience.

Aditionally, ClinicalViewer upholds data integrity and patient confidentiality through its synchronized integration with CaseManager, preventing cross-patient data access and ensuring accurate information display.



Key Features

- **User-based Annotation History:** Gain full visibility of the diagnostic process with a complete record of who made each annotation, ensuring accountability and collaboration throughout case review.
- **Parallel Slide Viewing:** Effortlessly compare multiple stains side by side within a single case, streamlining complex evaluations and enabling a comprehensive overview of different tissue sections.
- **Preview and Thumbnail Comparison:** Quickly verify complete tissue digitization by comparing the preview image with the slide thumbnail, reducing the risk of missed areas and ensuring reliable analysis.
- **Focus Quality Alerts:** Receive instant warnings for suboptimal image focus, safeguarding against diagnostic errors and maintaining high-quality visual assessments.
- **Patient and Stain Information Display:** Access critical patient and staining data directly within the viewer, eliminating guesswork and enabling a faster, more confident diagnosis.
- **Integrated Image Analysis Tools:** Leverage advanced image analysis directly within the viewer for deeper insights and enhanced diagnostic precision, all in one streamlined interface.



Additional Laboratory Components

MacroStation is a lightweight, user-friendly grossing table with an integrated image recording system, ideal for capturing high-quality macroscopic images. It bridges the gap between macro and micro imaging, allowing pathologists to access comprehensive visual data from a single platform. MacroStation integrates seamlessly with CaseManager DX and SlideStorage DX, storing macroscopic images alongside digital slides and case data. Gross images can be annotated, shared, or reviewed through teleconsultation, enhancing diagnostic collaboration.



SlideDriver is an innovative navigation device that offers microscope-like control, making it the ideal tool for pathologists and researchers who prefer the traditional experience of examining slides. Designed to provide familiar, tactile navigation on digital slides, SlideDriver helps ease the transition for users new to digital pathology while enhancing the efficiency of experienced practitioners.

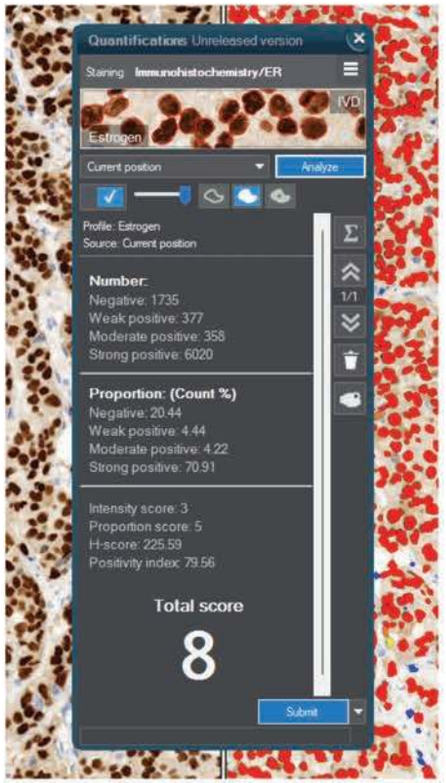
Supported by ClinicalViewer, SlideDriver offers precise, intuitive movement across digital slides, allowing users to navigate with the same comfort and control as a traditional microscope. This tool bridges the gap between conventional microscopy and digital workflows, providing a seamless experience for pathologists who value hands-on examination.



Diagnostic Applications

Diagnostic Applications (DAPPS) is a field-of-view-based image analysis platform tailored for rapid, targeted quantification, with automated cell counting for diagnostic workflows. This optional software offers specialized modules for key biomarkers — including ER, PR, HER2, and Ki67 for breast tissue, as well as GEPNET and PD-L1 for lung tissue — delivering focused insights for complex cases. Its advanced algorithms and manual refinement tools ensure precise segmentation, even in challenging tissue samples. (Ki-67 is now IVDR-Certified, while ER, PR, HER2, GEPNET and PD-L1 are validated for research purposes)

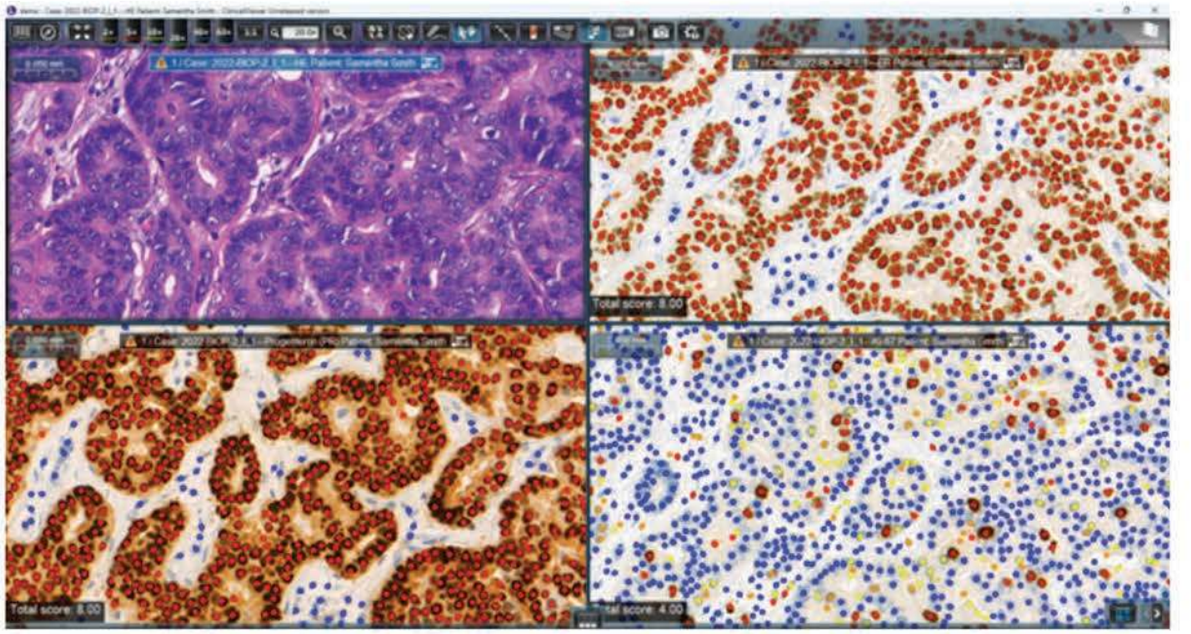
Notably, the Ki67 module is now IVDR-certified, underscoring its reliability in regulated diagnostic environments. DAPPS also facilitates structured case organization and collaborative review, while on-premise deployment provides robust data security and control. Combining automation with expert oversight, DAPPS supports reliable diagnostics, streamlining workflows and strengthening diagnostic confidence.

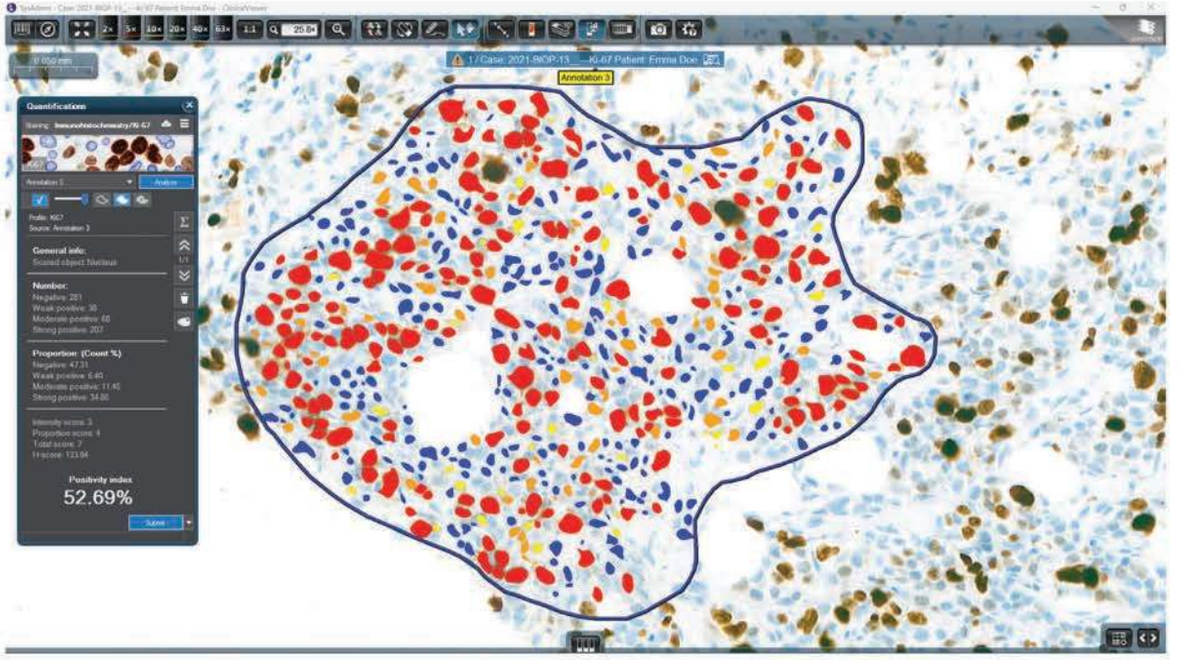


Key Features

- **Targeted, Field-of-View Image Analysis:** Focuses on specific areas of interest within tissue samples for precise, relevant insights, supporting accurate diagnostic decisions.
- **Comprehensive Biomarker Assessment:** Specialized modules for critical biomarkers, including Ki-67, which is now IVDR-Certified while Estrogen, Progesterone, HER2, GEPNET, and PD-L1, are validated for research purposes. These biomarkers enable detailed analysis to support complex case evaluations.
- **Automated Cell Counting:** High-throughput, standardized cell quantification addresses the limitations of manual counting, enhancing speed, consistency, and reproducibility.
- **Manual and Semi-Automatic Adjustments:** Offers flexibility with manual correction tools, allowing pathologists to refine segmentation and detection for complex or ambiguous regions.
- **Calibration and Standardization:** Built-in features ensure consistency across cases, utilizing robust sample databases and quality control protocols for reliable, reproducible results.
- **Enhanced Result Management:** Advanced features, including multi-view support and rescoring options, improve case processing, accessibility, and adaptability for varied diagnostic needs.
- **Secure, On-Premise Deployment:** Offers a cost-effective, data-secure solution with local hosting, ensuring compliance with stringent privacy regulations while reducing risks associated with cloud-based systems.
- **Research and Education Support:** Provides server-side storage for research scenarios and serves as a valuable training tool, offering annotated cases with algorithmic insights guided by experienced pathologists.
- **Data Integration and Archiving:** Facilitates a data-driven clinical approach by integrating with patient information systems, supporting long-term storage, retrieval, and analysis of digital slides and algorithm outputs.

(Regulatory Disclaimer: Diagnostics Applications module is available in specific product variants, and may not be available in every country 3DHISTECH is present, e.g. Canada)

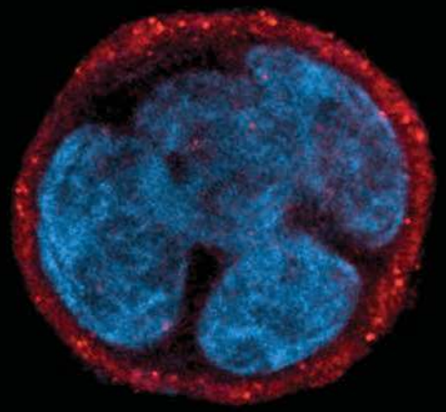


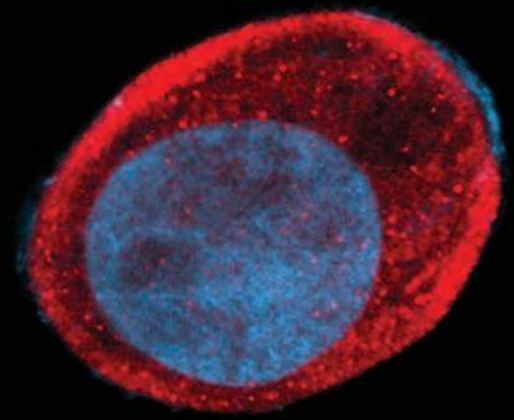


Ki-67 Quantification Analysis Module now IVDR Certified

In Focus

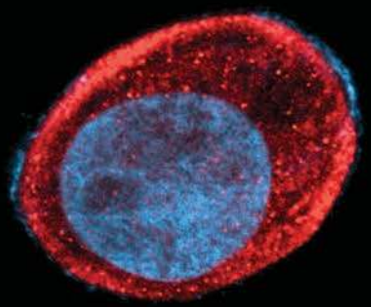
Research Solutions



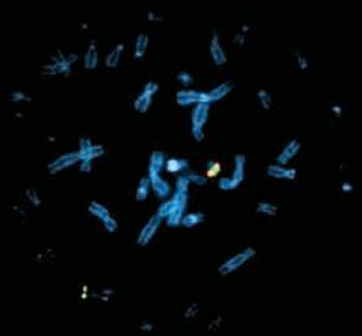




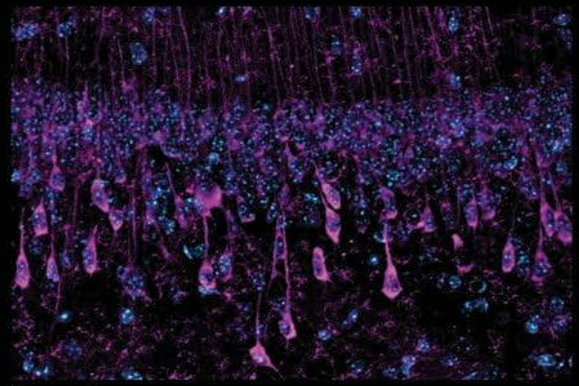
Research Applications of Digital Pathology



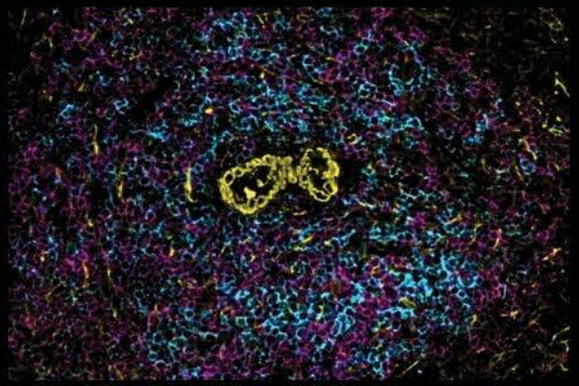
Mollecular Cell Biology
Cancer cell from HT29 cell line
With the Pannoramic Confocal Solution



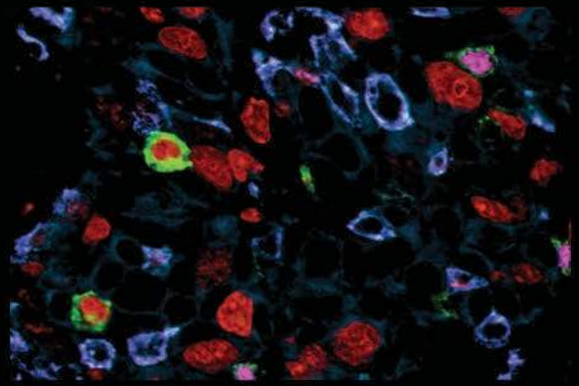
Genetics
FISH on metaphase chromosomes, human
With the Pannoramic MIDI III Solution



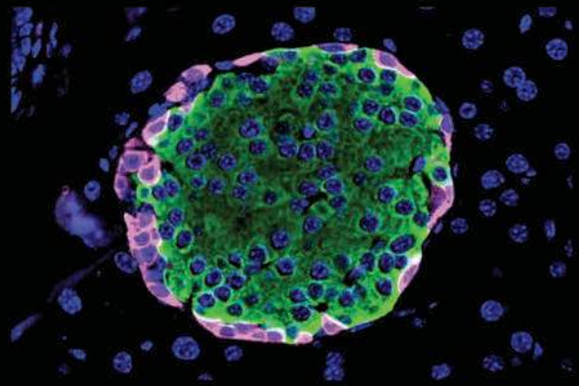
Neuroscience
AAV transfected neurons, mouse hippocampus
With the Pannoramic Confocal Solution



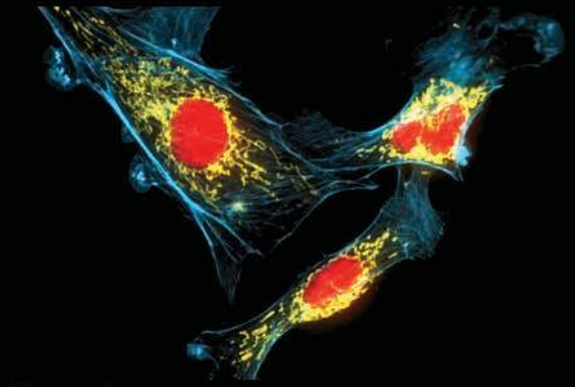
Immunology and Infectious Diseases
Periateriolar lymphoid sheath (PALS), mouse spleen
With the Pannoramic 250 Flash III Solution



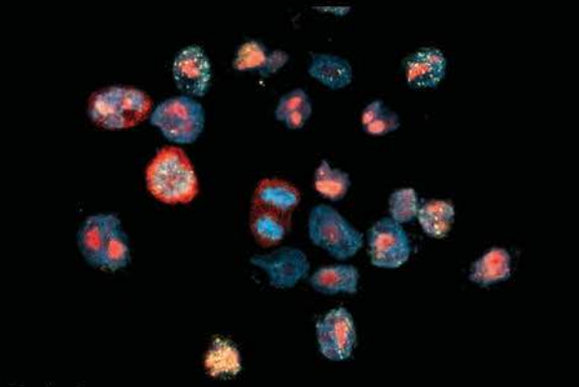
Cancer Research
Multiplex immunolabeling of human lung cancer
With the Pannoramic Confocal Solution



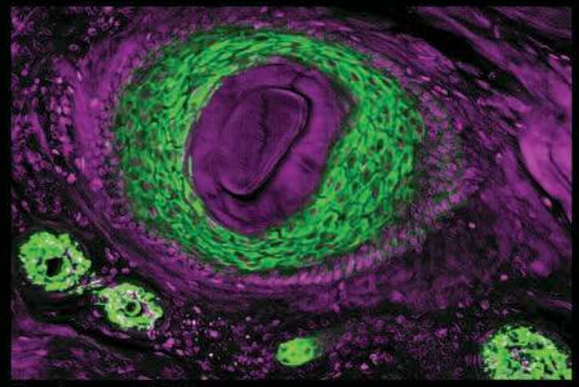
Biomedical Research
Alpha and beta cells in the islet of Langerhans
With the Pannoramic MIDI III Solution



Pharmacology
Bovine pulmonary artery endothelial cells (BPAEC)
With the Pannoramic 250 Flash III Solution



Toxicology
Drug induced altered cell division in cell culture
With the Pannoramic 250 Flash III Solution



Developmental Biology
Immunostained hair follicule, mouse skin
With the Pannoramic MIDI III RX Solution

Solution Components

Each solution includes a **Pannoramic RX Digital Scanner**, a high-performance **All-in-one PC with Virtual Server,** as well as robust **RX Software and Modules.**

Select the **Pannoramic RX Digital Scanner** that best suits your laboratory's specific requirements.







	Pannoramic 250 Flash III Digital Scanner	Pannoramic 150 Digital Scanner	Pannoramic 75 Digital Scanner	Pannoramic MIDI III Digital Scanner	Pannoramic Confocal Digital Scanner
Capacity	up to 300 slides	150 slides	75 slides	12 slides	11 + 1 cleaning slide
BF Scanning Speed	up to 100 slides / hour	up to 40 slides / hour	up to 25 slides / hour	up to 40 slides / hour	up to 4 to 5 slides / hour
FL Scanning Speed	7 slides / hour	7 slides / hour	7 slides / hour	7 slides / hour	up to 2 slides / hour
Objective	10x (NA 0.3) FL only; 20x (NA 0.8); 40x (NA 0.95)	10x (NA 0.3) FL only; 20x (NA 0.8); 40x (NA 0.95)	10x (NA 0.3) FL only; 20x (NA 0.8); 40x (NA 0.95)	4x (NA 0.0) FL only; 10x (NA 0.3) FL only; 20x (NA 0.8); 40x (NA 0.95)	10x (NA 0.3); 20x (NA 0.8); w40x (NA 1.2); w63x (NA 1.2)
BF Resolution (µm/pixel) / Magnification	up to 0.09 / 113x	up to 0.10 / 103x	up to 0.10 / 103x	up to 0.10 / 103x	up to 0.10 /97x
FL Resolution (µm/pixel) / Magnification	up to 0.10 / 98x	up to 0.10 / 98x	up to 0.10 / 98x	up to 0.10 / 98x	up to 0.10 /97x
Supported Racks	3DH	3DH	3DH	3DH	3DH
Flash Scanning	Yes	LED - based	LED - based	LED - based	-
Doublewidth Slide Compatible	-	-	-	-	-
Dimensions in cm (w x d x h)	67 x 75 x 58	67 x 69 x 55	67 x 69 x 55	67 x 47 x 60	95 x 57 x 100
Weight	49 kg	49 kg	49 kg	30 kg	120 kg



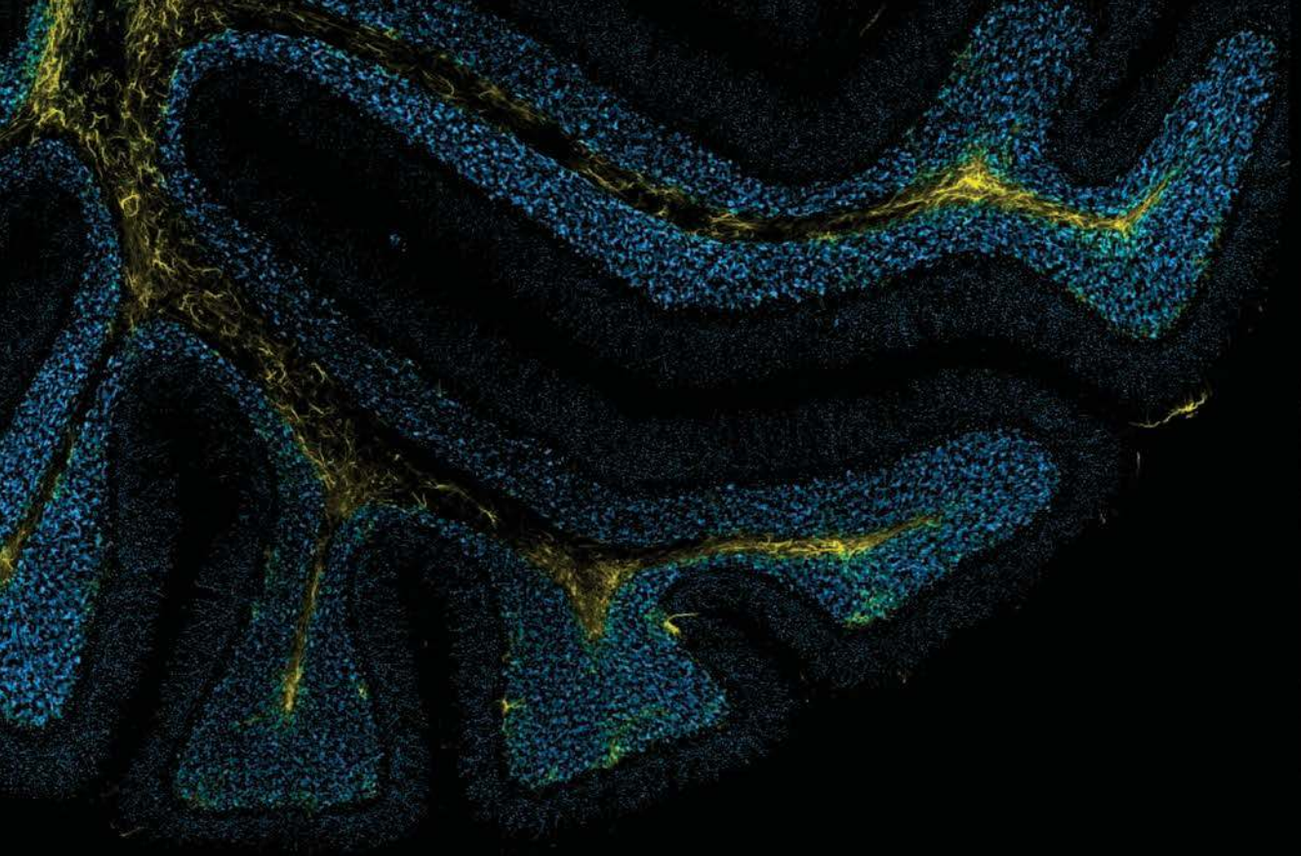
All-in-one PC with Virtual Server

A centralized server solution, this component delivers high-performance local and server storage, database management, and processing capabilities. It ensures operational efficiency while guaranteeing the integrity and security of your digital pathology data.

Research RX Software & Modules Included in The Package



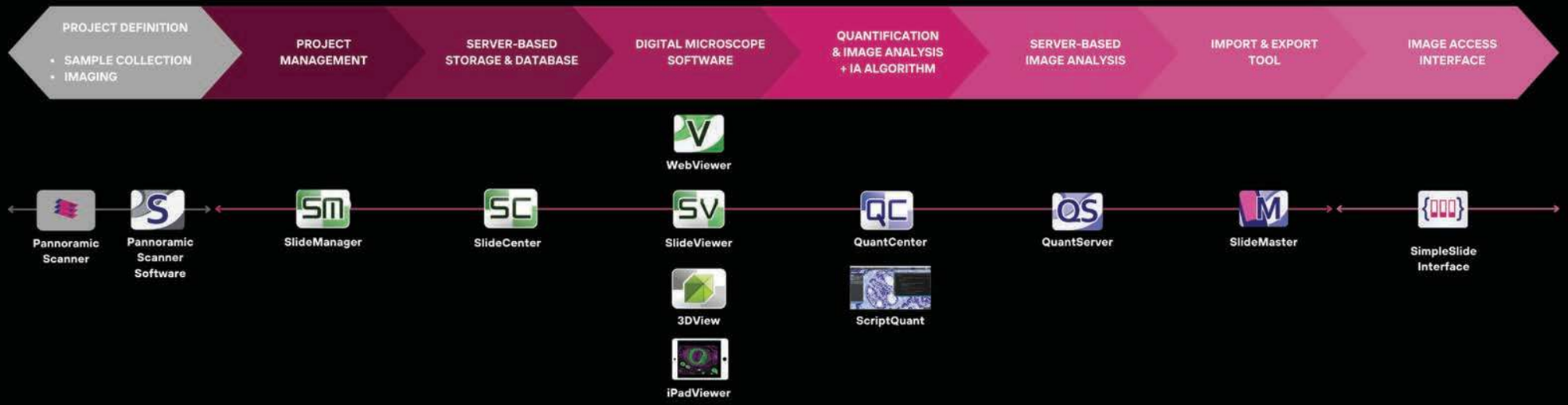




RX Software

A powerful research software suite designed to elevate digital pathology workflows through intelligent image analysis, seamless project management, and scalable data storage solutions. Tailored for modern research demands, it integrates AI-driven analytics, 3D visualization, and cloud-based collaboration tools to support fields such as oncology, neuroscience, pharmacology, and toxicology.

Key components of RX Software include QuantCenter for precision image quantification, SlideManager for structured research coordination, SlideCenter for centralized data management, and SlideViewer/WebViewer/iPadViewer for flexible access and collaboration. With additional tools like ScriptQuant for custom image analysis algorithms and SimpleSlideInterface for API-driven integrations, RX Software provides an adaptable, future-ready platform for cutting-edge digital pathology research.



Pannoramic Scanner Software

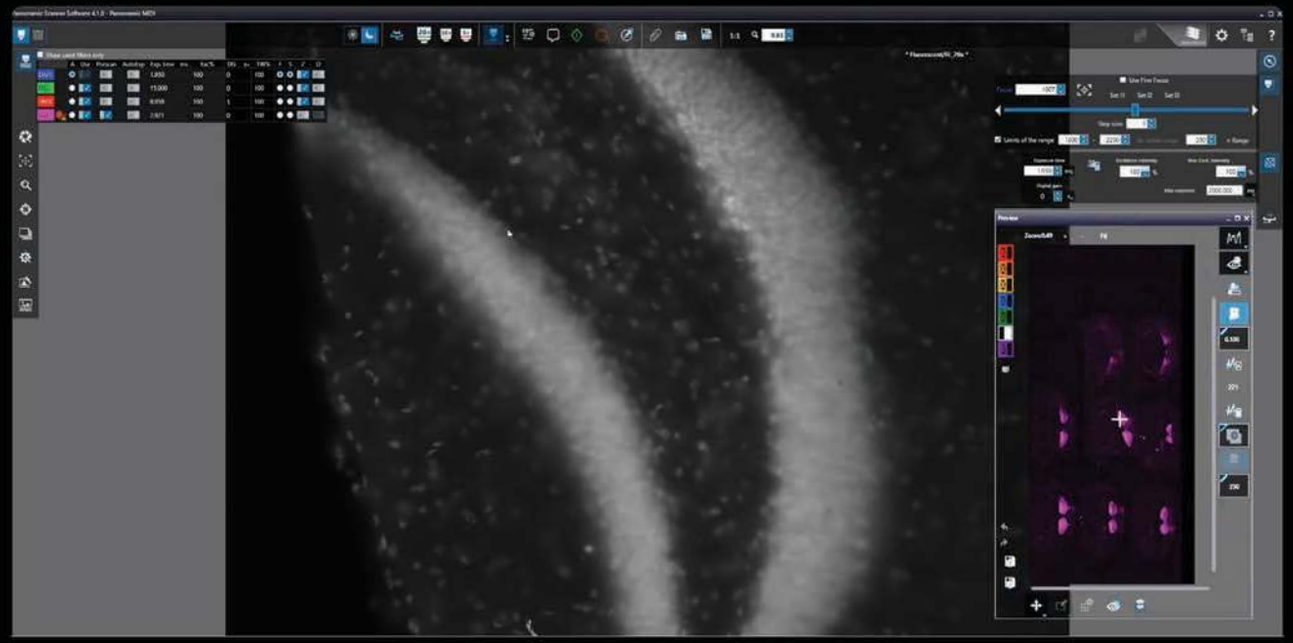
The Pannoramic Scanner Software is a specialized control and imaging solution designed for the Pannoramic Scanners enabling high-precision digitalization of biological samples using brightfield and/or fluorescence microscopy.

It provides advanced scanning modes, automated workflow management, real-time teleconsultation, and integrated barcode recognition.

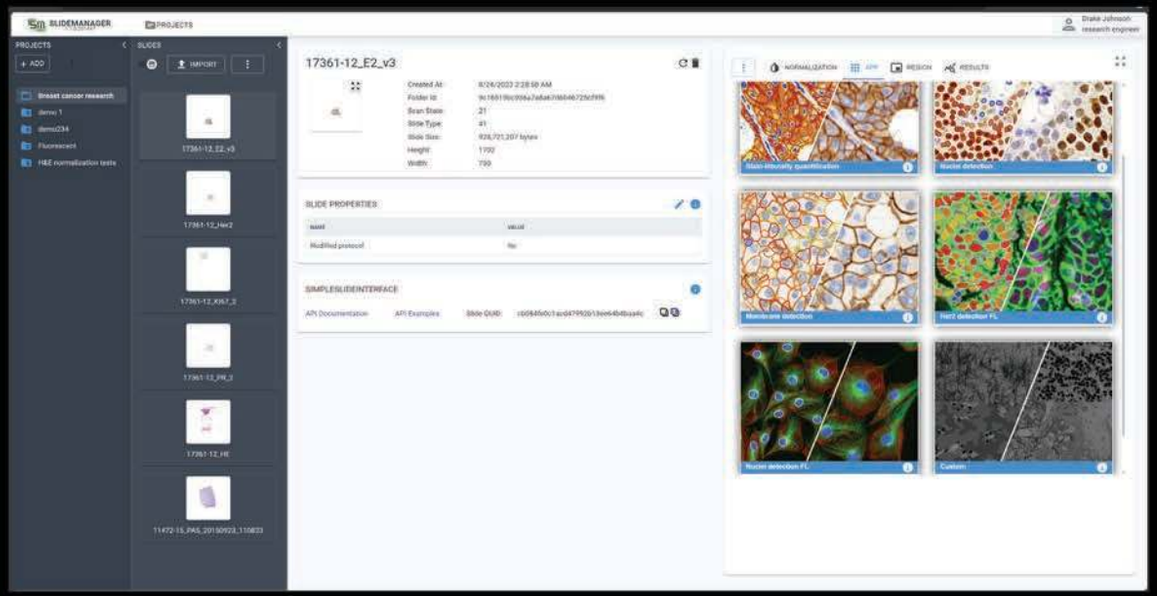
With features like extended focus, Z-stack imaging, and FRET mode, it ensures optimal image acquisition for research and educational applications

Key Features

- **Enables smooth transition between brightfield and fluorescence imaging modes**
- **Fully automated scanning process with batch processing capabilities**
- **Multiple scanning profiles, Z-stack imaging, and extended focus options**
- **Supports real-time remote access to digitized slides. Enables collaboration between researchers and pathologists from different locations.**
- **Offers multiple image compression options and file formats (DICOM, non-overlapping MRXS).**
- **Supports up to 50 fluorescent channels with 9 physical filter positions. Enhances research workflows for multiplex imaging, critical for cancer and molecular pathology.**



SlideManager



SlideManager is a powerful workflow management software designed to optimize research processes. It simplifies project organization, enhances collaboration, and integrates advanced tools. It equips researchers to manage, analyze, and share data effectively, ensuring impactful results in a streamlined environment.

What sets SlideManager apart is its intuitive design, enabling users to easily organize projects, import and manage slides, and collaborate effortlessly with colleagues. With features like automated background processing, metadata customization, and secure data management, SlideManager adapts to the dynamic needs of researchers, ensuring accuracy and reliability at every step.

By Simplifying tedious tasks, SlideManager allows users to focus on what truly matters – achieving breakthroughs and advancing knowledge. It fosters a sense of control and accomplishment, making research feel more rewarding and less overwhelming.

Key Features

- **Intuitive Web-Based Interface**
- **Advanced User Management and Collaboration**
- **Flexible Project Organization and Metadata Management**
- **Seamless SlideCenter Integration**
- **Slide-Stain Normalization Algorithm**
- **Integrated QuantServer Tools**
- **One-Click SlideViewer Access**
- **Integrated SimpleSlideInterface**
- **Robust Backup and Restore Features**

SlideCenter

SlideCenter is a centralized digital slide management platform designed for efficient storage, organization and sharing of virtual slides. It supports teleconsultation, real time collaboration, and secure access control, making it an essential tool for pathology research and education.

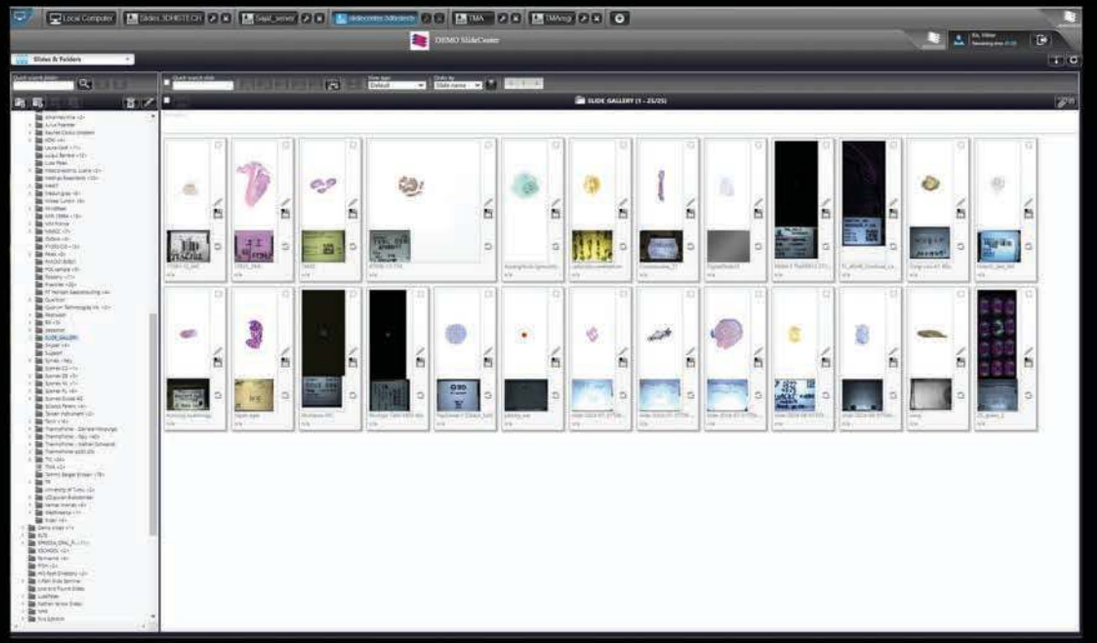
SlideCenter offers seamless teleconsultation, enabling real-time and asynchronous collaboration on digitized slides with integrated chat functions, setting it apart from traditional platforms.

Its hierarchical case organization allows users to efficiently structure slides into folders, cases, and blocks. With flexible access and sharing options, SlideCenter supports public and private slide sharing, ensuring secure multi-user access across institutions.

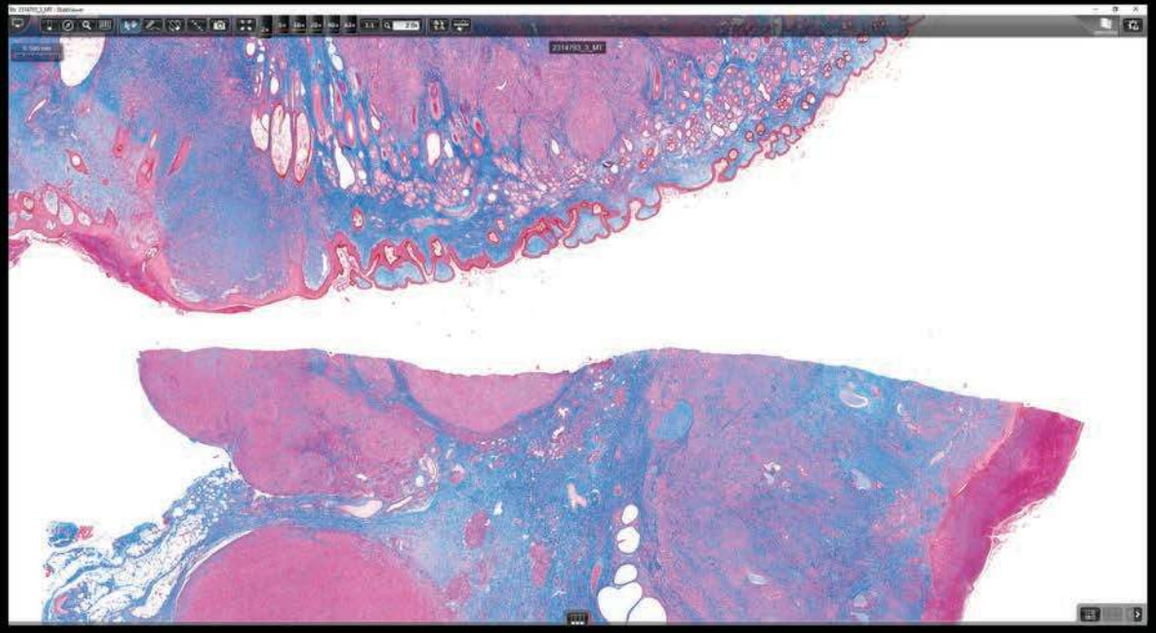
Unlike other solutions, it provides multi-viewer compatibility, working seamlessly with SlideViewer and WebViewer. Its intuitive interface, advanced telepathology tools, and streamlined data organization make it the ideal choice for digital pathology, research, and education, delivering unmatched efficiency and accessibility.

Key Features

- **Centralized Slide Storage & Management**
- **Flexible Slide Access & Sharing**
- **Teleconsultation for Remote Collaboration**
- **Multi-Platform Compatibility**
- **Hierarchical Case Organization**
- **Advanced Slide Processing & Search Functions**
- **Secure User & Group Management**
- **High-Speed Slide Upload & Processing**



SlideViewer



SlideViewer is a powerful digital microscope software that offers whole-slide visualization, precise zooming, and intuitive annotation tools.

Unlike traditional microscopes, it enables instant navigation across entire slides, seamless collaboration, and digital accuracy in consultations.

With SlideViewer, users gain enhanced support for polarization-mode imaging, allowing automatic stacking and real-time opacity adjustments between brightfield and polarization slides.

Additionally, improved TMA annotation tools support specialized tissue microarray workflows

Key Features

- Whole-slide mavigation & instant zooming
- Advanced annotation & measurement tools
- Seamless collaboration & teleconsultation
- Support for polarization imaging
- Enhanced TMA analysis
- Multi-format compatibility
- Grayscale & gradient mapping for enhanced visualization
- 3D Peek for Z-stack imaging
- Customizable viewing & interface settings
- Optimized workflow with SlideCenter integration
- Better storage & accessibility

3DView

Explore Tissue Structures in 3D with 3DView. Unlike traditional visualization software, which offers only static 2D sections or limited 3D capabilities, 3DView delivers an advanced, interactive experience.

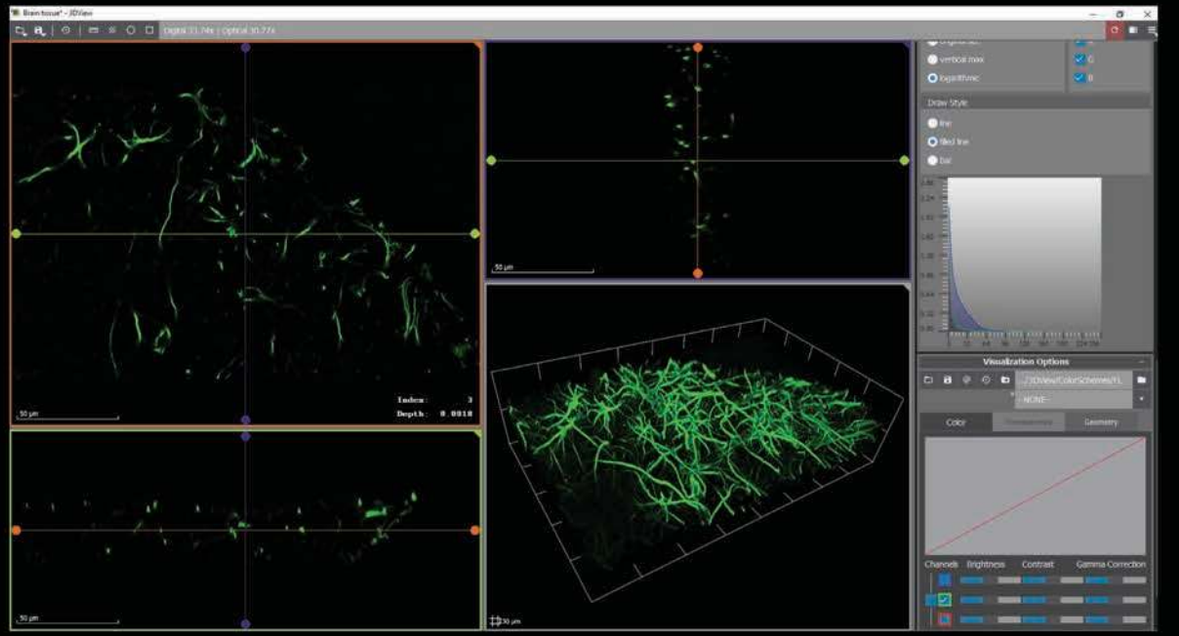
It enables seamless 3D reconstructions of 2D serial sections and micro CT images in VOL/VGI format for comprehensive tissue analysis.

The SlideMatch alignment, allows users to rotate, zoom, and slice images offering deeper insights into tissue structures.

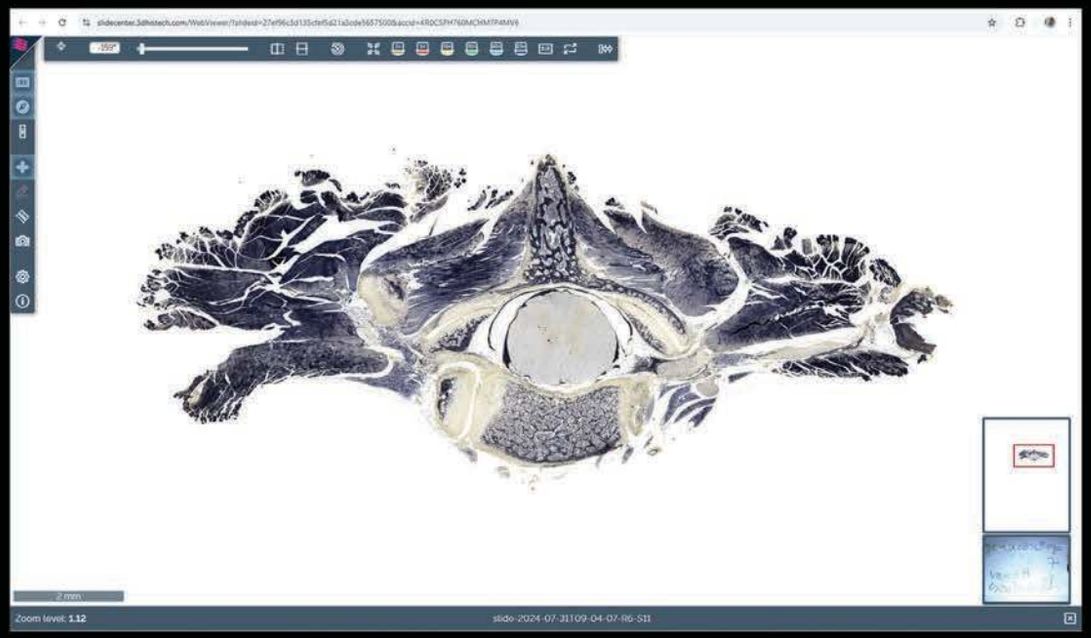
With superior compatibility, measurement tools, and high-resolution export options, 3DView surpasses competitors by providing a more versatile, precise, and publication-ready solution for researchers and pathologists.

Key Features

- **Adjust brightness, contrast, gamma, and RGB channels select and edit multiple staining for optimal clarity**
- **Supports both 2D slice view (arbitrary sections) and 3D volume view**
- **Creates 3D reconstructions from Z-stack slides**
- **Accurately assess metric distances within the 3D model**
- **Export reconstructions as 2D image series or full 3D volumes, with adjustable channel data, alignment, magnification, and format settings**
- **Generate high-resolution video exports and publication-ready snapshots for presentations, research, and documentation**
- **Supports MRXS, SVS, CZI, NDP, and VSI**



WebViewer



WebViewer - Fast, intuitive Slide Viewing in SlideCenter.

WebViewer is the next-generation multi-platform solution for seamless slide viewing and annotation, in SlideCenter 3.3.

Designed for speed and usability, it enables quick slide access, smooth navigation, and efficents collaboration.

With advanced zooming, annotation tools, rotation, and full-screen mode, WebViewer enhances digital pathology workflows.

Ideal for researchers, pathologists, and lab professionals, it offers high-speed performance and customizable viewing options, including fluorescence color channel setup.

Now the default viewer in SlideCenter, WebViewer makes slide management faster and more precise.

Key Features

- Navigator rectangle for quick overview and easy repositioning.
- Draw, edit, and manage annotations directly within the viewer.
- Editable list of annotations for analysis and collaboration.
- Slide rotation and flip
- Reset rotation and flip feature
- Full-screen mode for an immersive viewing experience.
- Resizable and movable Slide View bar
- Color channel setup for fluorescence slides
- Scale bar and status bar
- Set zoom levels to specific magnifications
- Quick Slide Information Access
- Slide info panel displaying essential slide properties
- Snapshot and Export Capabilities
- Intuitive settings menu for personalized viewing preferences.

iPadViewer - 3DHISTECH Pannoramic Viewer for iPad

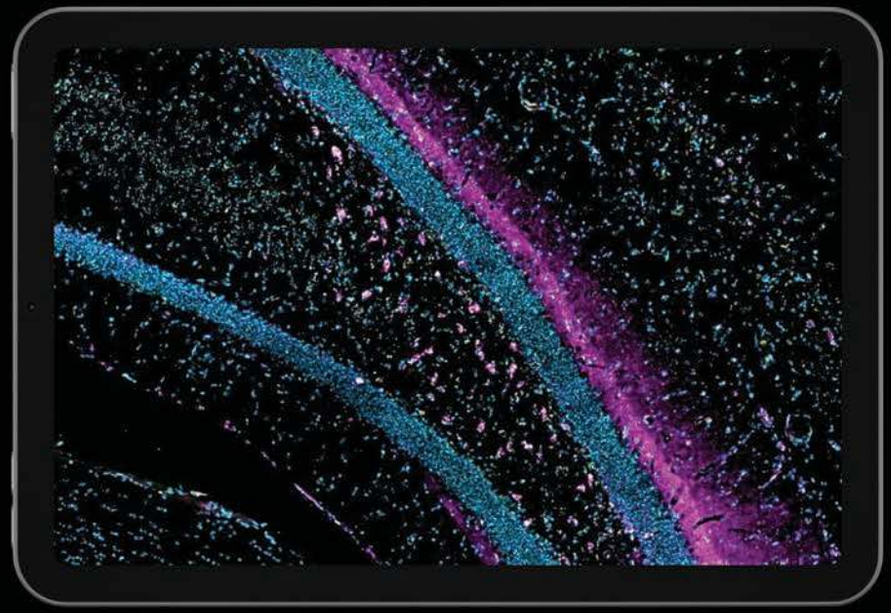
Access and analyze digital pathology slides anywhere with 3DHISTECH's iPad Viewer. Designed for medical and research professionals, this high-resolution viewer enables seamless navigation, remote case review, and collaboration via SlideCenter and PathoNet. Enhance workflow flexibility, telepathology, and education with intuitive, full-function slide viewing on your iPad.

With just an iPad and an internet connection, professionals can securely access, review, and navigate digital slides from any location. This mobility is particularly beneficial for:

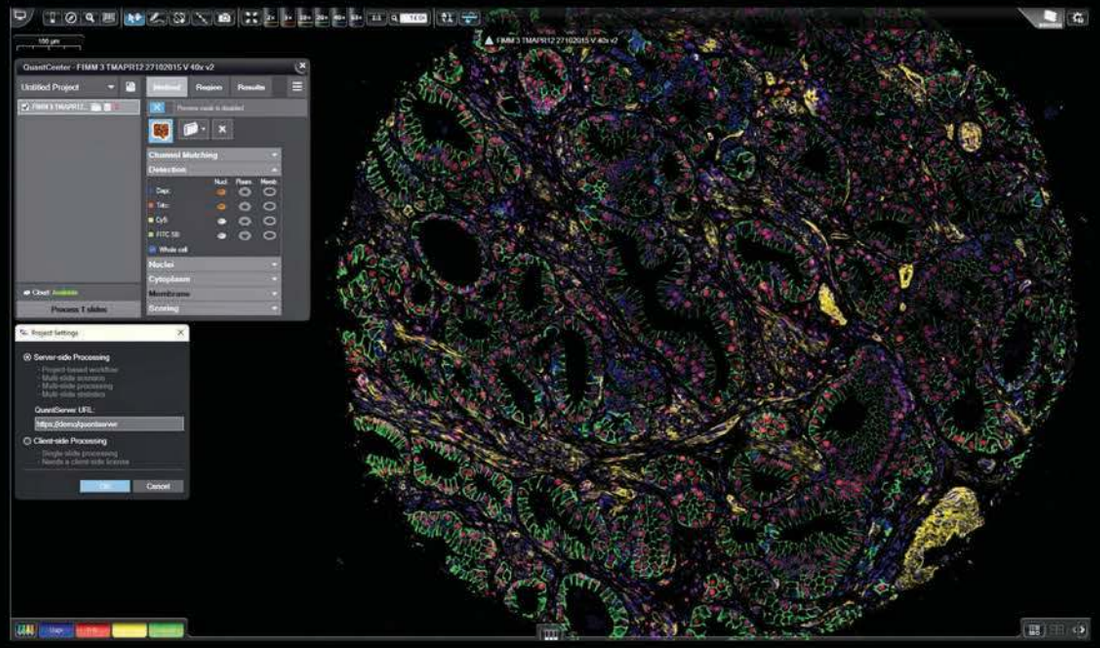
- Pathologists consulting remotely on urgent cases.
- Researchers analyzing specimens across multiple institutions.
- Educational settings, where trainees and students can interact with slides outside the lab

Key Features

- **Instant Access to digital pathology**
- **Rapid loading of high-resolution digital slides**
- **Smooth navigation and zooming for detailed cellular analysis**
- **Secure connection to pathology data servers for protected case access**
- **Seamless moving and zooming for precise exploration of tissue samples**
- **Arbitrary slide rotation for optimal viewing angles**
- **Apple-like navigation that enhances user experience and efficiency**
- **·Share digital slides for second opinions without geographic limitations.**
- **·Engage in telepathology and virtual tumor boards for multidisciplinary collaboration.**
- **Support training and education by providing students with on-demand access to pathology slides.**



QuantServer



QuantServer is a high-performance image analysis server designed for multi-slide digital pathology. Unlike traditional client-based software, it offloads processing to a dedicated server, enabling simultaneous multi-slide analysis, batch processing, and efficient result storage. It supports multi-parallel processing for large-scale research, AI-driven pathology, and high-volume laboratories, ensuring faster, more reliable, and reproducible workflows

Its distributed image processing server designed for high-throughput digital pathology enables multi-slide analysis, batch processing, and image normalization, integrating seamlessly with QuantCenter and SlideManager for scalable, parallel workflows in large-scale research and AI-driven pathology applications.

Key Features

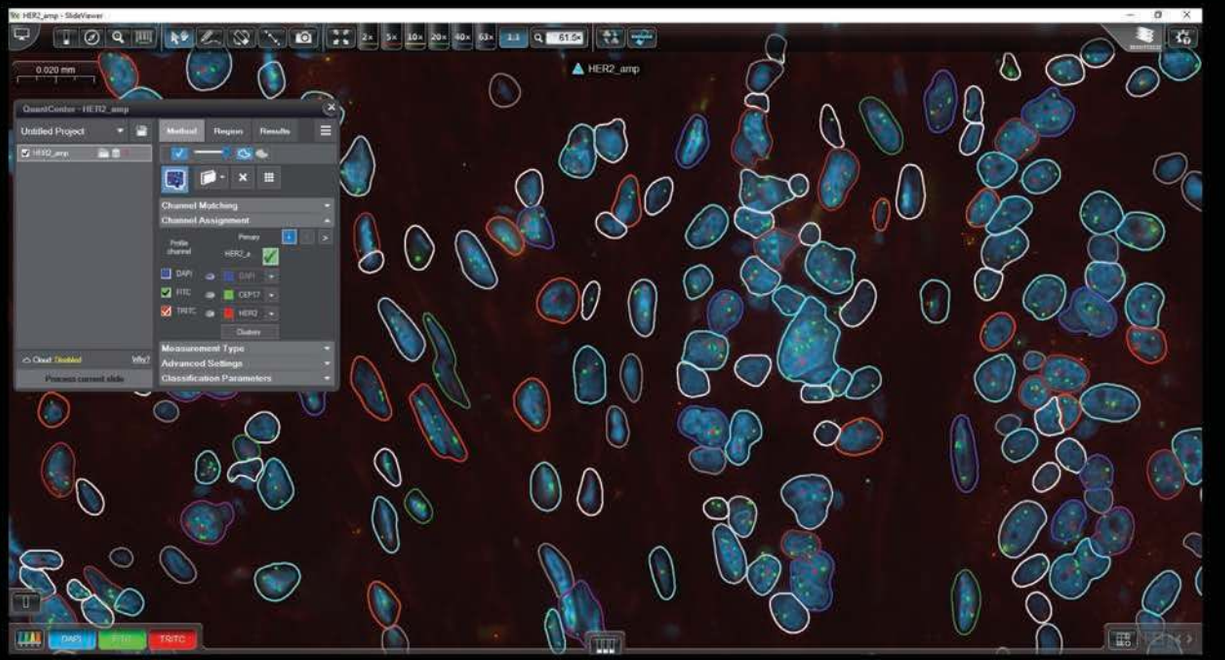
- **Processes thousands of slides simultaneously, reducing client-side computing requirements.**
- **Supports multi-user environments, enabling parallel workflows without system slowdowns.**
- **Performs batch processing to analyze multiple slides efficiently.**
- **Integrated with SlideManager, enabling web-based project and slide management.**
- **Color normalization ensures consistent staining appearance across different sample preparations.**
- **Supports H&E slide normalization to correct staining variations for more reliable quantification.**
- **Allows users to create custom workflows for image processing.**
- **Saves and reloads user profiles for standardized, repeatable analysis workflows.**
- **Stores image analysis results centrally, making it easier to retrieve and compare datasets.**
- **Accessible through SlideManager's web interface, eliminating the need for client-side software installations.**
- **Supports remote project execution and result management from any connected device.**
- **Optimized for large-scale AI-driven pathology research.**
- **Can be used to train and execute deep-learning models.**

QuantCenter

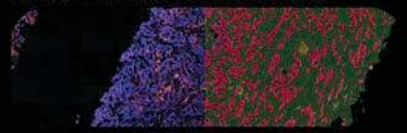
The Most Versatile Image Analysis Software for Digital Pathology. QuantCenter offers modular, high-precision image analysis for whole-slide quantification in histopathology and molecular pathology. Unlike most quantification software, it is more flexible than one-size-fits-all solutions with customizable modules tailored to specific analysis needs, features customizable AI-powered segmentation and deep-learning capabilities delivering superior accuracy, multi-slide batch processing, and integrated visualization tools which provide comprehensive insights without requiring external software. All these offers maximum flexibility for researchers and its scalable architecture make it the ultimate solution for quantitative pathology research.

QuantCenter is an image analysis platform for whole-slide quantification in histopathology and molecular pathology. With customizable algorithms and linkable modules. Integrated with SlideManager, it enables efficient execution of analysis on research study samples, driving precise reproducible results.

It offers a range of combinable modules including:



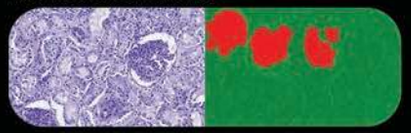
HistoQuant
Her2-Cep17 DNA stained breast tissue classification



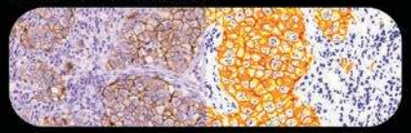
PatternQuant
Elongated villous structure with multi-layered nuclei analysis



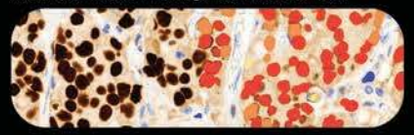
PatternQuantPlus
Analysis of a low-contrast sample



DensitoQuant
Her2 stained breast tissue analysis



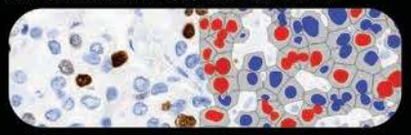
NuclearQuant
Nuclei quantification in estrogen stained breast tissue



MembraneQuant
Cell membrane analysis in Her2 stained breast tissue



CellQuant
Ki67 nuclei classification by cytoplasmic environment



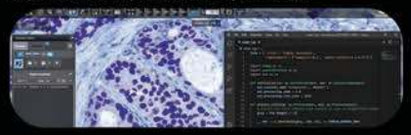
FISHQuant
Her2-Cep17 stained FISH sample analysis



CISHQuant
CISH sample analysis



SCRIPTQUANT
Nuclei detection by user-defined Python code



Key Features

- Unlike traditional image analysis software, QuantCenter offers a modular framework, allowing users to select and combine specialized tools for precise whole-slide quantification.
- Customizable AI-driven analysis enables adaptation to specific research needs, providing greater flexibility than static competitor solutions.
- Advanced segmentation and classification tools, including HistoQuant, PatternQuant, and PatternQuant Plus, ensure accurate stain identification and deep-learning-driven tissue recognition.
- Targeted quantification with NuclearQuant, MembraneQuant, CellQuant, DensitoQuant, FISHQuant, and CISHQuant, covering all major staining techniques.
- Custom script integration via ScriptQuant, offering unmatched flexibility in digital pathology.
- BatchAnalysis-ProcessingQueue allows multiple digital slides to be processed simultaneously, increasing efficiency and throughput.
- As QuantCenter's server-side analysis, QuantServer ensures high-speed processing and centralized data storage, optimizing workflows for large-scale research studies
- Integrated Data Visualization (DVT) tools, including scatterplots, pie charts, histograms, and tables, enable intuitive and real-time result interpretation.
- Quantitative analysis results can be easily exported for reporting and collaboration
- Fully compatible with SlideManager, ensuring smooth execution of analysis on study samples without requiring additional manual steps.
- Supports a wide range of whole-slide image formats, making it a universal solution for diverse pathology laboratories
- Suitable for small-scale research and high-throughput clinical studies, with adaptable computational power and server-side processing.
- Enables standardized, reproducible image quantification, essential for clinical diagnostics and drug development

Applications and DOI References for Quantitative Modules

CANCER RESEARCH & PATHOLOGY

CD68-positive macrophages quantification in hypertensive patients by ***CellQuant***, Positive signal analysis in rabbit liver by ***PatternQuant***
10.1016/j.advms.2023.08.001 2023

Immunopositive tissue area ratio analysis by ***PatternQuant***
10.1111/his.14846 2023

Immunoreactive cell counting on IHC p53 samples for myleoid disorder testing by ***NuclearQuant***
10.1016/j.acpath.2022.100064 2023

SIGLEC15 expression level quantification in thyroid carcinoma by ***DensitoQuant***
10.3389/fimmu.2022.975787 2022

Ki-67 proliferation index quantification by ***NuclearQuant***
10.1038/s41598-022-06555-3 2022

Staining density quantification of Peli1 in intrahepatic cholangiocarcinoma by ***DensitoQuant***
10.1158/2326-6066.CIR-21-0419 2022

Micronucleus quantification in colorectal cancer cell lines HT-29 and SW480 for revealing carcinogenesis pathways by ***CellQuant***
10.3390/cancers14071820 2022

Epithelial, stromal and necrotic region extraction and IHC quantification by ***PatternQuant***, ***DensitoQuant*** and ***NuclearQuant***
10.1186/s13058-022-01501-7 2022

IHC staining quantification (NRP1, CD31) in claudin-low breast cancer progression by ***DensitoQuant***
10.1186/s13058-022-01501-7 2022

Macrophage infiltration level quantification and CCL2 expression in small cell lung cancer by ***DensitoQuant***
10.1016/j.canlet.2020.11.034 2021

Quantifing mRNA ISH signal positivity for Rag1/2, Dntt/TDT alongside with CD3+, CD8+, or CD4+ T cells in both mouse models and human tissue samples of invasive breast cancer by ***HistoQuant***
10.1158/2326-6066.CIR-20-0645 2021

PD-L1 and B7-H3 expression level quantification in a multi-racial cohort of patients with colorectal cancer by ***DensitoQuant***
10.1016/j.clcc.2021.02.002 2021

INFECTIOUS DISEASE AND IMMUNE RESPONSE

Staining density quantification of HHLA2 in intrahepatic cholangiocarcinoma tumor immune microenvironment by ***DensitoQuant***
10.1186/s12957-023-02970-6 2024

ERα and ERβ expression quantification in liver samples by NuclearQuant
10.1007/s00204-023-03502-7 2023

Inflammatory cell infiltration quantification (CD4+, CD8+ T cells, CD20+ B cells, CD68+ macrophages) in patients with renal tubulointerstitial injury in IgA nephropathy by ***CellQuant***
10.1002/iid3.686 2022

HBME-1 and Gal-3 postive cell quantification in thyroid carcinoma diagnosis by ***CellQuant***
10.3390/endocrines3020021 2022

Quantifying STT3A expression in lung tissues of SARS-CoV-2 infected mice by ***HistoQuant***
10.1016/j.ebiom.2021.103712 2021

Glomerular staining area and total glomerular tuft area measurements in PAS-stained section of obesity-related renal injury in high-fat diet fed mice model by ***HistoQuant***
10.1007/s00125-021-05473-9 2021

THERAPEUTIC RESEARCH & DRUG DEVELOPMENT

Hypoxia biomarker quantification (Glut-1, Glut-3, VEGF, HIF-1α, and STAT3) in oral squamous cell carcinoma by ***CellQuant***
10.1111/jop.13427 2023

Lymphocyte counting and population density calculation on CD56 stained samples by ***HistoQuant*** and ***NuclearQuant***
10.1016/j.celrep.2023.113641 *2023*

Tubule dilation measure and renal cell nucleus quantification in H&E stained rat samples by ***HistoQuant*** and ***NuclearQuant***
10.1016/j.jacbts.2023.03.003 2023

Tumor microenvironment analysis on CD16a stained samples by ***NuclearQuant*** and ***DensitoQuant***
10.3390/jpm13121720 2023

Dermal macrophage identification on CD68 stained skin samples by ***PatternQuant*** and ***CellQuant***
10.1016/j.advms.2023.08.001 2023

CD3, CD8, and CD20 positive lymphocyte infiltrating quantification in colorectal cancer mouse models by ***DensitoQuant***
10.1016/j.biopha.2023.114976 2023

NEUROSCIENCES

Interaction quantification of cancer cells and neurons to treat glioblastoma by ***CellQuant***
10.1038/s43018-023-00626-8 2023

Ki67, αSMA, and F4/80 marker quantification in hepatic fibrosis by ***HistoQuant***
10.1016/j.celrep.2023.112059 2023

Quantification of BrdU, DCX, NeuN, Iba1, GFAP, and Aβ plaques, to evaluate neurogenesis, neuroinflammation, and AD pathology in APP/PS1 transgenic mouse model by ***HistoQuant***
10.3390/ijms231810364 2022

CELLULAR & MOLECULAR BIOLOGY

Diffuce glioma analysis on IHC stained samples by ***NuclearQuant***
10.53846/goediss-10033 2023

Neutrophil accumulation quantification, bronchoalveolar lavage fluid cell count, and cytokine concentration in acute respiratory distress syndrome by ***HistoQuant***
10.3390/cells12232729 2023

CD4, CD8, and CD45 immune marker quantification in ovarian cancer by ***HistoQuant***
10.3390/ijms241813684 2023

Quantification of peroxisome abundance change by ***PatternQuant*** and ***CellQuant***
10.1177/09603271231183885 2023

BrdU quantification incorporation in hepatocellular carcinoma for examining the role of SPOCK1 by ***CellQuant***
10.3389/fonc.2022.819883 2022

CD45/CD3/CD4/CD8 positive immune cell quantification in molecular profiling of the intestinal mucosa and gut-associated lymphoid tissue by ***CellQuant***
10.1038/s41598-021-90761-y 2021

GENETICS & GENOMICS

mTomato fluorescence quantification in rhesus monkey airway epithelial cells for CFTR R553X mutation using ***CellQuant***
10.1038/s41467-023-43904-w 2023

IHC staining intensity quantification of CHST8, F4/80, mannose receptor (MR), and granzyme B (Gzmb) in syngeneic mouse tumors by ***DensitoQuant***
10.1016/j.celrep.2023.113641 *2024*

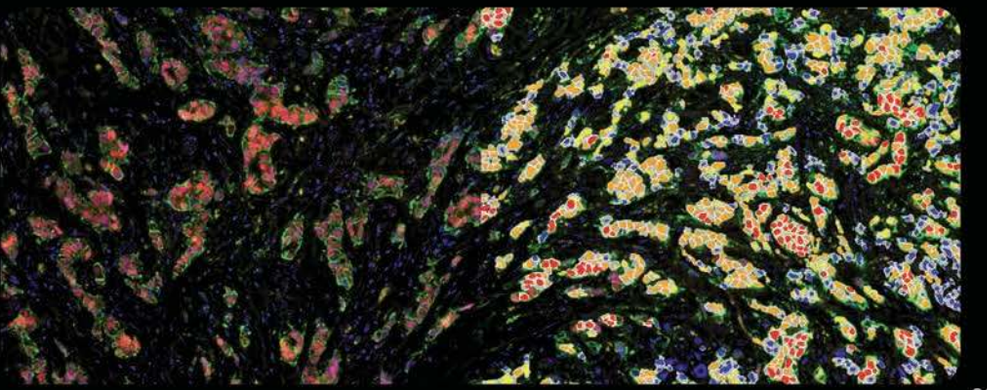
Colocalization of GFAP, TUBB3, and GSA-B4 with eGFP and hIL-10 in the injured rat spinal cord by ***HistoQuant***
10.34133/research.0056 2023

Nuclei and signal counting on TMA FISH samples by ***FISHQuant***
10.1186/s13000-021-01103-5 2021

Four-color PTEN deletion counting in prostate cancer by ***FISHQuant***
10.1158/1538-7445.AM2014-2458 2014

AR amplification score determination on FISH samples by ***FISHQuant***
10.18632/oncotarget.16169 2017

Estrogen-Her2 stained breast tissue analysis by CellQuant



SlideMaster

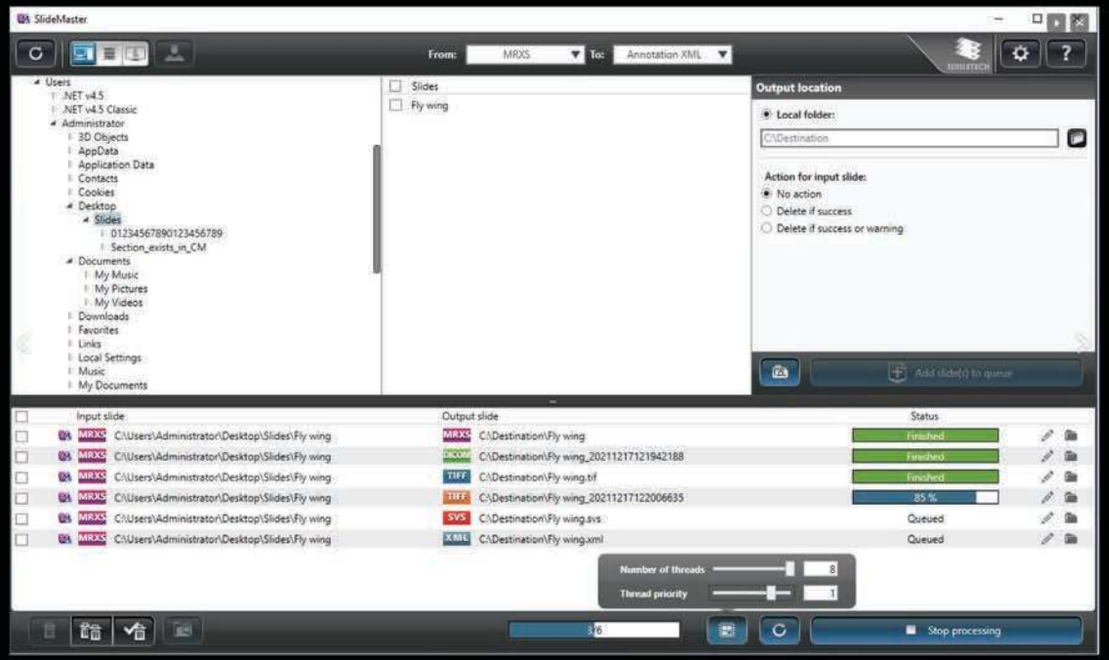
Digital Slide Conversion for Interoperability

An advanced digital slide conversion tool designed to facilitate interoperability between different whole-slide imaging formats. It enables seamless integration between 3DHISTECH's proprietary MRXS format and third-party slide formats, ensuring compatibility across different digital pathology platforms. By automating format conversions, directory monitoring and annotation handling, this ensures that laboratories and institutions using multiple scanning platforms can efficiently manage – exchange, store, retrieve, and analyze slides without compatibility concerns

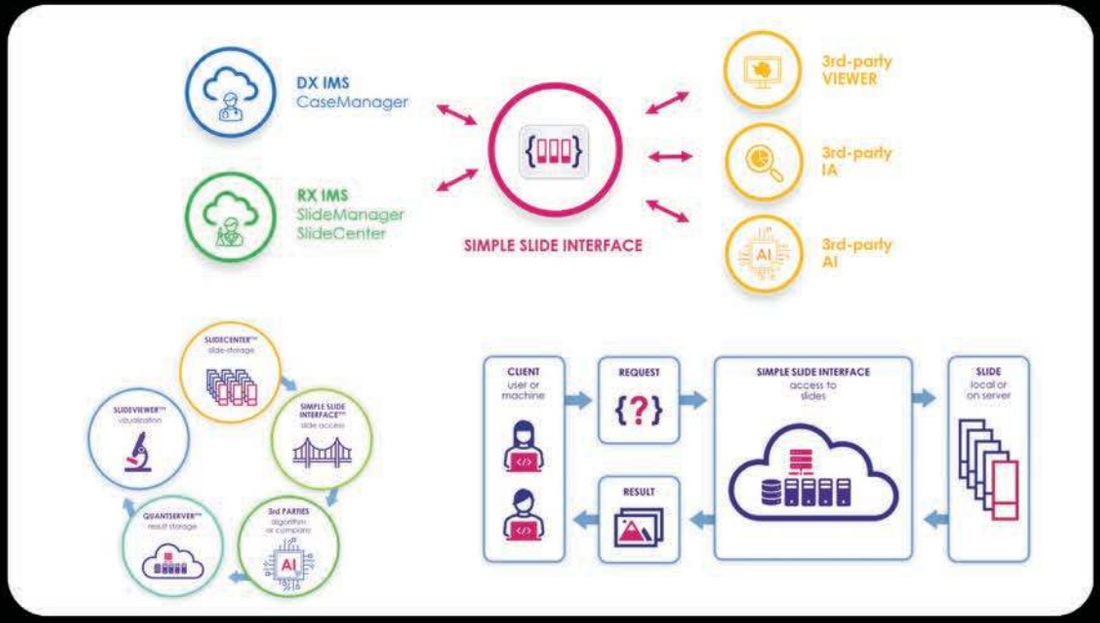
SlideMaster plays a critical role in multi-vendor compatibility by bridging the gap between different whole-slide imaging systems. Whether integrating 3DHISTECH scanners into an existing multi-platform laboratory or enabling cross-institutional collaborations, SlideMaster ensures format compatibility without workflow disruptions.

Key Features

- **Interoperability Across Platforms – Converts slides between MRXS and widely used formats such as Leica/Aperio SVS, Roche TIFF, WS DICOM, and more.**
- **Automated Workflow Integration – Monitors specified directories for newly scanned slides, automatically uploads them to SlideCenter, and performs conversion with minimal user intervention.**
- **Annotation Support – Exports annotations from SlideViewer (formerly CaseViewer) to supported formats, ensuring critical diagnostic information remains intact.**
- **Efficient CPU Core Management – Allows users to control the number and priority of CPU cores used for conversions, optimizing system performance.**
- **Bi-Directional Slide Exchange – Supports both uploading and downloading of slides to/from SlideCenter, ensuring smooth data transfer across platforms.**



SimpleSlideInterface



SimpleSlideInterface – A High Level Interface for Digital Slide Access

SimpleSlideInterface is a powerful software interface designed to provide fast, efficient, and structured access to digital pathology slides, metadata, and annotations.

As a versatile bridge between 3DHISTECH solutions and third-party applications, it enables researchers, developers, and pathology IT teams to seamlessly integrate digital slide data into AI-powered analysis, research workflows, and multi-user collaborations.

By streamlining digital slide retrieval, management, and integration, SimpleSlideInterface enhances productivity across biomedical research, AI-driven pathology, and collaborative diagnostic environments.

Whether for automated image analysis, high-throughput research, or large-scale data sharing, it is the ideal solution for modern digital pathology workflows.

Key Features

- **Efficient Slide Access – Retrieve, open, and query slides from local storage, SlideCenter, and SlideStorageDX**
- **Slide Metadata Retrieval – Extract essential properties, including dimensions, resolution, channels, and scan maps**
- **Advanced Tile and Image Handling – Read specific tile regions based on coordinates, magnification, and focus indices**
- **Annotation Management – Supports GeoJSON-based annotation reading, insertion, and deletion, along with TMA marker handling**
- **Original Field of View Access – Retrieve raw, uncompensated camera field-of-view (FOV)**
- **Integrated Search and Filtering – Perform folder and slide searches across local and remote repositories**

TMA molmed

The TMA molmed is a fully automated, high-throughput system that seamlessly integrates tissue microarray (TMA) creation with laser microdissection-like molecular sampling, making it a powerful tool for molecular pathology, translational research, and biobanking. Its modular architecture accommodates six core sizes as small as 0.2 mm, offering unmatched flexibility for laboratories handling both standard and mega blocks.

With mega block compatibility, this dual-functionality instrument enables high-volume sample processing, supporting up to six standard donor blocks or two mega blocks with 30 PCR tubes, as well as configurations for three standard donor blocks or one mega block with a wellplate. Its open modular architecture supports PCR cassettes, microtiter plates, and customized tissue cassettes, ensuring seamless integration into molecular workflows for DNA, RNA, and protein extraction, including PCR, dPCR, and sequencing applications.

Engineered for efficiency and precision, the TMA molmed transfers 200-250 cores per hour and supports high-density TMA block creation, accommodating up to 558 cores per recipient block. Automated block height measurement ensures proper core alignment, while digital integration with MRXS digital slides and JPEG overlays enhances accuracy in tissue selection. A comprehensive data management system streamlines workflows with barcode tracking, automated project data saving, and multi-format export options.

Combining modular adaptability with high-speed automation, the TMA molmed sets new standards in TMA preparation and molecular research. Its customizable recipient block designs, six configurable core sizes, and automated molecular sampling to PCR tubes or wellplates ensure unparalleled precision, efficiency, and contamination-free sample handling for state-of-the-art laboratory applications.

Key Features

- Six configurable core sizes (as small as 0.2 mm) for precise sample extraction
- Mega block (macroblock) compatibility allows high-volume processing:
- Up to 6 standard donor blocks or 2 mega blocks with 30 PCR tubes
- Configurations for 3 standard donor blocks or 1 mega block with a wellplate
- Open modular design supports PCR cassettes, microtiter plates, and customized tissue cassettes
- Transfers 200-250 cores per hour.
- Accommodates up to 558 cores per recipient block, supporting high-density TMAs
- Automated block height measurement ensures precise alignment of tissue cores
- MRXS digital slide and JPEG overlay compatibility
- Barcode tracking, automated donor block imaging, and data saving enhance workflow efficiency
- Direct molecular sample extraction to PCR tubes or wellplates, eliminating cross-contamination risks
- Supports DNA, RNA, and protein extraction, enabling downstream applications like PCR, dPCR, and sequencing



TMA Master II



The TMA Master II is the most compact fully automated tissue microarrayer on the market, offering advanced functionality in a compact design that fits any laboratory bench. As an evolution of the TMA Master, it incorporates several hardware and software enhancements inspired by 3DHISTECH's flagship TMA Grand Master, delivering improved precision, efficiency, and reliability.

Designed for pathology laboratories, biobanks, pharmaceutical research, and molecular diagnostics, the TMA Master II is a computer-controlled system that creates high-quality tissue microarray (TMA) blocks with 0.6, 1, 1.5, and 2 mm diameter cores. It can generate up to four identical TMA blocks, ensuring reproducibility for large-scale studies. Additionally, it includes an optional PCR cassette with four PCR tube capacity, allowing tissue sample extraction for molecular pathology applications.

Unlike conventional systems, the TMA Master II ensures superior precision and efficiency through features such as automated tool size and block height measurements, a high-resolution donor block camera, and digital slide overlay technology for precise tissue selection. With upgraded motors and tools from the TMA Grand Master, it operates at speeds of up to 250 cores per hour, making it one of the most efficient systems in its category. Controlled by the latest TMA Control software, this system streamlines TMA block design, data management, and digital slide integration, ensuring accurate sample selection and documentation.

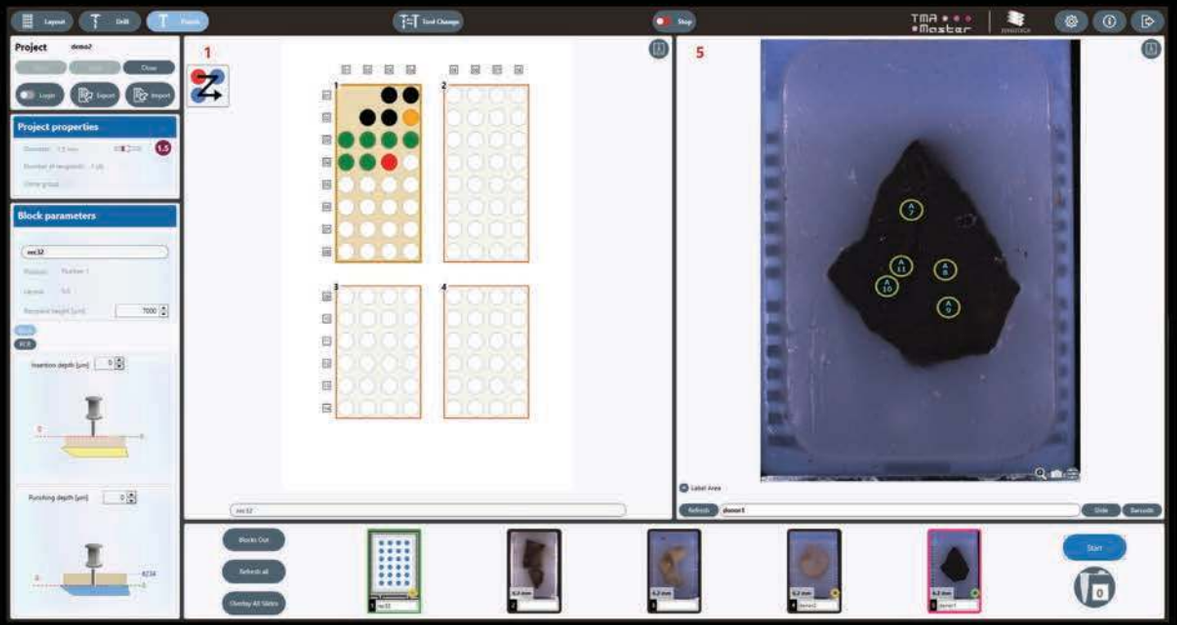
With its space-saving design, automation-driven precision, and optional molecular pathology capabilities, the TMA Master II is a powerful and cost-effective solution for laboratories seeking high-quality, reproducible TMA preparation in a compact system

Key Features

- **Requires minimal bench space**
- **Provides high-throughput tissue microarray (TMA) block preparation without compromising laboratory space efficiency**
- Reduces manual workload, minimizes human error
- Many competing systems require manual intervention, while the TMA Master II fully automates TMA block creation for consistent, high-quality output.
- Ensures consistent core dimensions and optimal block quality without manual calibration.
- Eliminates variability, improving the reproducibility of TMAs for high-precision research.
- Provides greater durability, stability, and accuracy during sample extraction and core placement.
- Utilizes proven high-performance motor technology from the flagship TMA Grand Master for superior mechanical reliability.
- Supports tissue sample extraction for molecular analysis, expanding research applications.
- Many TMA systems lack integrated options for molecular pathology, making TMA Master II more versatile.

TMA Control

Streamlines TMA block design, aiding block layout designers. It imports donor block data from diverse spreadsheet formats. This tool offers digital slide overlay, enabling precise sample selection by superimposing annotations and JPEGs onto donor block images. Enhanced data includes automatic saving, reloading, and language localization for project data.



INCLUSIONS:

For TMA molmed
- Control PC
- PCR
- Microtiter Plate



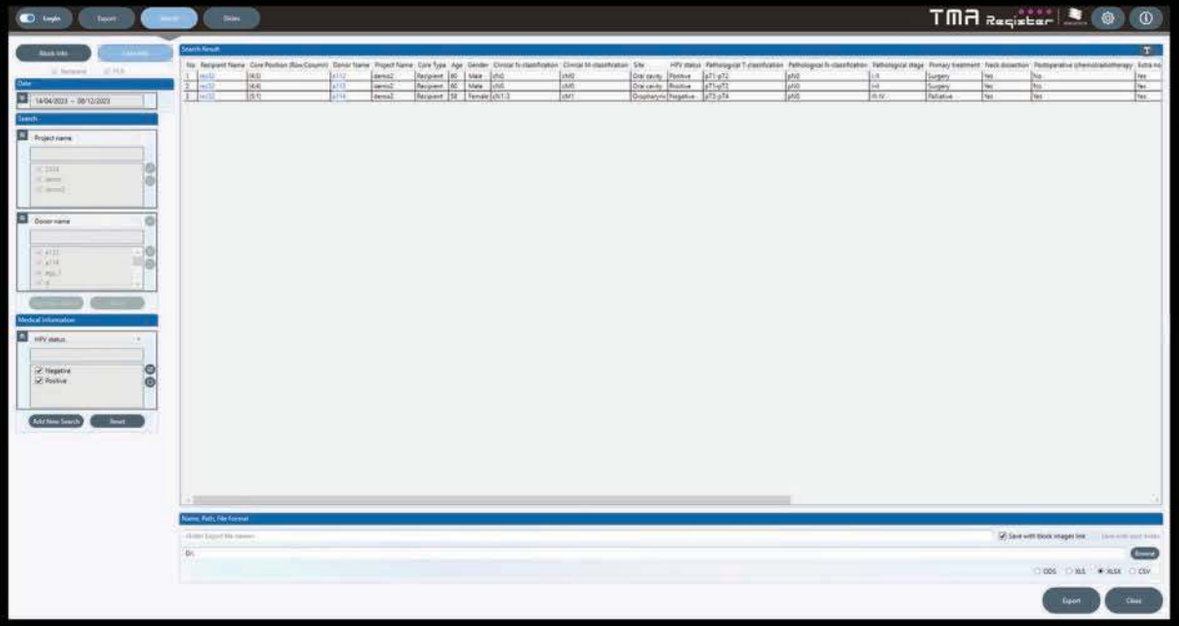
For TMA Master - PCR
- Control PC
- PCR



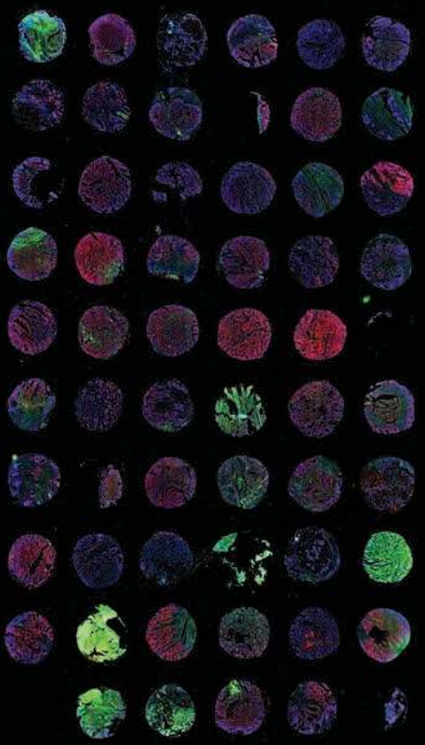
For TMA Master
- Control PC



TMA Register



Manages TMA data and slide design. It exports data in diverse spreadsheet formats and offers advanced search for TMA or tissue sample-related data. It also registers TMA slides, plain block sectioning, and staining protocols. Verifies scanned slides and decodes TMA slides planned in the register (SlideCenter® connection is needed for this feature).



Enterpise-Level Digital Pathology Centers & Academic Medical Institutions

In enterprise-level diagnostic digital pathology centers and the academic medical institutions for research, the seamless operation of high-performance imaging systems is essential for efficiency and scalability. Whole slide imaging (WSI) scanners, tissue microarray (TMA) systems, and micro-CT instruments form the backbone of digital pathology, because they are fundamental to the digitization, imaging, and structured analysis of pathology samples at scale.

1. Whole Slide Imaging (WSI) Scanners – These are the core instruments that convert glass slides into high-resolution digital images, enabling remote diagnostics, AI-assisted analysis, and streamlined pathology workflows. Without WSI, digital pathology wouldn't exist in its current form.

2. Tissue Microarray (TMA) Systems – TMAs allow for the efficient analysis of multiple tissue samples in a single slide, making large-scale research, biomarker studies, and high-throughput pathology feasible. They are widely used in translational research and biomarker validation.

3. Micro-CT Instruments – In digital pathology, 3D imaging of tissue samples provides additional structural insights that complement traditional 2D whole slide imaging, particularly in cancer research, bone pathology and other applications.

4. Control PCs and Software – These systems ensure the operation, integration, and compatibility of these instruments within existing laboratory infrastructures, making them practical for enterprise-scale deployment.

These instruments are powered by dedicated control PCs and specialized control software, ensuring seamless operation, workflow coordination, and compatibility with existing third-party platforms and large-scale institutional systems. Rather than standalone solutions, these technologies are designed for integration within established digital pathology infrastructures, supporting streamlined imaging, data management, and accessibility across research and clinical environments. By providing instruments ready for integration in an existing ecosystem, this enables institutions to optimize digital pathology workflows and scale their operations with confidence.

TMA GRAND Master

The Ultimate High-Throughput TMA

The TMA Grand Master is the industry-leading automated tissue microarrayer in the market, designed to streamline high-throughput tissue microarray (TMA) creation with unmatched precision, speed, and reliability. Engineered for research, biomarker studies, and drug development, it automates the selection, coring, and placement of tissue samples, significantly reducing manual workload while ensuring exceptional reproducibility. With its high-capacity design, the TMA Grand Master can process up to 72 recipient blocks and 600 donor blocks in a single run, far surpassing traditional methods and competing systems.
Its intelligent software allows for precise core selection, automated tissue recognition, and real-time visualization, minimizing human error and maximizing efficiency. The system's high-speed robotic arm ensures accurate and consistent placement, while its barcode-based tracking enhances sample traceability. Designed for laboratories that demand both scalability and reliability, the TMA Grand Master sets the standard in automated TMA production – Featuring fully automated walkaway operation, 72 blocks capacity, 4 core diameters, ability to create clone blocks (identical TMAs), sample extraction feature for molecular analysis in PCR tubes (6 PCR casette, 10 PCR tube in each).

Key Features

- **Processes 72 blocks simultaneously (60 donor, 12 recipient)**
- **High-speed operation – Processes up to 280 cores per hour**
- **Four core diameters: 0.6mm, 1mm, 1.5mm, and 2 mm**
- **High-density arraying: Up to 558 cores per block (0.6mm cores)**
- **Custom recipient block design for tailored applications**
- **Digital slide overlay for precise tissue core selection**
- **Automatic block height measurement for perfect alignment**
- **Integrated barcode scanning (1D and 2D) for efficient tracking**
- **Automatic donor block and label image saving for documentation**
- **Project data automatically saved to database for seamless analysis**
- **PCR extraction function for downstream molecular pathology**
- **Accommodates 6 PCR cassettes (each holding 10 PCR tubes)**
- **FFPE tissue samples ready for DNA extraction and PCR analysis**
- **Cleaning block integration to prevent cross-contamination**
- **Imports clinical data and integrates with research workflows**
- **Exports TMA data in multiple formats (ODS, XLS, XLSX, CSV, XML)**
- **Compatible with digital pathology workflows, including MRXS and JPEG image formats**
- **Automated digital slide alignment ensures precise core placement**
- **Comprehensive project tracking and TMA data management**



Inclusions:

For TMA Grand Master - PCR

- **Control PC**
- **PCR**

For TMA Grand Master

- **Control PC**

Pannoramic Powerhouses for Large-scale Digital Pathology

DIAGNOSTIC	Pannoramic 1000 DX Digital Scanner	Pannoramic 480 DX Digital Scanner	Pannoramic 250 Flash III DX Digital Scanner
Capacity	up to 1200 slides	up to 480 slides	up to 300 slides
Speed	80 slides / hour	80 slides / hour	up to 60 slides / hour
Resolution (µm/pixel)	0.2 0.1 / 0.18 0.09 / 0.24 0.12	0.2 0.1 / 0.18 0.09 / 0.24 0.12	0.2 0.1 / 0.18 0.09 / 0.24 0.12
Automated Objective Changer	Supports up to 3 objectives	Supports up to 3 objectives	-
Obejective Options	20x (NA 0.8); 40x (NA 0.95)	20x (NA 0.8); 40x (NA 0.95)	20x (NA 0.8); 40x (NA 0.95)
Image Output	MRXS / DICOM	MRXS / DICOM	MRXS / DICOM
Supported Racks	3DH / Sakura / Leica	3DH / Sakura / Leica	3DH
Brightfield Scanning	Yes	Yes	Yes
Flash Scanning	Yes	Yes	Yes
Polarization	-	Yes	-
Doublewidth Slide Compatible	Yes	Yes	-
Automated Immersion System	with Research Upgrade, not IVDR	with Research Upgrade, not IVDR	-
IVDR Certification	Yes	Yes	Yes
Dimensions in cm (w x d x h)	154 x 90 x 100	120 x 90 x 100	67 x 74 x 58
Weight	270 kg	240 kg	46 kg

RESEARCH	Pannoramic 1000 Digital Scanner	Pannoramic 480 Digital Scanner	Pannoramic 250 Flash III Digital Scanner
Capacity	up to 1200 slides	up to 480 slides	up to 300 slides
Speed	80 slides / hour	80 slides / hour	up to 60 slides / hour
Resolution (µm/pixel)	0.18 0.09 / 0.24 0.12	0.18 0.09 / 0.24 0.12	BF: 0.24 /0.12 FL: 0.33/0.16 to 0.17/0.09
Automated Objective Changer	Supports up to 3 objectives	Supports up to 3 objectives	Supports up to 2 objectives
Obejective Options	20x (NA 0.8); 40x (NA 0.95); w40x (NA 1.2)	10x (NA 0.45); 20x (NA 0.8); 40x (NA 0.95); w40x (NA 1.2)	10x (NA 0.45); 20x (NA 0.8); 40x (NA 0.95)
Image Output	MRXS / DICOM	MRXS / DICOM	MRXS / DICOM
Supported Racks	3DH / Sakura / Leica	3DH / Sakura / Leica	3DH
Brightfield Scanning	Yes	Yes	Yes
Fluorescence Scanning	-	-	Yes
Flash Scanning	Yes	Yes	Yes
Polarization	-	Yes	-
Doublewidth Slide Compatible	Yes	Yes	-
Automated Immersion System	Yes (Supplementary)	Yes (Supplementary)	-
Dimensions in cm (w x d x h)	154 x 90 x 100	120 x 90 x 100	67 x 74 x 58
Weight	270 kg	240 kg	46 kg


Pannoramic 1000


Pannoramic 480


Pannoramic 250 Flash III

Available Options for Large Scale Diagnostic Institutions

- **OPTION 1 - SCANNER ONLY**
  DX Scanner → DICOM slides → 3rd party IMS / DICOM PACS → 3rd Party Viewer
- **OPTION 2 - SCANNER + CASEMANAGER DX + LIS INTEGRATION**
  DX Scanner → MRXS Slides → CaseManager DX → ClinicalViewer (+ Diagnostic Applications)
  → MRXS Slides → CaseManager DX ↔ 3rd Party LIS
  → DICOM Slides → 3rd Party DICOM PACS (Archive) *Optional
- **OPTION 3 - SCANNER + CASEMANAGER DX + TRACK&SIGN + HIS INTEGRATION**
  DX Scanner → MRXS Slides → CASEMANAGER DX → ClinicalViewer (+Diagnostic Applications)
  ← CaseManager DX + Track&Sign ← 3rd Party HIS
  → DICOM Slides → 3rd Party DICOM PACS (Archive) *Optional

Available Options for Large Scale Research Institutions

- **OPTION 1 - SCANNER ONLY**
  RX Scanner → DICOM slides → 3rd party IMS / DICOM PACS → 3rd Party Viewer
- **OPTION 2 - SCANNER + SLIDECENTER**
  RX Scanner → MRXS Slides → SlideCenter → SlideViewer or WebViewer
  → DICOM Slides → 3rd Party DICOM PACS (Archive) *Optional
- **OPTION 3 - SCANNER + SLIDECENTER + LIS INTEGRATION**
  RX Scanner → MRXS Slides → SlideCenter → SlideViewer or WebViewer (+ Quants)
  → DICOM Slides → 3rd Party DICOM PACS (Archive) *Optional → SlideCenter
  → 3rd Party LIS

Our portfolio features advanced, high-performance scanners designed as standalone solutions for seamless integration into high-volume pathology institutions specializing in diagnostics or research. These systems are ideal for organizations with established digital infrastructure and dedicated IT support, ensuring smooth interoperability within existing workflows. Engineered for high-throughput, precision imaging, these scanners deliver exceptional image quality and reliability, meeting the demands of large-scale pathology operations.

Pannoramic X

The Pannoramic-X micro-CT scanner revolutionizes 3D digital pathology by enabling ultra-high-resolution imaging of whole-FFPE tissue blocks, full blocks (macroblocks), and specimens up to 15 cm without traditional sectioning. Utilizing soft X-ray technology, it delivers virtual slicing and virtual staining, preserving sample integrity while enhancing biomarker analysis, tumor morphology assessment, and cancer staging. Powered by DVREAL 3D imaging, it provides unmatched depth and detail, surpassing conventional histology. Its intuitive software suite – CT Control and 3Dview, supports digital archiving, volumetric analysis. With high-throughput capabilities, cost-effective operation, and integration into digital pathology workflows, the Pannoramic-X is an essential tool for cutting-edge research in cancer diagnostics, molecular pathology, and personalized medicine. Unlike conventional slide-based histopathology, the Pannoramic-X eliminates depth and size limitations, accommodating large tissue volumes with high-detail scanning optimized for low-contrast samples. It provides an intuitive, user-friendly workflow, integrating seamlessly into digital pathology environments. The Pannoramic-X is shaping the future of digital pathology, oncology research, and molecular diagnostics. It is a must-have for leading research institutions, pathology labs and pharmaceutical development centers aiming to push the bounderies of precision medicine and cancer diagnostics.

Key Features

- **Enables high-resolution imaging of whole-FFPE, Full Blocks (Macro Blocks), and specimens up to 30 cm**
- **3D Digital Pathology without sectioning**
- **Ultra-high resolution imaging of large specimens**
- **Virtual slicing and staining with DVREAL Technology**
- **Enhanced Tumor Morphology & Biomarker Analysis**
- **High-volume, High-throughput scanning**
- **Seamless digital pathology integration**
- **Cost-effective & easy to operate**



INCLUSIONS:

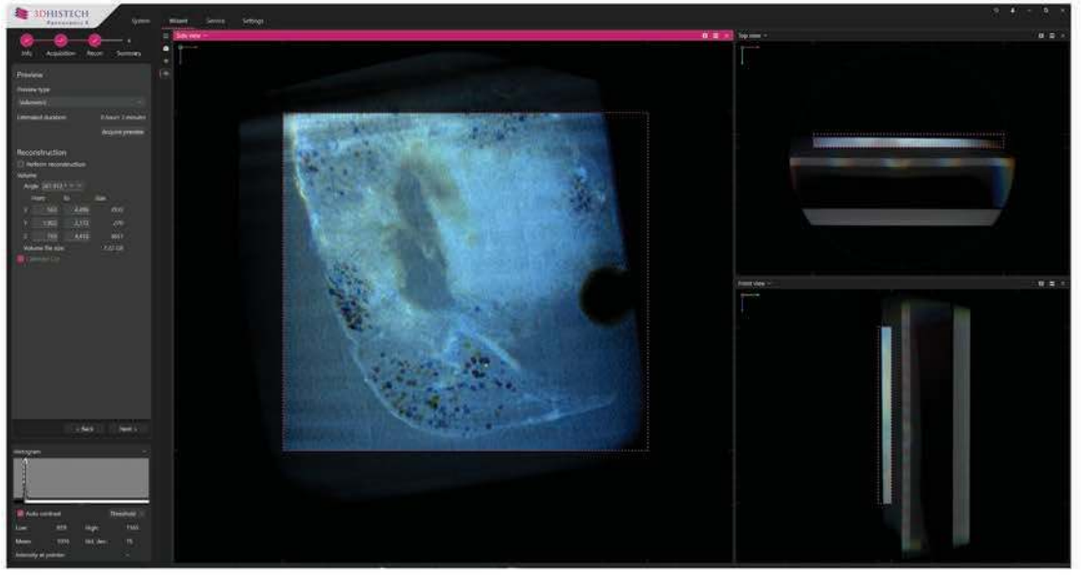
For Data Acquisition

- Pannoramic-X
- 4K Monitor
- Control PC - (built-in)
- Power cord
- Keyboard / Mouse

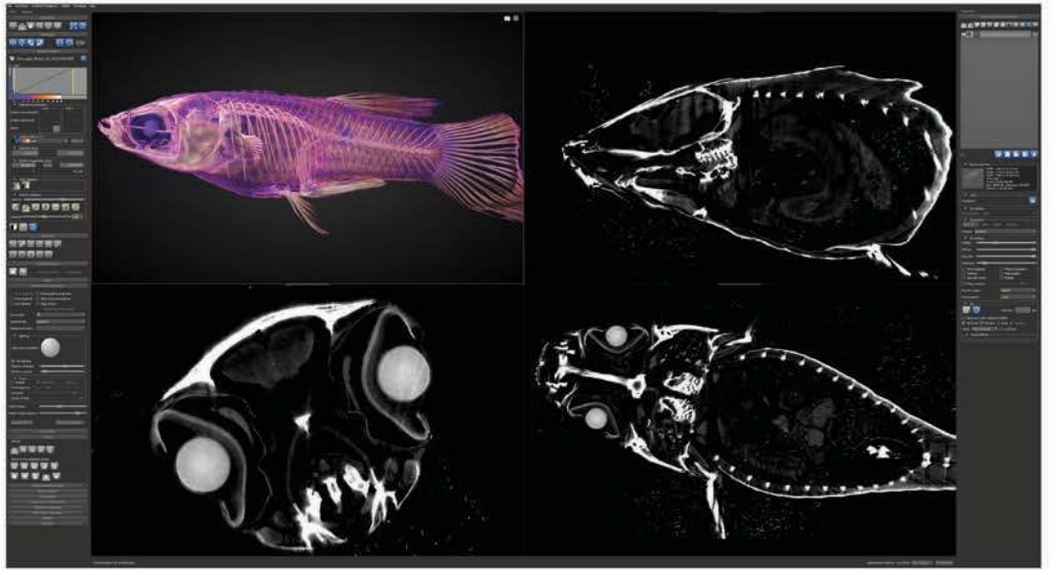
For The Reconstruction Workstation

- 4K Monitor
- Reconstruction PC
- Keyboard / Mouse

CT Control



This advanced software offers precise control and monitoring of the Pannoramic-X



Guppy (Poecilia reticulata) - Digitally scanned, virtually sectioned and stain with DVREAL Technology

DEVELOPED AND PRODUCED BY

3DHISTECH

V5

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AWARDS

2020	GHP Life Sciences Award
2019	Hungarian Innovation Grand Prize (2003)
2016	International Scanner Contest Award (2012, 2010)
2013	Exporter of The Year Award
2012	Ányos Jedlik Award
2011	European Inventor Award
2010	First European Scanner Contest Award
2006	Dénes Gábor Award

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