vieworks

Azer Scientific

POWERED BY biolyst SCIENTIFIC

Beyond Z-Stacking: Introducing Realtime EF Technology

for Smarter Digital Scanning

VISQUE DPS AzerView 510

Company General Information

Azer Scientific
POWERED BY biolyst SCIENTIFIC

Advancing Diagnostics through
Practical, Scalable Solutions

Company	Establishment	Experties
Azer Scientific *Powered by Biolyst*	Founded in 2003 U.S.-Based Manufacturer	20+ Years of Industry Experience Lab Workflow Solutions
Product Portfolio Histology Cytology Hematology Microbiology General Lab Supplies	**Pathology Workflow Focus** From Staining to Imaging Innovative Service & Equipment	**Clients & Market** Hospitals Reference Labs Academic Institutions

VIEWORKS

To make remarkable contributions to humanity
by providing the best imaging solution

Income	Establishment	Patent
Revenue 191.5 M USD	18 September 1999	407 In-House Patent
Number of Employees 500 (2024)	**Proportion of Employees** R&D 30% Production & QA 40% Service 15% Others 15%	**Web** www.vieworks.com

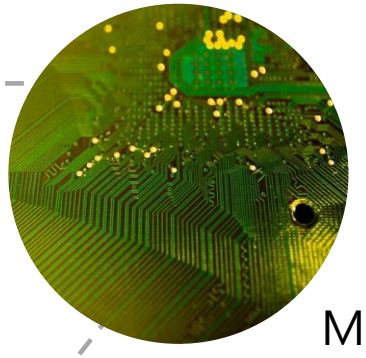
Why Vieworks Entered Digital Pathology

X-ray Imaging

Started in 1999
Specialized in medical diagnostic imaging
Global No.2 in X-ray detector Pannel market

Digital Pathology

Realtime EF Technology with 3-Camera
Launched in the U.S. market in 2025
(First introduced in Korea in 2024)



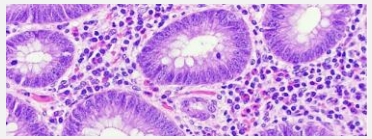
Machine Vision

Started in 2006
Specialized in High-resolution Camera

Bio Imaging

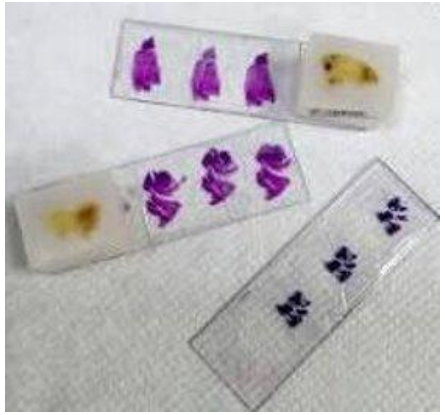
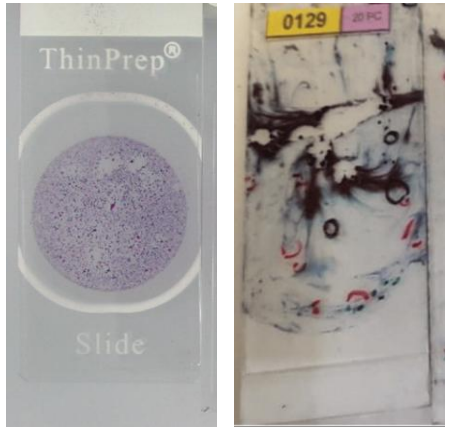
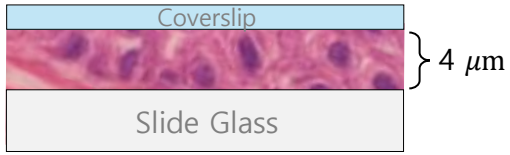
Started in 2016
Specialized in fluorescence and cell analysis Imaging Solution
Foundation for Digital Pathology Business

Azer Scientific Histopathology Portfolio

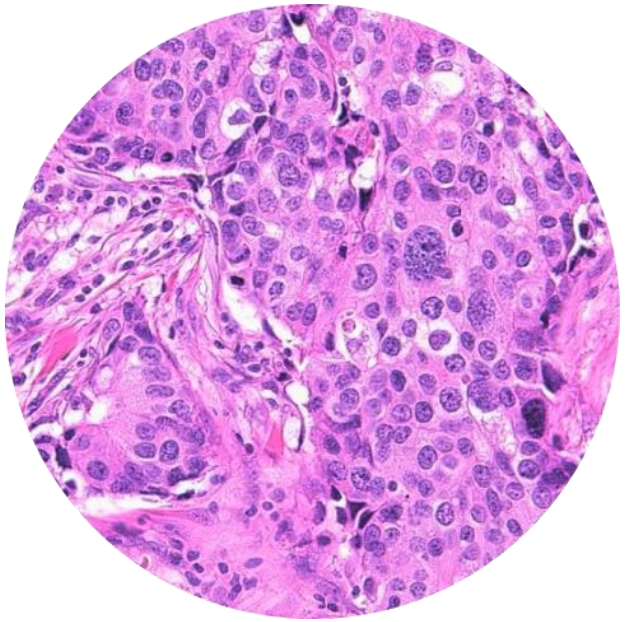
	Specimen Collection	Accessioning/ Grossing	Processing	Embedding	Microtomy	Staining/ Advanced Dx
Histology 	• Prefilled Formalin Kits • Specimen Containers • Fixatives	• Decalcifiers • Scalpels/Blades • Marking Dyes • Cassettes • Primo Cassette Printer	• Dehydrants / Solvents • Embedding Paraffin	• Cassettes • Paraffin • Embedding Center	• Microtome Blades • Microscope Slides • Cover Glass • Coverslip Tape • Presto Slide Printer	• iCon H&E Stains • Special Stains / Kits • Human Tissue Controls • IHC / FISH / ISH
						

Why Realtime EF(Extended Focus) Technology?

The main difference between Histology and Cytology is Thickness

Subject	Histology	Cytology
Thickness	**Uniform thickness (~4μm)**	**Nonuniform thickness due to cellular thickness** ➔Z-stacking scanning is required
		
Type	H&E, IHC, Biopsy	Liquid-Based Cytology, Smear
Characteristics		

Realtime EF Technology



Realtime EF Technology

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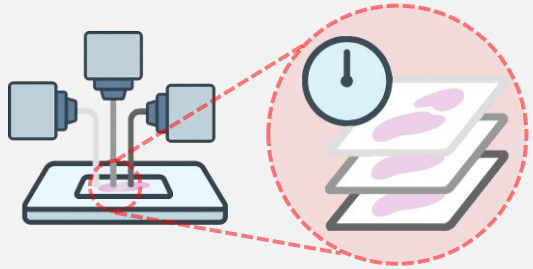
AzerView510

High-Performance Slide Scanner for Digital Pathology System

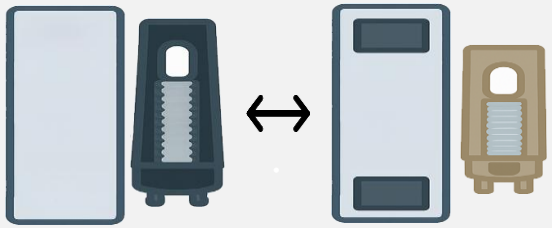
Why AzerView510?

AzerView510 Unique Features



Realtime EF(Extended Focus) technology

Significantly Smaller Image File Sizes

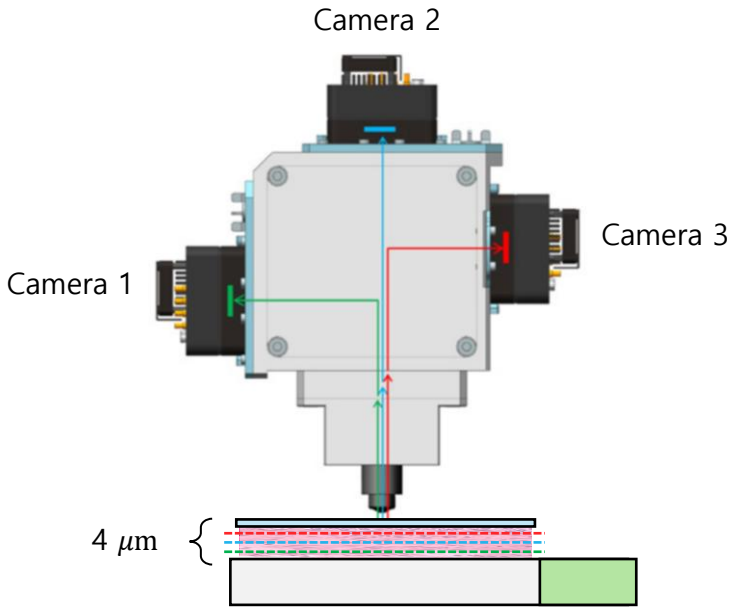


Interchangeable slide rack

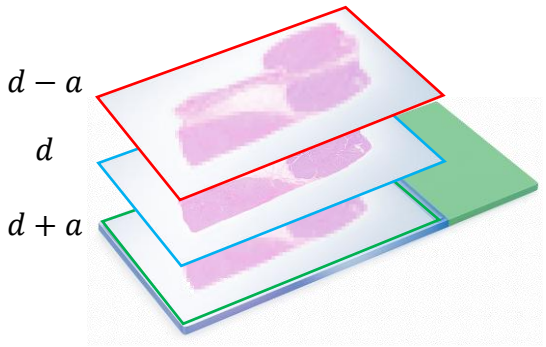
Dedicated Error Rack

Realtime EF Technology

- 3 cameras capturing up to 4um focus depth in a single image



Three cameras each having different focused imaging planes

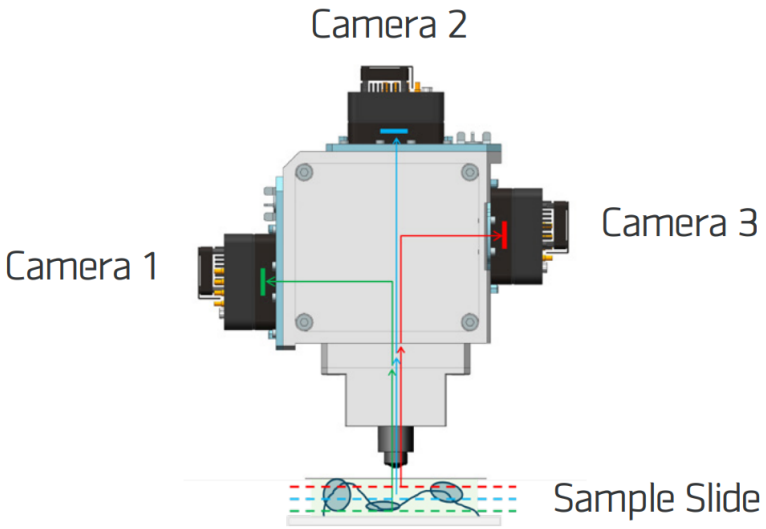


- Time and cost-effective image with more information

	Single Camera Imaging	Realtime Extended Focus	
Focus depth (per image)	1~1.5um	4um	3 times more
Scan time (per 3 stack)	3t	t	3 times less
Data size (per 3 stack)	3x	x	

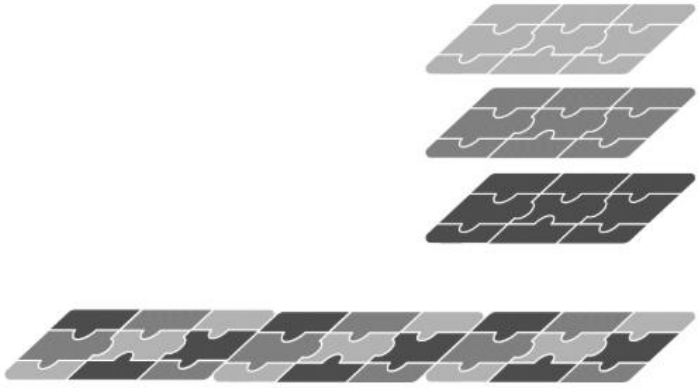
Optimized Scan

- Optimal scan type is **selected** from 2 modes depending on slide type



Single focus mode
for Tissue Slides
for Histopathology

Realtime EF mode
for Liquid-Based Cytology Slides
for Cytology

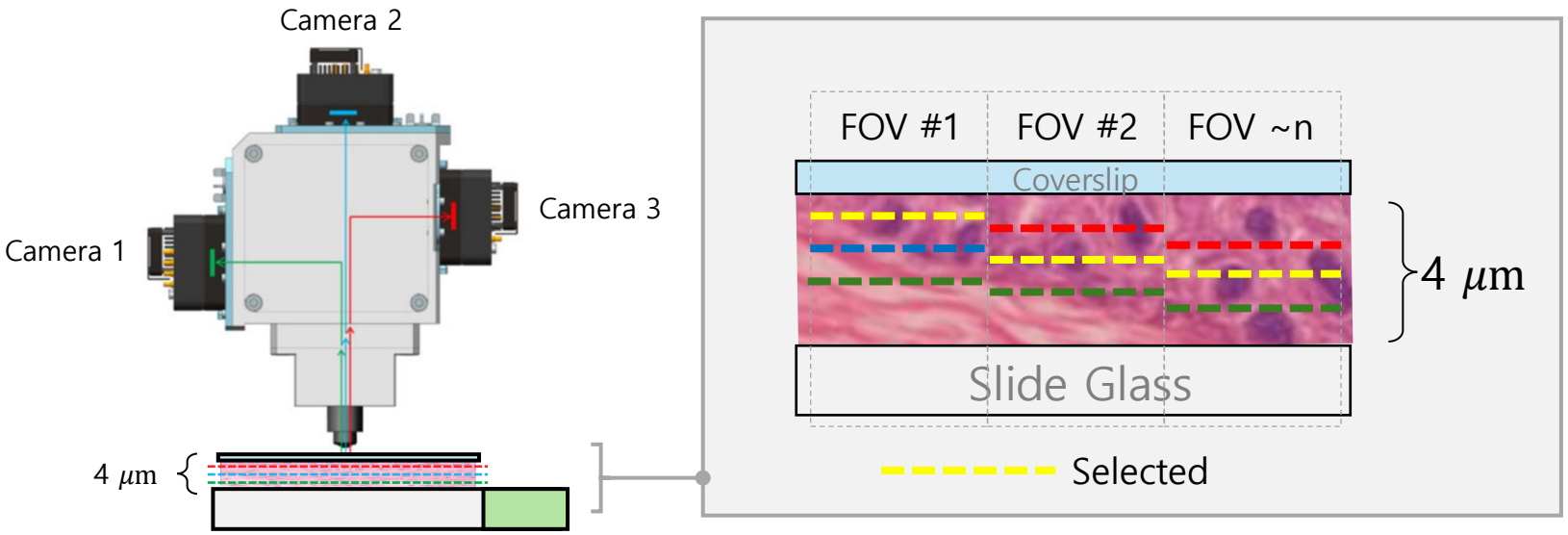


Single Focus Mode for Histopathology

Realtime EF technology enhances focus accuracy, resulting in higher image quality and success rates.

Single focus mode
Suitable for Histopathology

1. Captures three images at different focal planes simultaneously
2. Selects and stitches the best-focused image to generate WSI



- The three cameras used in Realtime EF technology are designed to cover approximately 4μm in depth, closely matching the average thickness of the tissue slides
- This design enables realtime auto focus, resulting in high quality imaging and ensures scan success rate of ≥ 99%

Single Focus Mode for Histopathology

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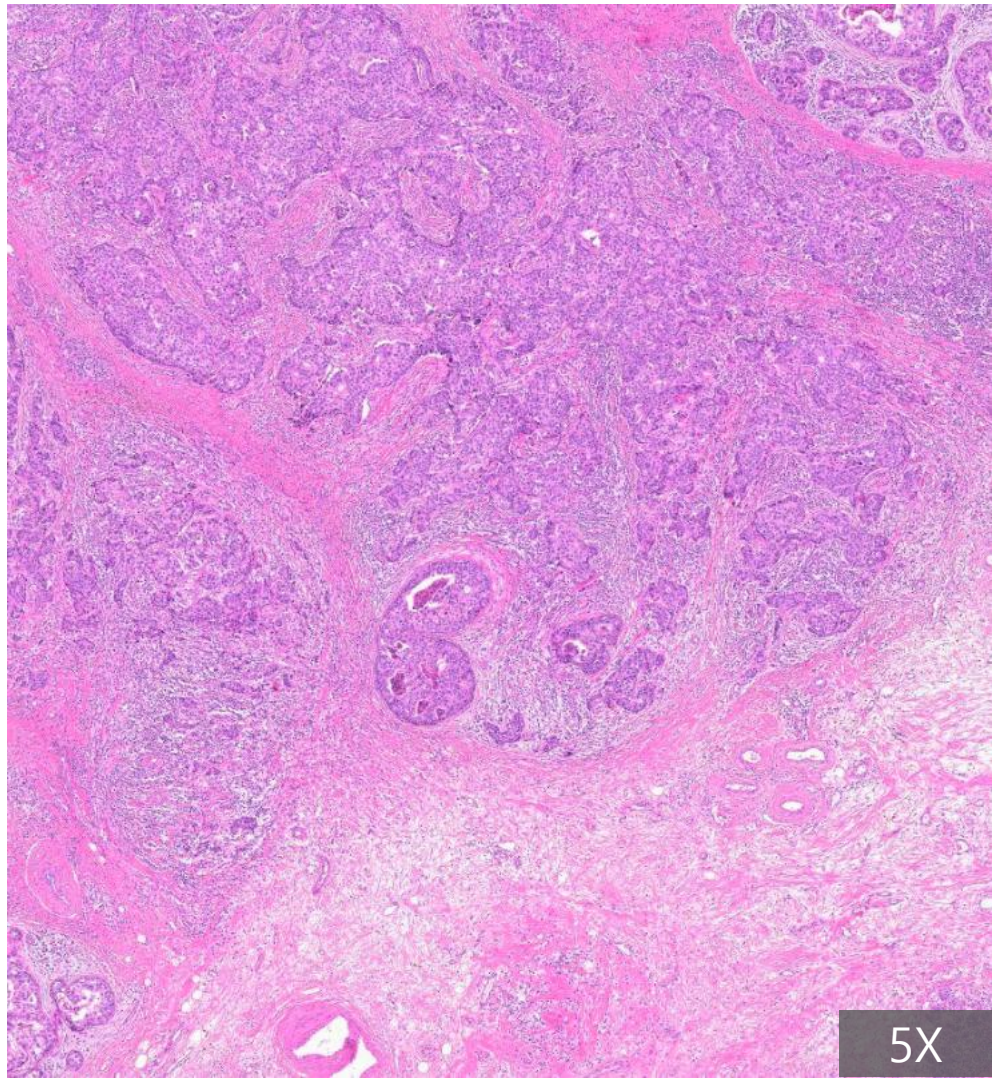
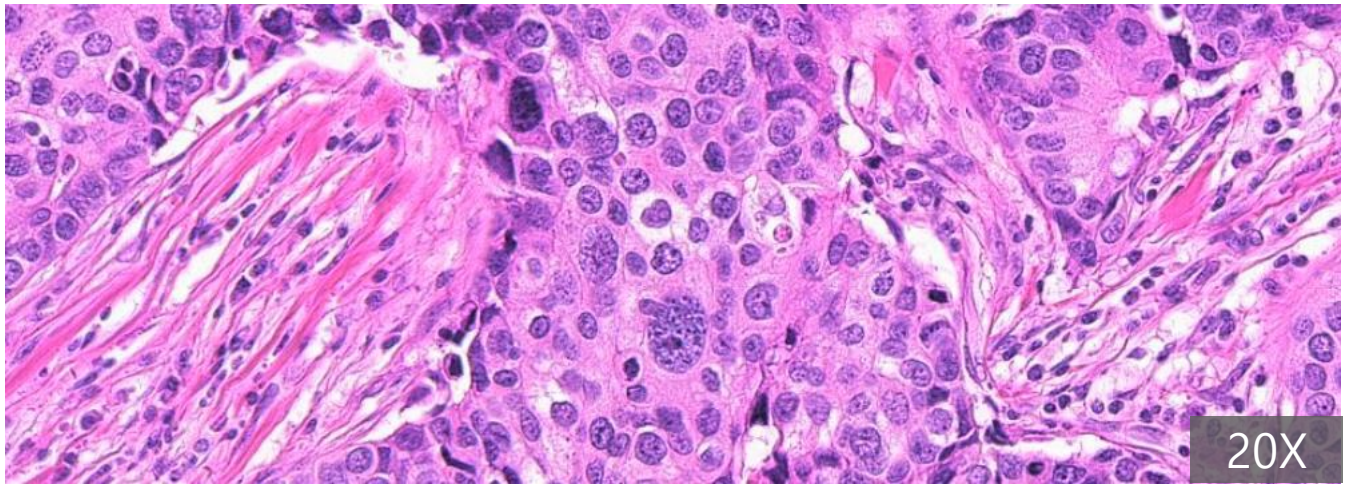
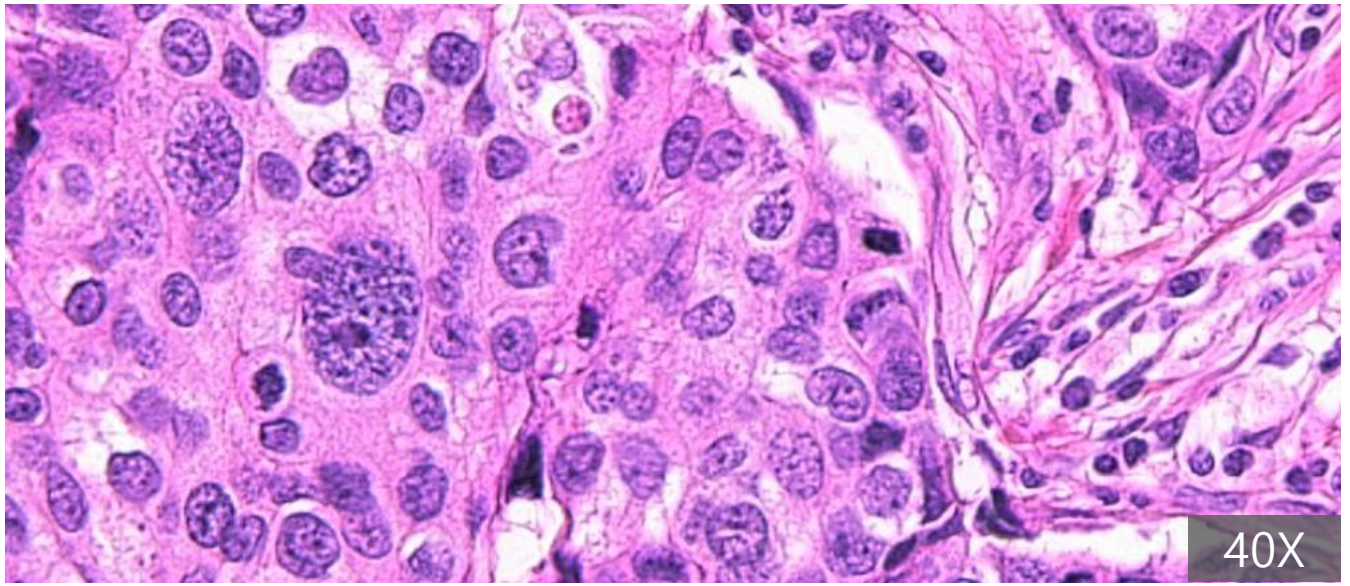
- Realtime EF technology enhances focus accuracy, resulting in higher image quality and success rates.







Realtime EF Technology in Z-stack

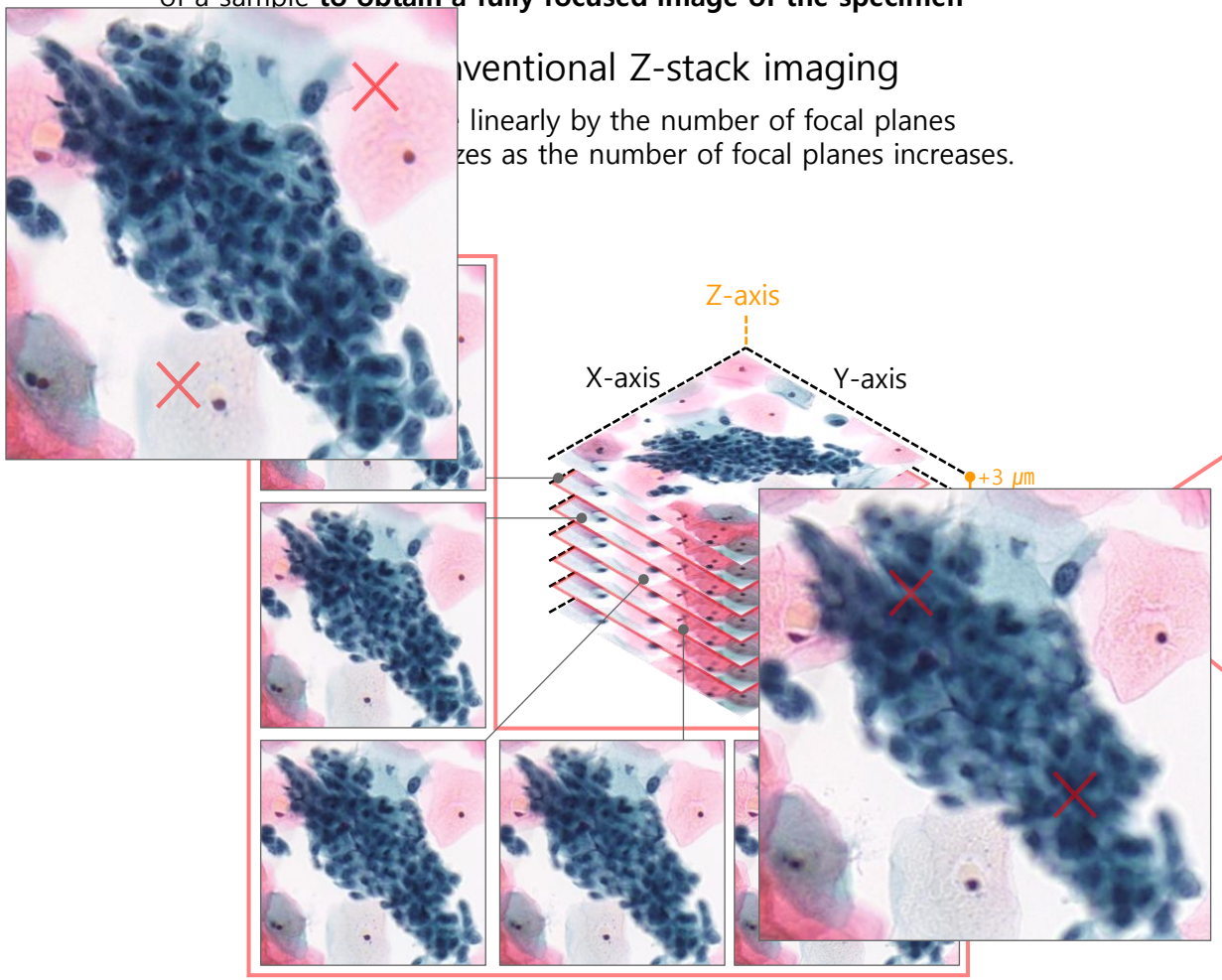
Faster and more accurate

- Z-stack imaging

  Capturing multiple images at different focal planes along the Z-axis (depth) of a sample **to obtain a fully focused image of the specimen**

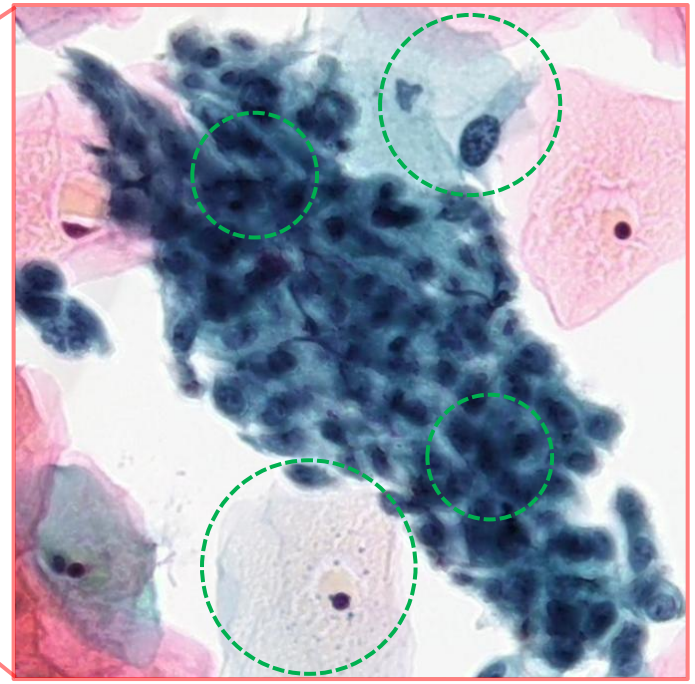
  …nventional Z-stack imaging

  … linearly by the number of focal planes
  …zes as the number of focal planes increases.



- Realtime EF mode overcomes these limitations while retaining the advantages of Z-stack imaging
  1) Capturing images at three focal planes in realtime
  2) Maintaining the same image size as a conventional image

Approximately 4 μm depth

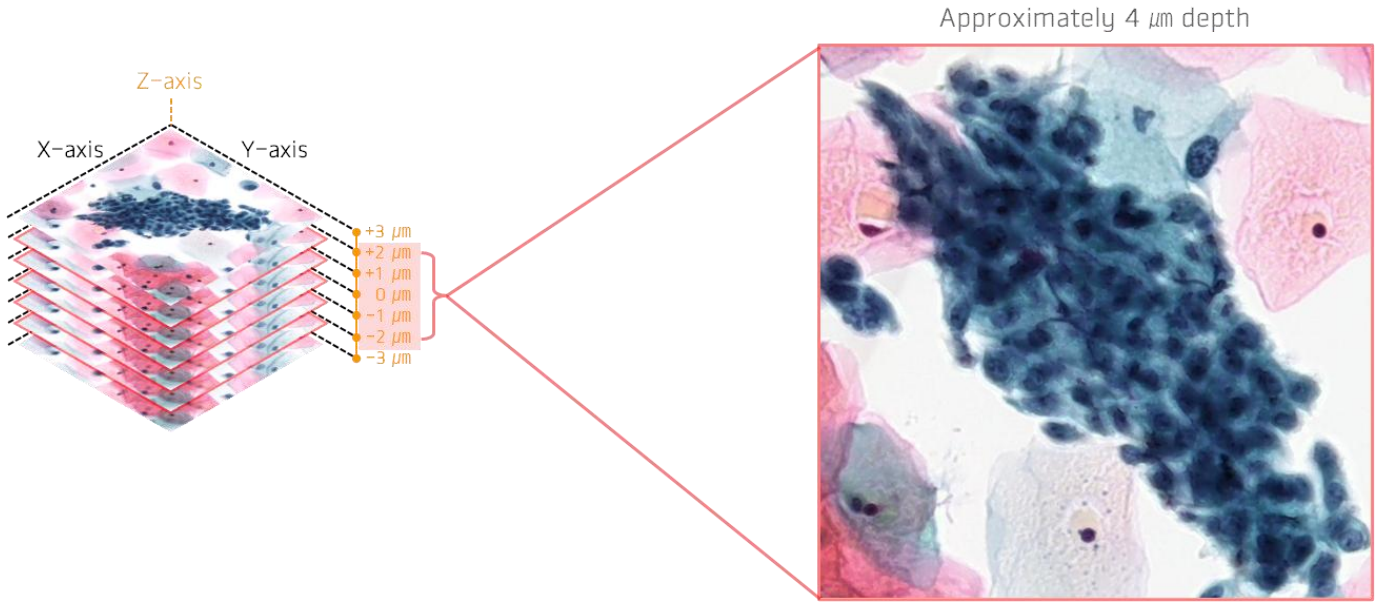


Realtime EF Mode for Cytopathology*

Realtime EF technology breaks through the limitations of standard slide scanners in Cytopathology

Realtime EF scan mode
Suitable for Cytopathology

1. Captures three images at different focal planes simultaneously
2. Selects and stitches the best-focused segmented areas to generates WSI



- Realtime EF scan mode overcomes limitations of conventional Z-stacking
- By using Realtime EF scan mode,
  a single image containing multiple focal layers information

* Optimized for Liquid-Based Cytology

Realtime EF Mode for Cytopathology

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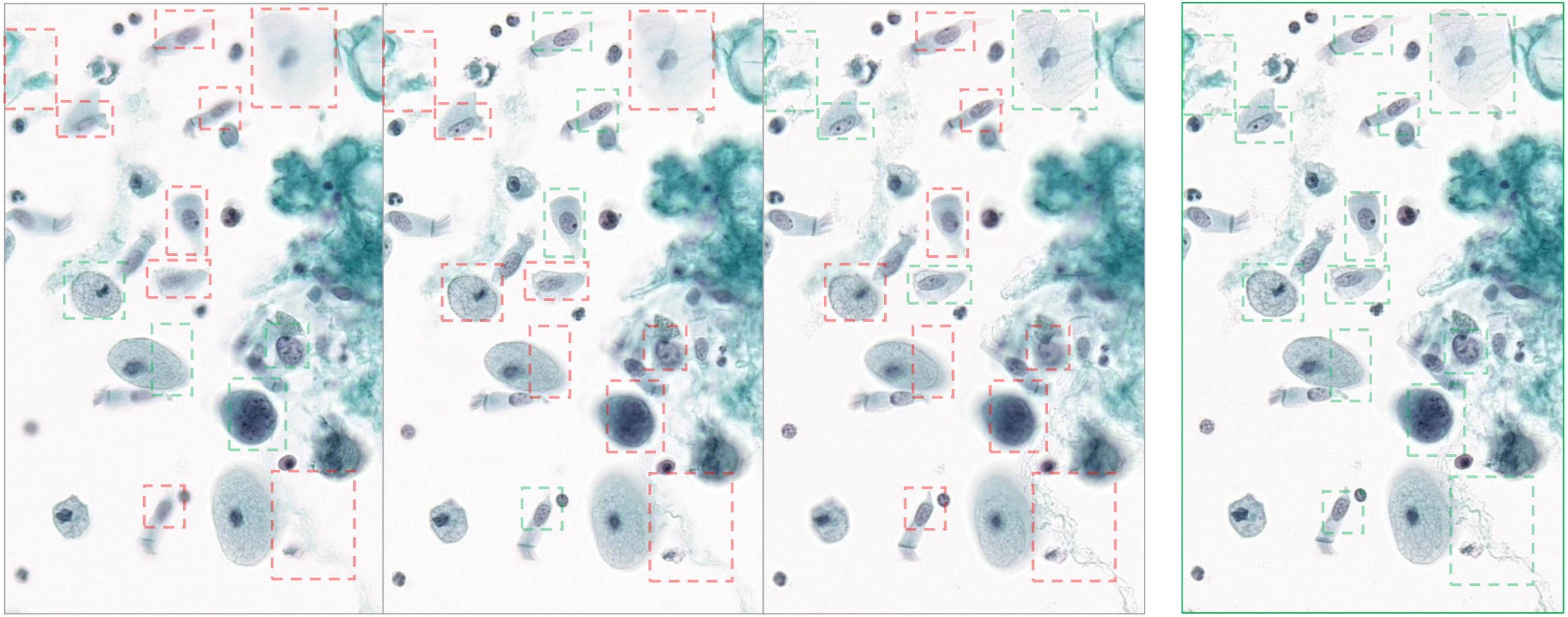
Example of Realtime EF technology

Camera 1 | Camera 2 | Camera 3 | Realtime EF technology



40x Scale Image

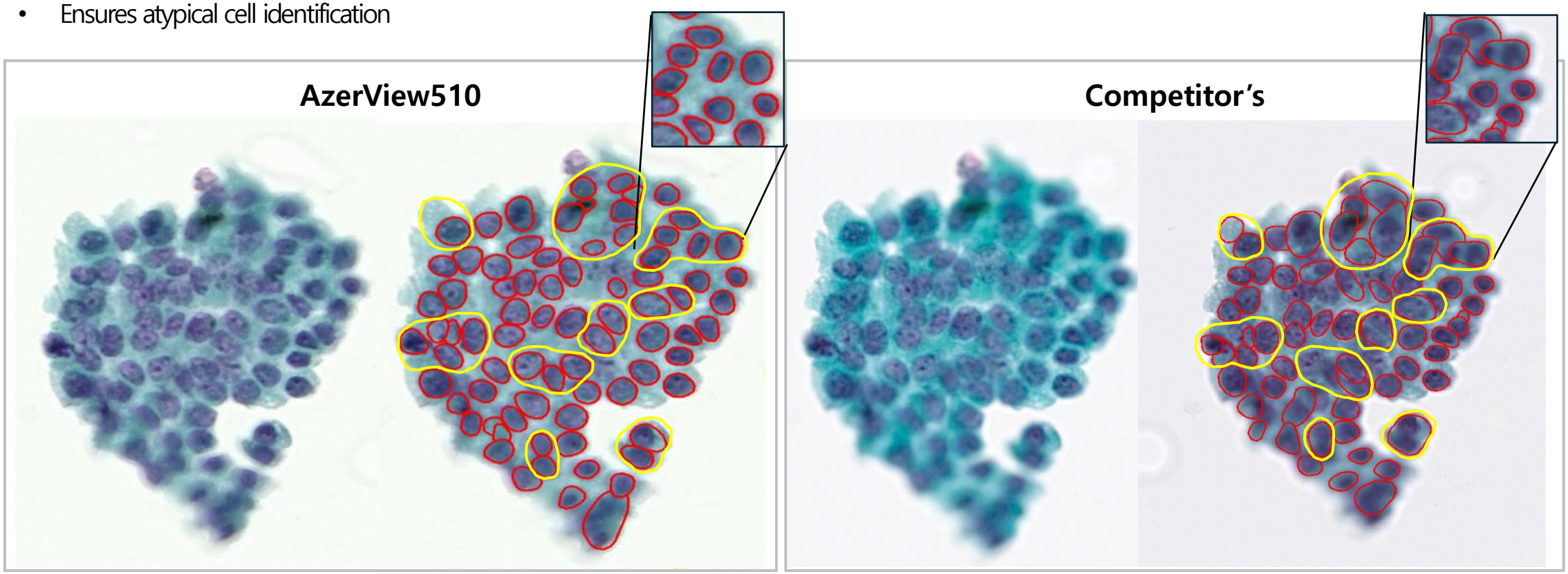
Focused
Not Focused

Realtime EF Technology in AI-Based segmentation

Realtime EF technology significantly enhances performance in AI-based segmentation

Clean images with accurate focus is crucial to improve the precision of AI-based diagnoses and deep learning models

- Ensures high-accuracy cell segmentation
- Ensures atypical cell identification



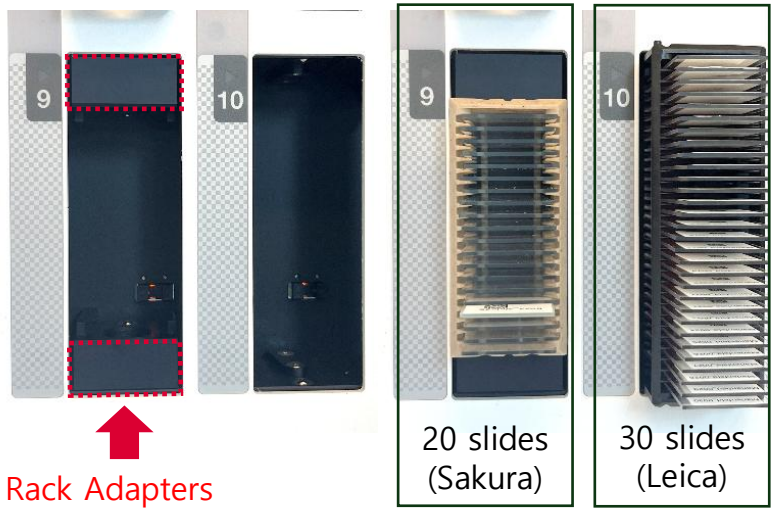
Left: Original image / Right: Performing cell segmentation in AI-based computer-aided diagnosis (AI-CAD).

Superior cell segmentation performance in images scanned with Realtime EF technology.

Unique features

Interchangeable slide rack

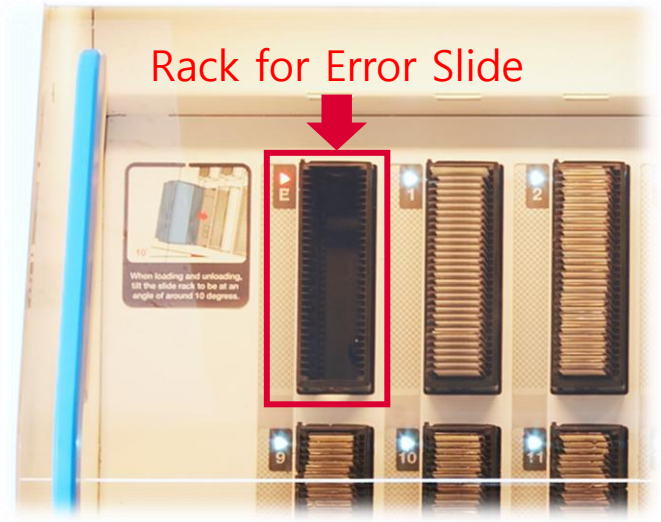
Distinguish rack type automatically



- Compatible with racks from most commonly used slide stainer
- Patented Rack Adapter

Dedicated Error Rack

Auto-sorting of error slide



- Slides without labels or with damaged barcodes
- Automatic scans quality evaluation

User Statements

Significantly Smaller Image File Sizes

- Realtime EF technology image file size is one-third (1/3) smaller with no significant loss in Image quality

" AzerView510 allowed us to obtain high-quality images with only one-third the file size of typical slide scanners. "

— Prof. Chan Kwon Jung, Department of Pathology, Seoul St. Mary's Hospital (Presented at the KSP 2024)

File name	Image size (KB)	
	Competitor's	**AzerView**
C23-000047	1,488,016	411,694
C23-000048	1,435,098	397,375
C23-000152	1,580,419	492,693
C23-000154	1,630,124	546,150
C23-000208	1,322,757	405,308
C23-000254	1,426,706	435,895
C23-000255	1,409,871	459,861
C23-000365	1,521,817	429,846
C23-000424	1,498,266	428,181
C23-000616	1,463,453	459,188
C23-000856	1,528,157	434,132
C23-000981	1,605,401	490,381
C23-000985	1,452,860	412,753
C23-001406	1,411,700	444,832
C23-001456	1,449,210	410,201
C23-001459	1,518,646	441,091
C23-001515	1,562,198	538,055
Average	**1,488,512**	**449,273**

Opinion about AzerView510

"The Cytology images scanned by AzerView510 are truly outstanding, with remarkable clarity and detail."

Informal Feedback from a pathologist who tested the system

"This device's Realtime EF technology unlocks new possibilities in digital pathology."

Prof. Yosep Chong
(Uijeongbu St. Mary's Hospital)

"AzerView510 is compatible with both cytology and histology slides."

Prof. Jin Roh
(Ajou University Hospital)

Specifications

Specifications

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Large capacity and high scan speed with superior throughput

Product	AzerView 510	AzerView 210 (Coming Soon!)
Imaging Type	Brightfield	
Number of Slides (1 x 3″ slide glasses)	Leica rack: 510 (17 racks) Sakura rack: 340 (17 racks)	Leica rack: 210 (7 racks) Sakura rack: 140 (7 racks)
Scan Speed (15x15mm^2)	30 sec	≒ 23 sec
Throughput (/hr)	83 slides	≒ 60 slides
Pixel Resolution (㎛/pixel)	0.275	0.1725
Dimension (Weight)	1080 x 845 x 638 (167.8kg)	≒ 550 x 725 x 625 (95kg)
Rack Compatibility	Yes (Leica 30/racks; Sakura 20/rack)	
Scan Success Rate	≥ 99%	
Z stacking	Yes (Dedicated 3 camera fusion included)	
Slide Type	1 x 3"	
Error Slide Sorting Function	Yes	
Barcode Scan	1D, 2D (Data Matrix, QR code, Code 39, Code 128, Code 128A, Code 128B, Code 128C)	

Thank you

Contact Info

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