

# Zeiss Axio Scan.Z1

Location: HSC (Building 586) Room 60



The Zeiss Axio-Scan.Z1 is a fast and flexible slide scanner that digitizes specimens to produce high-quality virtual slides. In addition to brightfield slide scanning, the Axio-Scan.Z1 uses LED lights to scan up to nine fluorescent channels. Up to 100 slides can be loaded onto the scanner, making it suitable for large projects, including digital archives. Scanned images are saved as CZI files and can be viewed using Zeiss freeware Zen-lite or third-party image analysis programs.

## Main features of Axio Scan.Z1:

- Holds up to 100 slides.
- Able to image both bright-field (e.g. H&E slides) and up to nine-colour fluorescent samples.

- Image areas can be detected automatically or marked out, to form montages of the whole sample, or multiple samples on each slide
- Setup wizard to guide users through optimising image acquisition and autofocus parameters.
- Once setup, the system can be left for unattended automated scanning e.g. overnight

## Light Sources:

In addition to an internal lamp for brightfield imaging, the Axio Scan.Z1 has an X-Cite 120LED source for fluorescent imaging.

## Filter cubes for LEDs:

The scanner has a 10 position filter turret to fit most fluorophores. The Zen profile wizard is used to pick filter to match your imaging needs. Alternate filter cubes can be installed for specialty applications. Please consult with Cell Imaging staff for consultation and assistance.

Filter Position	Excitation (nm)	Emission (nm)	Typical Fluorophores	Opal Dye
1	empty	empty	Brightfield	
2	325-375	435-485	DAPI	
3	426-446	465-495	Cyan, Protein	480
4	480-500	510-530	Alexa Fluor 488	520
5	510-530	540-560	Alexa Fluor 489	540
6	538-562	570-640	HE, DsRed, Alexa Fluor 555	570
7	568-592	610-640	Alexa Fluor 568	620
8	610-630	645-675	Alexa Fluor 660	650
9	625-655	666-715	Cy5	
10	650-680	695-755	Alexa Fluor 680	690

## Objectives:

Objective	Magnification	Immersion	Numerical Apperture	Correction Ring	Coverglass (mm)	Working Distance (mm)
EC Plan-Neofluar M27	2.5X	Air	0.085		0.17	8.8
Fluor M27	2.5X	Air	0.12		0.17	8.7
Fluar M27	5X	Air	0.25		0.17	12.5
Plan Apo M27	10X	Air	0.45		0.17	2.1

Plan Apo M27	20X	Air	0.8		0.17	0.55
Plan Apo Korr M27	40X	Air	0.95		0.13-0.21	0.25

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