



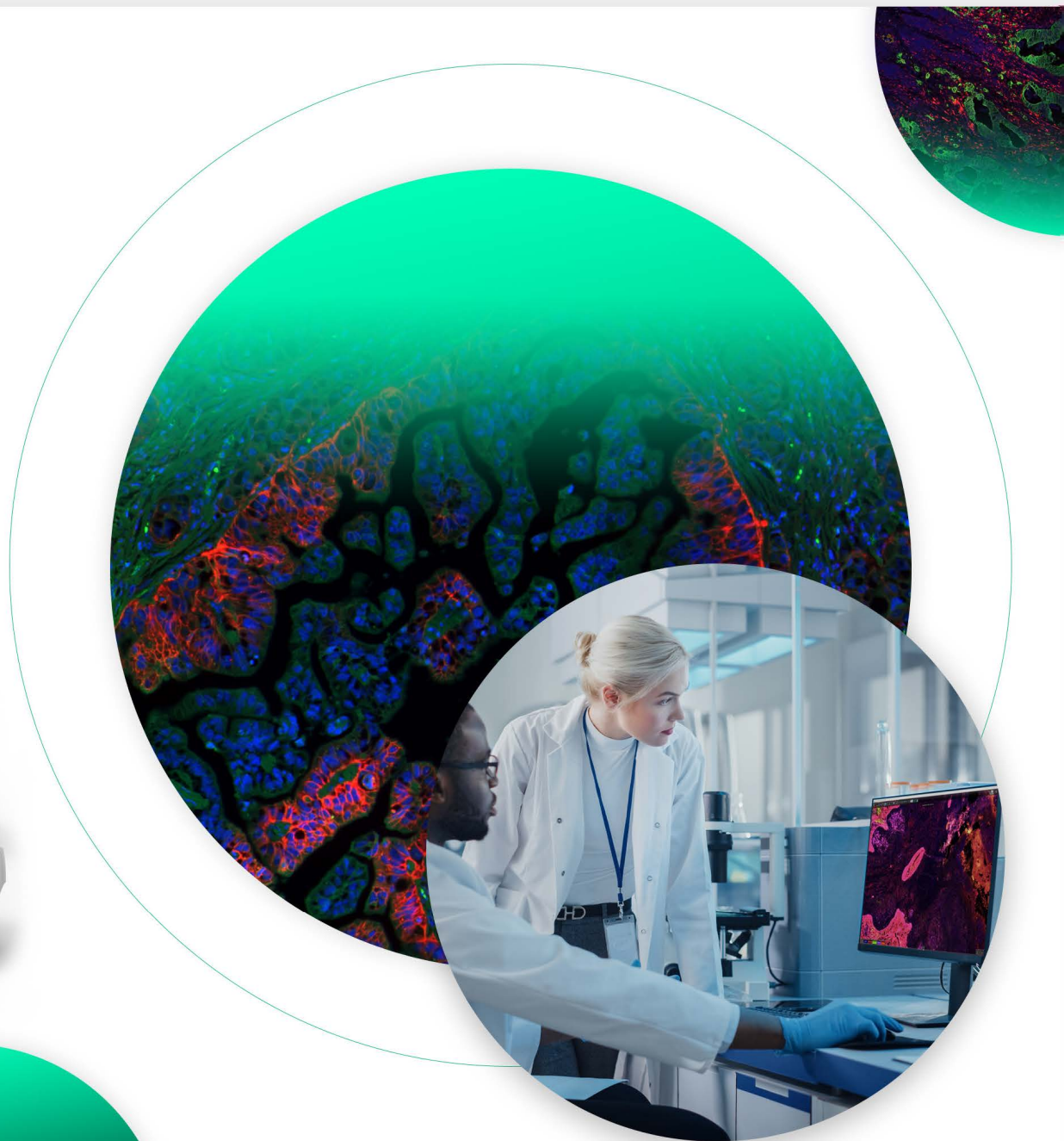
PANNORAMIC®

Scanners for Research

Award-winning PANNORAMIC® whole-slide scanners and software – tailored to the needs of cancer and pharmaceutical research, molecular and developmental histology, neuroscience and many more



- **Flexibility**
- **Versatility**
- **Superior** image quality





Digital microscopy starts with a whole-slide scanner suited to the – often very diverse – imaging needs of cancer research laboratories, pharmaceutical companies or medical research institutes specialized in, among other fields, neurobiology, molecular or developmental histology.

The PANNORAMIC® family is the most comprehensive product range on the digital slide scanner market. From affordable single-slide to high-speed 1000-slide capacity, from high-quality brightfield to versatile brightfield and fluorescence scanning in the same device, for superior-quality confocal scanning with 3D reconstruction, for normal or double-width slides, PANNORAMIC® scanners offer a scanning solution tailored to researchers' diverse needs.

Digital microscopy cannot be complete without software that helps researchers store, view and analyze slides.

PANNORAMIC® scanners are powered by the PANNORAMIC® Scanner Software for Research, which facilitates versatile, fast and high-quality slide scanning according to the needs of research laboratories. Digital slides are opened with the SlideViewer™ state-of-the-art slide viewing application, while the QuantCenter™ quantification modules simplify image analysis and the SlideCenter™ provides slide management and storage. (Also, digital slides are easily converted to the universal TIFF format, enabling the use of third-party image analysis applications.)

PANNORAMIC® scanners and software by 3DHISTECH offer digital microscopy solutions tailored to the needs of research laboratories - contributing to great research results.

PANNORAMIC® 1000

Thanks to its unprecedented capacity and unparalleled speed, PANNORAMIC® 1000 offers the fastest scanning on the market for high-volume scanning tasks.

Key features

- » **Capacity:** up to 1200 slides
- » **Speed:** 26 sec/slide*
- » **Brightfield** scanning
- » **Flash** scanning technology
- » **Objective type:** Plan-Apochromat 20x (NA 0.8) and 40x (NA 0.95) with optional water immersion objective C-Apochromat W 40x (NA 1.2)
- » **Flexibility:** optional immersion objective, arbitrary-order scanning, single and double-width slide scanning
- » **Automatic loading**

P1000



*20x objective/40x optical equivalent magnification, 0.24 µm / pixel, 7500 µm focus point distance, 15x15 mm average sample size, single layer local scanning (scanning time only)

PANNORAMIC® 250 FLASH III

Thanks to its award-winning scanning technology, PANNORAMIC® 250 FLASH III offers a versatile, high-quality and high-speed scanning solution to high-volume scanning tasks.

Key features

- » **Capacity:** 300 slides
- » **Speed:** 35 sec/slide*
- » **Brightfield** and **fluorescence** scanning (9 physical filter cubes and 45 logical fluorescence channels)
- » **Flash** scanning technology in brightfield mode
- » **Objective type:** Plan-Apochromat 20x (NA 0.8) and 40x (NA 0.95)
- » **Automatic loading**
- » **Automatic switching** between brightfield and fluorescence scanning based on profile content

P250 FLASH III



*20x objective / 40x optical equivalent magnification, 7500 µm focus point distance, 15x15 mm average sample size, single layer local scanning (scanning time only)

PANNORAMIC® Confocal

Owing to its innovative structured illumination confocal imaging technology, PANNORAMIC® Confocal offers brightfield and fluorescence confocal scanning in unprecedented quality for molecular pathology applications at low running costs, contributing to increased productivity for research laboratories.

Key features

- » **Capacity:** 11 slides (+1 cleaning slide)
- » **Colocalized brightfield, fluorescence and confocal** scanning
- » Innovative structured **illumination** confocal imaging
- » **Objective type:**
 - Plan-Apochromat 20x (NA 0.8) and water immersion objective C-Apochromat W 40x (NA 1.2)
 - C-Apochromat W 40x (NA 1.2) or C-Apochromat W 63x (NA 1.2)
- » **Superior-quality 3D reconstruction**
- » **Automatic switching** between brightfield and

Confocal



PANNORAMIC® SCAN II

PANNORAMIC® SCAN II is a medium-capacity, all-round slide scanner with an affordable fluorescence option for medium-sized laboratories.

Key features

- » **Capacity:** 150 slides
- » **Speed:** 2 min 30 sec/slide*
- » **Brightfield and fluorescence** scanning (9 physical filter cubes and 45 logical fluorescence channels)
- » **Objective type:** Plan-Apochromat 20x (NA 0.8) and 40x (NA 0.95)
- » **Continuous loading**

SCAN II



*20x objective / 40x optical equivalent magnification, 7500 µm focus point distance, 15×15 mm average sample size, single layer local scanning (scanning time only)

PANNORAMIC® MIDI II

PANNORAMIC® MIDI II is an award-winning all-round digital slide scanner with an affordable fluorescence scanning option for low-volume slide scanning.

Key features

- » **Capacity:** 12 slides
- » **Brightfield** and **fluorescence** scanning (9 physical filter cubes and 45 logical filters)
- » **Objective type:**
 - Plan-Apochromat 20x (NA 0.8) and 40x (NA 0.95) - optional 10x objective (NA 0.3) for fluorescence scanning
 - Plan-Apochromat 10x (NA 0.3) or Plan-Apochromat 20x (NA 0.8)
- » New, high-sensitivity **4.2 MP back illuminated sCMOS camera** for even better multi-staining images
- » **Compact design** - small footprint
- » **Automatic switching** between brightfield and fluorescence scanning based on profile content

MIDI II



PANNORAMIC® DESK II DW

PANNORAMIC® Desk II DW is an affordable, entry-level slide scanner for research and education, a simple and easy-to-use device for laboratories starting to go digital.

Key features

- » **Capacity:** 1 slide
- » **Brightfield** scanning
- » **Objective type:** Plan-Apochromat 20x (NA 0.8) or 40x (NA 0.95)
- » **Single and double-width** glass slide scanning
- » **Compact design** - small footprint

DESK II DW



PANNORAMIC® Scanner Software for Research

Versatile and flexible scanner software tailored to the diverse needs of research laboratories

Key features

- » Scanning profiles for individual slides, multiple scanning locations and separate scanning of TMA slides for flexibility
- » Several focus modes, new intensity stitching algorithm, two multilayer scanning options* and deconvolution for superior image quality
- » Highly adjustable software and hardware settings
- » Flexible image analysis
- » Customizable user interface and scanning workflow
- » Built-in slide conversion into the following file formats: DICOM, Tiled TIFF

*PANNORAMIC® 250 FLASH III and PANNORAMIC® 1000 only

SlideCenter™ slide storage system

- » Fully featured slide storage server
- » Capable of storing both macroscopic images and digital slides
- » Advanced user and slide management features
- » Integration options with several laboratory information management solutions

SlideViewer™ slide viewing application

- » Simple and straightforward graphical user interface
- » Several useful features including 9-slide MultiView, Marker Counter, Advanced Annotation Management, DDIC (Digital Differential Interference Contrast) and TMA Spot Detection
- » 3D visualization with 3DPeek
- » Advanced file management: compatibility with several 3rd party slide formats, multiple export options

QuantCenter™ image analysis modules for whole-slide quantitative evaluation

- » A highly customizable set of image analysis tools for research
 - Tissue classification: HistoQuant™, PatternQuant™, PatternQuant™ Plus
 - IHC quantification: NuclearQuant™, MembraneQuant™, CellQuant™, DensitoQuant™
 - Molecular pathology: FISHQuant™, CISHQuant™
 - ScriptQuant™ for user-created image analysis scripts
- » For both brightfield and fluorescence slides
- » Built-in data visualization
- » Batch analysis mode

	PANNORAMIC® DESK II DW	PANNORAMIC® MIDI II	PANNORAMIC® SCAN II	PANNORAMIC® CONFOCAL	PANNORAMIC® 250 FLASH III	PANNORAMIC® 1000
Slide loading capacity	1	12	150	11 +1 cleaning slide	300	up to 1200
Double width slide compatible	Yes	-	-	-	-	Yes
Objective type	Plan-Apochromat 20x (NA 0.8) OR 40x (NA 0.95)	Default: Plan-Apochromat 20x (NA 0.8); Optional: Plan-Apochromat 40x (NA 0.95); Optional: Plan-Apochromat 10x (NA 0.3) for FL scanning	Default: Plan-Apochromat 20x (NA 0.8); Optional: Plan-Apochromat 40x (NA 0.95)	Default: Plan-Apochromat 20x (NA 0.8) AND C-Apochromat w 40x (NA 1.2); Optional: Plan-Apochromat 10x (NA 0.3) for FL scanning and C-Apochromat w 63x (NA 1.2)	Default: Plan-Apochromat 20x (NA 0.8); Optional: Plan-Apochromat 40x (NA 0.95)	Default: Plan-Apochromat 20x (NA 0.8); Optional: Plan-Apochromat 40x (NA 0.95) AND/OR C-Apochromat W 40x (NA 1.2)
Brightfield scanning technology	5 MP CMOS camera with RGB illumination	5 MP CMOS camera OR 4.2 MP sCMOS camera with RGB illumination		5.5 MP Scientific CMOS camera with RGB illumination	12 MP CMOS camera with Xenon Flash illumination	
Optical magnification	58x	58x and 116x / 31x and 62x / 15x and 26x	58x and 116x / 31x and 62x	15.4x/30.8x/61.5x/97.0x	41x / 82x	41x/82x
Pixel resolution (µm/pixel)	0.172	0.172 and 0.087 / 0.325 and 0.162 / 10x: 0.65	0.172 and 0.087 / 0.325 and 0.162	0.65/0.325/0.163/0.103	0.242 / 0.121	0.242 / 0.121
Highest brightfield scanning speed*	2 min 5 sec	5 min 30 sec (with 5MP CMOS Camera) 3 min 20 sec (with 4.2MP Scientific CMOS Camera)	5 min 30 sec (with 5MP CMOS Camera) 4 min (with 4.2MP Scientific CMOS Camera)	13 min	36 sec	26 sec
Average BF file size (native resolution)	2.6 GB (20x) / 7.9 GB (40x)	2.6 GB (20x) / 7.9 GB (40x)	1.2 GB (20x) / 3.7 GB (40x)	1.2 GB (20x) / 3.7 GB (40x)	1.25 GB (20x) / 4.5 GB (40x)	1.25 GB (20x) / 4.5 GB (40x)
Fluorescence scanning technology	-	5 MP 16 bit sCMOS Camera and a laser and LED based light engine with 8 solid state light sources		5 MP 16 bit sCMOS Camera and a laser based light engine with 7 multimode light sources	5 MP 16 bit sCMOS Camera and a laser and LED based light engine with 8 solid state light sources	-
Highest fluorescence scanning speed**	-	8 min 30 sec	8 min 30 sec	30 min	8 min 30 sec	-
Dimensions (w x d x h, cm)	38 x 31 x 25	70 x 50 x 50	74 x 53 x 45	97 x 58 x 103	68 x 69 x 55	154 x 100 x 91
Weight (kg)	12	23	26	120	46	270

* 20x objective, 15 mm x 15 mm, single layer

** 3 fluorescent channel, 20 ms exposure time with interpolated focus

Please note that the PANNORAMIC® Scanners for Research digital slide scanners is for research use only, and cannot be used for patient diagnosis or treatment selection.

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Developed and produced by



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