



3DHISTECH

The scanner, foundation of a good digital pathology solution

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3DHISTECH - Sysmex



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A good digital pathology solution

- **Scanner**
 - **Fast**
 - **Excellent image quality**
 - **Compact, BF and FL in one package**
- **Server**
 - **Instant availability on LAN, WAN**
 - **Management and Organization of slides**
 - **Supports pathology workflow**
 - **Integrates with HIS/LIS system**
- **Pathology workstation**
- **Image analysis**
 - **Quantification**
 - **Report**



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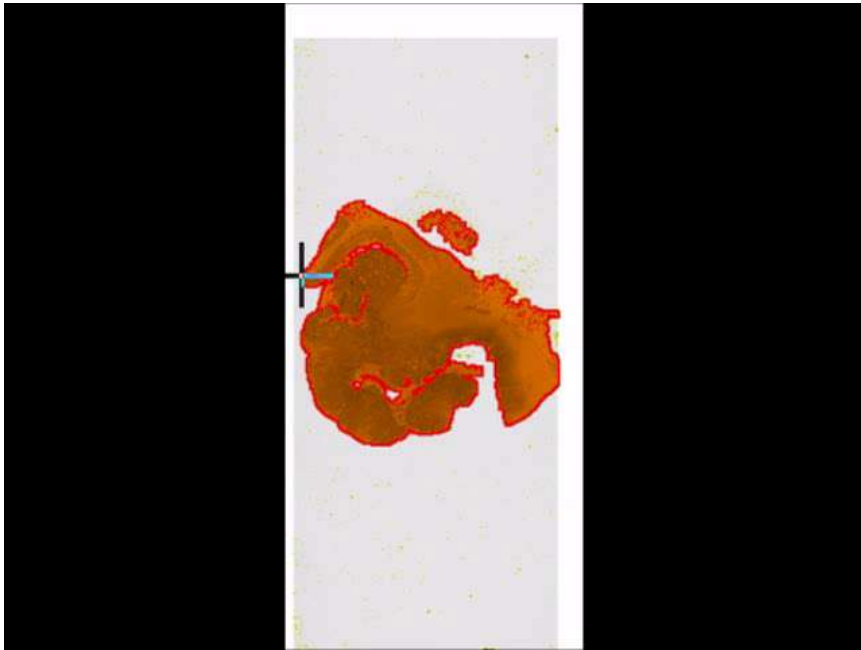
Speed

- **How soon can you see a new slide?**
- **Pannoramic 250 Super Flash**
 - **View a new slide in 100 seconds on average @ 40x**
 - **Winner of both 20x and 40X high throughput categories**
- **Scan only once in 40x**



Real time Scanning videos

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**Pannoramic
Flash**



**Pannoramic
Super Flash**



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Image quality

- **Important to get high quality images**
- **Winner in the 40X category = 0.25 μm /pixel**
 - **Pannoramic DESK**
- **Zeiss Plan-Apochromat objectives**
 - **High Numerical aperture of 0.8 and 0.95**
- **Optics are the same in all of our products**

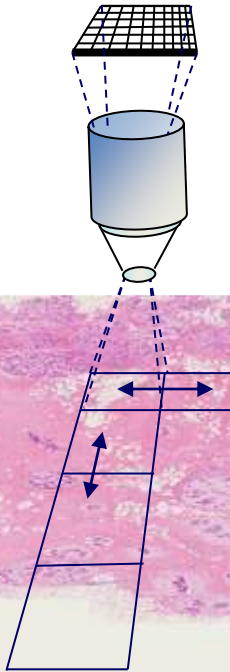


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Area sensor vs. TDI sensor

Area scanners

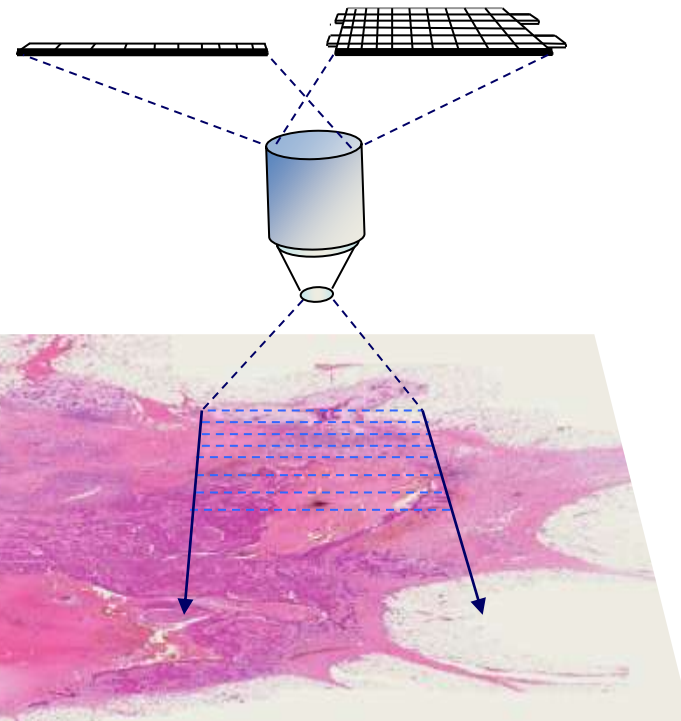
Camera sensor (1600x1200 pixel)



Line scanners

(4096 pixel)

($\geq 64 \times 4096$ pixel)

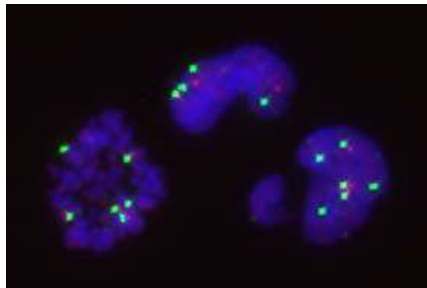




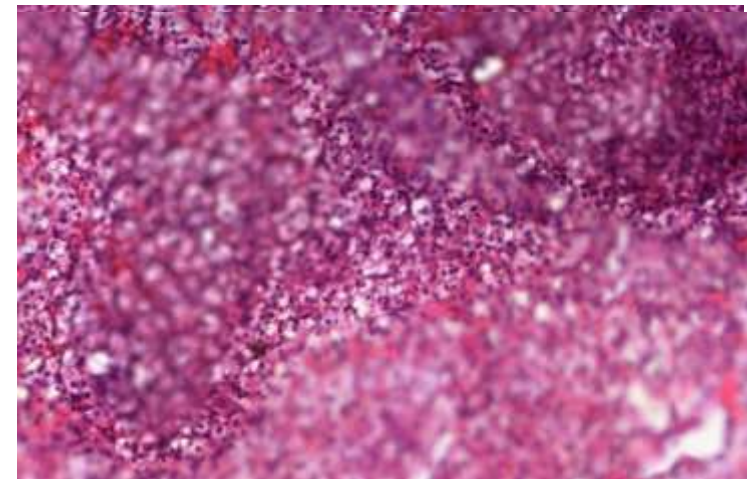
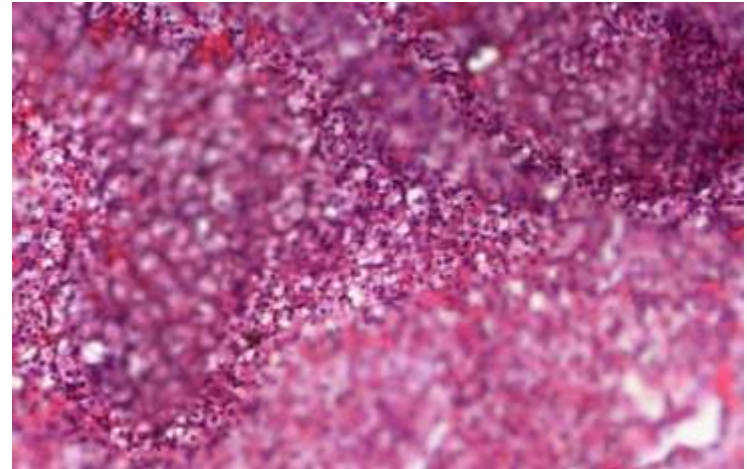
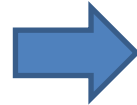
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Area camera advantages

- **Very good co-localization**
 - **Important for FISH**



- **Z-Stack, BF and FL**
 - **More than 29 levels**
 - **0.2 micron min step size**
- **Extended focus**





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Dedicated cameras for BF and FL

- **Allows for excellent image quality**
- **Allows for high dynamic range**
- **Automated switch in less than 2 seconds**

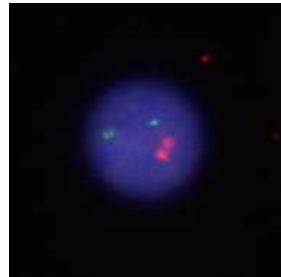




Fluorescence

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- ✓ **9 Arbitrary FL Filters**
- ✓ **Lumencor light source**
 - **Solid-State, 6 channels**
 - **brighter than other lamps**
- ✓ **PCO Edge sCMOS camera**
 - **16-bit, 2.5 megapixel, 40 fps**
 - **low noise, controls Lumencor**
- ✓ **FISH**





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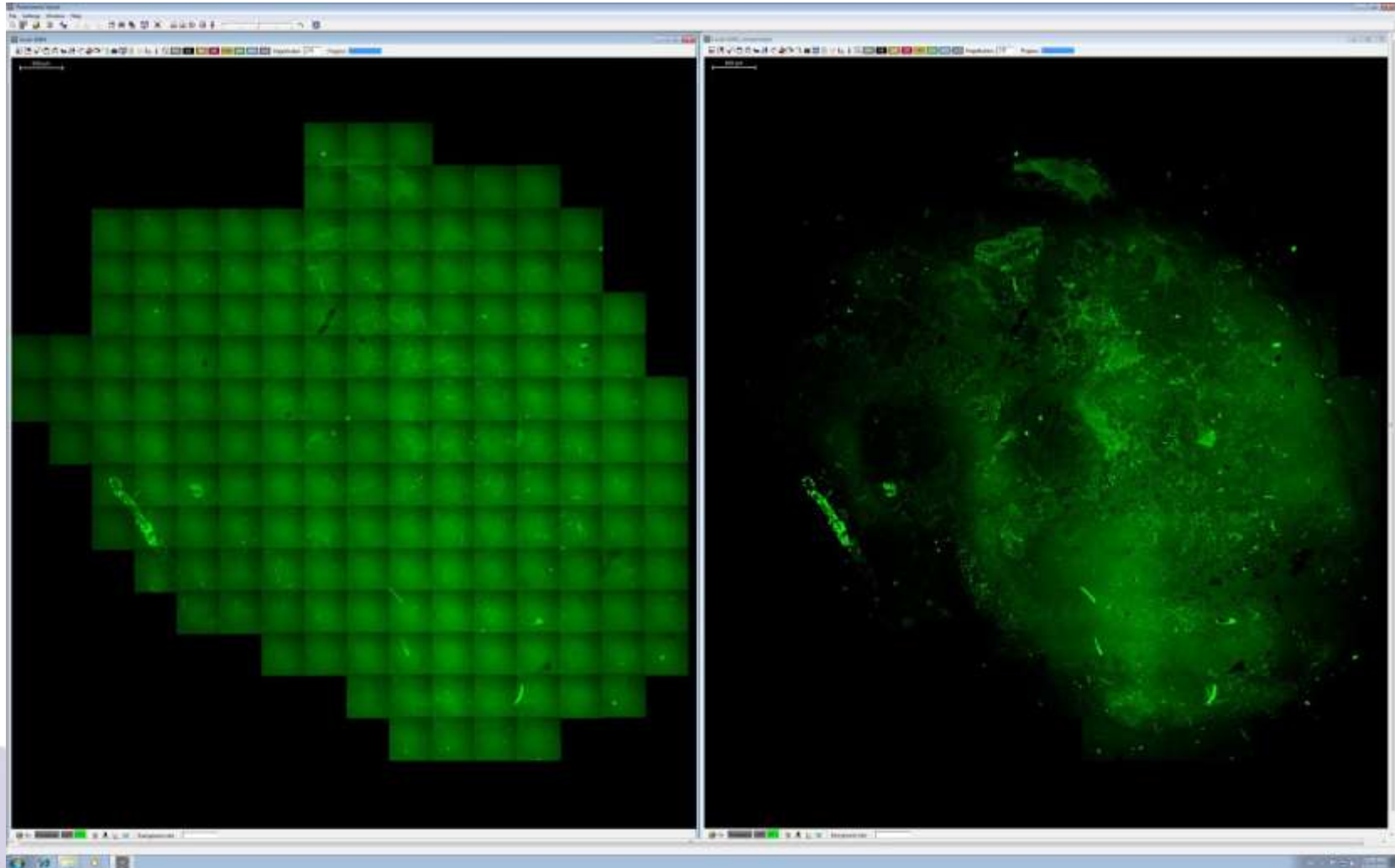
16-bit Fluorescence imaging

- **Competitors have only max 10-bit**
- **Capture faint signals without washing out strong ones – high dynamic range**
- **Allows for high quality image processing without loosing relevant information**
- **JPEG 2000**



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Improved Image compensation in FL

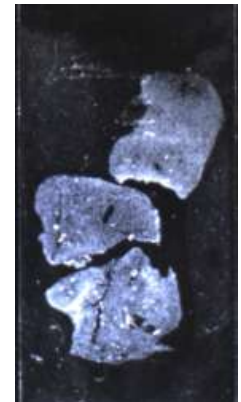




Dark Field Preview

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- **Makes FL stained samples detectable**
- **Reduces false signals from fingerprints, dust, etc.**
- **Speeds up FL acquisition**
 - **We know where the sample is!**
- **Patented**





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Compact Scanners for every need



Pannoramic DESK
1 slide
BF only



Pannoramic MIDI
12 Slides
BF / FL



Pannoramic 250 FLASH
250 Slides
BF / FL



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Tradition

- **Development since 1996**
- **4th generation scanners**
- **Market leader in Europe**
- **Second in worldwide sales**
 - **Over 500 units sold**
- **Best Components, Expertise**
- **Collaboration with pathologists**
- **Workflow support**
 - **HIS/LIS integration**



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Thank you for your attention!

Questions?

Please visit the Sysmex booth for live scans and demos!

<http://www.3dhitech.com>

<http://pathonet.org>

<http://slides.3dhitech.com/casecenter>

<http://www.sysmex-lifescience.com/>

<http://scanner-contest.charite.de/en/>