Motic®

MORE THAN MICROSCOPY

Motic VM Digital Slide System And Application Software

Pathology - Pathological Morphology - Teleconferencing - Research - Teaching And Consultation Of A Second Medical Opinion, Using The New Innovative Motic Vm Platform And Software Solutions

Motic VM

Digital Slide Scanning System And Software Applications

The Motic Vitual Microscope is a integrated and automated Image acquisition and Image processing system.

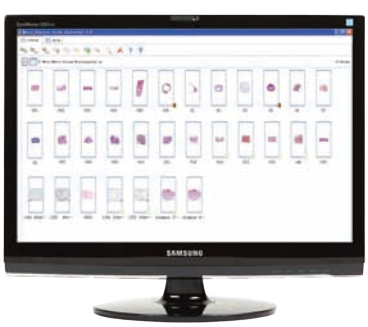
Through its motorized microscope platform and its automated Image scanning system, is digitizes traditional glass slides and transforms them into a “Whole Slide Image” (WSI).
The provided WSI contains all available image information of the slide same as using a traditional Microscope, but in a digital way for Pathologists, for research or medical education.
The WSI digital slide has all the features of traditional slide by having the advantage of not restricted from location or time.

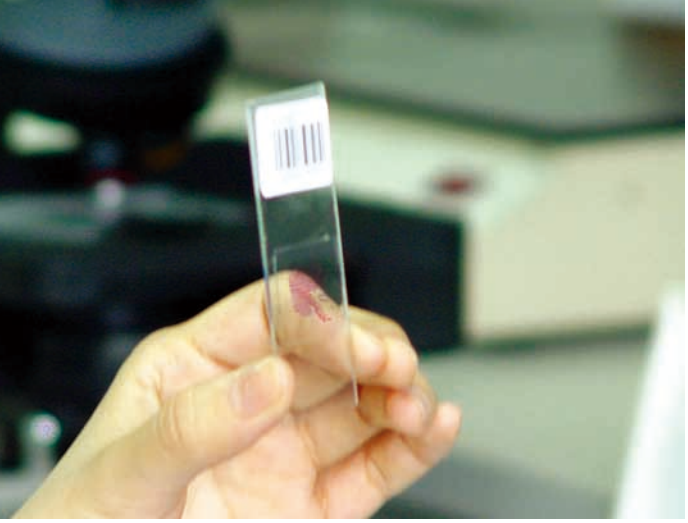
The VM digital slide scanning System provides automated image acquisition, storage and management of the digitized slide “WSI” and standardized interfaces to PACS/HIS for hospitals and research groups.

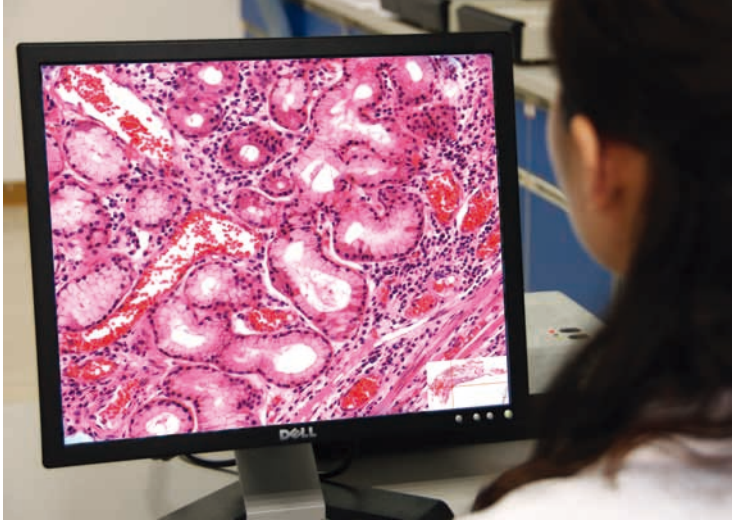
Using Motic VM shared digital pathology information offers a competitive solution for teaching, research, and medical diagnostic.
It’s remote pathology information system enables Hospitals and Pathologists in different locations to carry out academic exchanges and Internet conferences

VM Digital Slide Scanning System Transfers A Classical Glass Slide Into A Digital Slide “WSI”.

The system includes a motorized microscope, a professional camera, a System control Software, a Software to acquire and process the image and a standardized image compression with intuitive storage architecture.
It is a fully integrated system combining traditional technologies to a multifunctional automated Imaging platform







Digital Slides Scanning System Composition

1) Motorized Microscope Platform

The motorized microscope platform, it is using an electronically driven X-Y-Z Axis System and a automated magnification changer.

Observation the automate image with the Motorized VM Microscope Platform is similar observing the image with traditional microscope. Changing the magnifications is done with the fully automated system and changing the magnification on the acquired image is done the software.
This dual use feature also allows directly comparing of the image acquisition and the classical microcopy image.

2) Moticam Pro 285A Camera

The professional CCD Camera “Moticam Pro 285A” is an integrated part of Motic Virtual Microscope.
It acquires high resolution images of 10mmx10mm slides, and scans them into a digital slide “WSI” using the automated VM system.
Professional camera control systems and software, integrated design, ensures the stability of the entire system and high precision, laying a solid foundation for high quality digital slides.

Moticam Pro

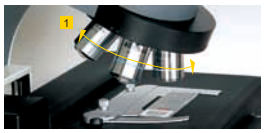
Automated-magnification Changer

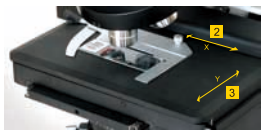
Motorized-Stage

Motorized-Focus

4 Axes Motorized Control

1 Change of magnification
2 X-Axis Stage Movement
3 Y-Axis Stage Movement
4 Z-Axis Stage Movement
- Coarse / Fine Focus





Control System	4 -Axis (X/Y/Z) control, motorized objective lens change, software controlled light source X / Y / Z Repeatability ≤ 1um
Objective	2x, 4x, 10x, 20x, 40x, 100x
Optical System	CCIS optical system, Koehler illumination, 6V/30W Halogen, 360 Degree Siedentopf tubehead 10x eyepiece with 22mm Field-Of-View
Condenser	Abbe condenser with NA 0.65
Moticam Pro 285A	2/3" CCD, resolution:1360X1024, 6.45umX6.45um/pixel, 12Bit, USB 2.0
Digital Slide Image Resolution	0.49 um/pixel (20x, 0.65x Camera adapter), 0.24 um/pixel (40x, 0.65x Camera adapter)
Scanning Time	<2 minute (objective 20x,10mmX10mm)

Automatic Adjustment Of The Light Source Advantage

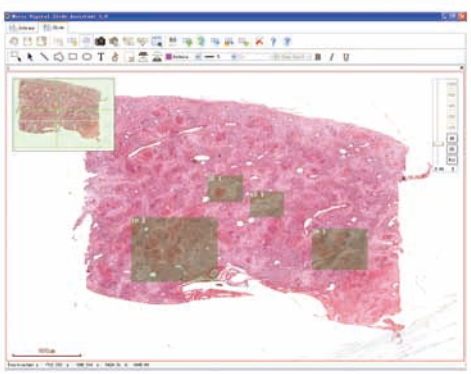
Using automatic objective changer there is no need to adjust the microscope illumination.
Software that can automatically adjust the brightness microscope light sources.

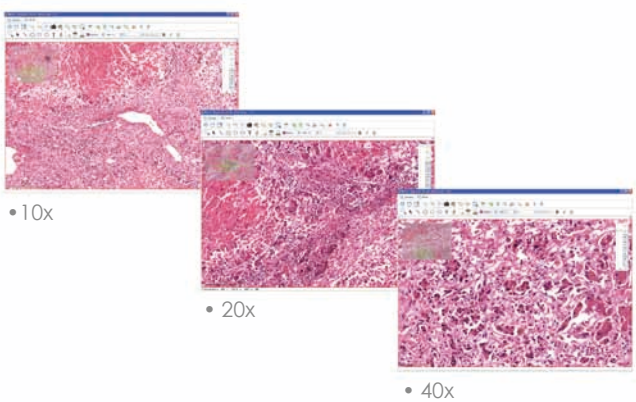
"ROI" Scanning Mode (State University Of New York Exclusively Authorized Patent To Motic)

Under low magnification image full-field scan, doctors can choose various Regions of Interest for high-magnification scanning.

The advantage is to achieve image information using a small file size for, convenient storage, transmission and exchange.

* New York State University exclusively authorized Motic for WorldWide integration of this technology.





Digital Slides, The Application-Oriented Clinical Diagnosis

(Pathological Diagnosis, Remote Consultation, Research, Education And Documentation)

Using the digital slide scanning system, transferring the classical glass slides into a digital image “WSI”, create a personalized complete digital slide.
It offers the possibility of a long-term preservation save storage of patient data. It is convenient for patients and hospitals reading or borrowing the digital slide for consultations and additional diagonsis.

- Establish a pathology slide library, which may include a database of information for research and documentation
- Reading the same digital slide via (intranet, LAN, Internet), without time and space limits;
- Combine different pathology information systems, achieve true digital pathology information. Access the digital database and using standardized Interfaces with the hospital (HIS / PACS, etc.), to provides a efficient communication platform for pathologists and other medical faculties

Application Of Digital Slides In Teaching / University Education

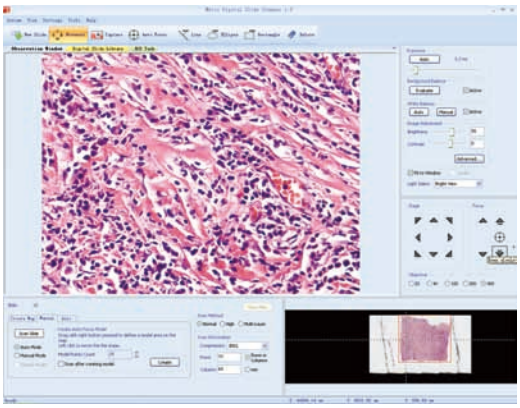
Such as embryology, pathology, microbiology, moving.
Botany, parasitology and other figures can be made to a digital slide.

It is the revolutionary breakthrough in morphology teaching.

Application Of Digital Slides In Sientific Research

- Such as drug screening
- Gene technology
- Toxicological experiments
- Forensic identification, criminal identification and others;
- Pharmaceuticals application in research institutes and laboratories
- Data stored safely, shared or used for later comparison and analysis’s

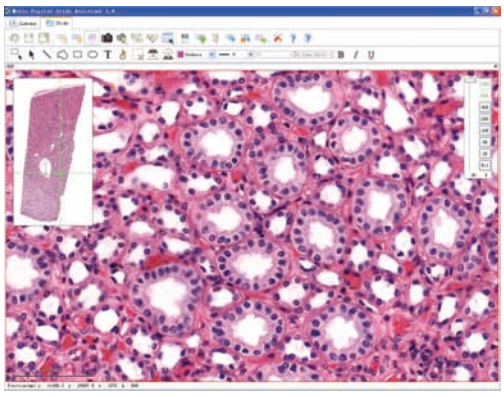
DSScanner

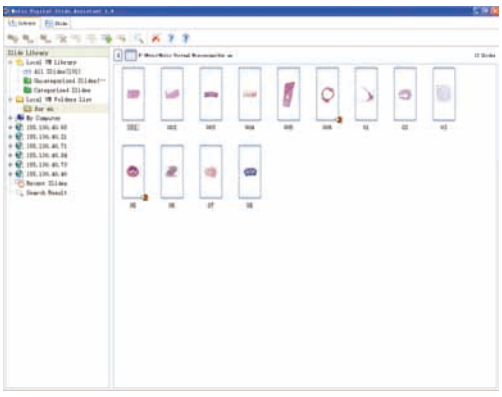


- Fast and reliable slide scanning through an automatic control of a motorized stage and several other motorized components (X / Y / Z / objective conversion etc.);
- Automatic scanning and seamlessly stitching for a slide in different magnifications and different regions,
- Support for various slide scanning modes, such as ROI scanning (low magnification for whole slide + high magnification for more interested sub-regions), quick scanning, high precision scanning (auto-focus for every field), multi-focus scanning (automatic fusion of several z levels in each field) etc., to fit for different applications;
- Optional scanning slide encryption, such as dongle protection, password protection and other protection methods to enhance the security of digital slides;
- ROI scanning mode: full-field scan at low magnification image, select the multiple regions of interest at different high magnification scanning. The file storage space is small, only a few MBytes. It is convenient for storage and transmission;
- Data storage and export support for JPEG and JPEG2000 formats, and support for multiple ROI collection and mass scanning;
- Support fluorescence slide scanning and 100X oil immersion scanning.
- Support DEMO configuration. Demo mode can be installed on any desktop or laptop computer, and the demo mode DSScanner can run without the need of hardware to be convenient for demonstration purpose.
- The ROI scanning mode technology is under license of the State University of New York, USA.

DSAssisant

- Support multiple slides simultaneously comparing and synchronizing pan for browsing;
- Automatic pan a digital slide with flexible speed settings, and add annotations on the fly during automatic pan movement;
- Shared digital slide library for multiple browsing;
- Support annotations with different font types, colors, font sizes, characters etc;
- Various measurement tools, such as length, perimeter, area, etc., and measurements can be labeled, and sorted by labels or viewed by label navigation ;
- Annotations with multiple layers and are able to be selectable and customizable;
- Several ROI based digital slide making methods;
- Recording function to record screen, voice and the whole process of digital slide scanning and operating. It is a good tool for courseware making and expertise sharing.





DSStore

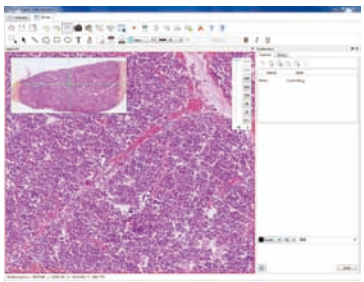
- A powerful VM digital slide database management functionality and slide viewing cross the network (e.g. internet or intranet).
- A Framework for digital slide storage, digital slide sort, search, categorize, user and role assignment, network access etc.
- New Silverlight technology for digital slide browsing.
- Seamless integration and inter-operation with DSScanner and DSAssistant modules.

Tele

- A remote-control microscope software system which supports both automatic microscope and manual microscope.
- Offers remote control of microscope operation, allowing distance image viewing, diagnosis and consultation between different locations. It also provides automated supplementary functions that improve precision, work efficiency and the control of microscope.
- Support rapid diagnosis of frozen slide through the remote-internet connection.
- Same platform as DSScanner, combined with powerful scanning software. The pathological experts can use the automatic microscope platform to remotely control, viewing the digital slider under the different magnifications, and then give the diagnosis report in timely manner.
- It is a necessary communication tool for obtaining experts and pathologists' second opinions in real-time.

DSConference

- Simultaneously browsing the same slide and the same field cross the internet with multiple users
- Adopt P2P technology for digital slide real-time communications
- Provide a set of comprehensive tools for customers to manage, processes and analyzes digital slide images.
- Modules includes: DSAssistant, Internet VM Conferencing

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SAMSUNG

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Design Change :
The manufacturer reserves the right to make changes in instrument design in accordance with scientific and mechanical progress, without notice and without obligation.

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