

Dactyloscopy Workstation – Lucia Forensic

Introduction

The dactyloscopy workstation for fingerprint imaging, processing, and comparison is built on combination of USB 3 monochromatic CMOS camera with high quality Schneider Kreuznach macro lens with fixed focal length providing excellent image quality without aberrations in the resolution range 600 – 2000 PPI. This imaging unit is mounted on the column with adjustable position of the camera. Objective is focused manually. The object is illuminated with a pair of LED panels with adjustable light temperature. Image capturing, calibration, processing, annotation, measurements, and comparison are integrated into the LUCIA Forensic software. Software supports newest PC hardware and software as Windows 10 operating system and 4k monitor.

There are 2 alternative cameras available providing different field of view. The image quality and resolution range is same.

There are 2 alternative stages – a stage with free working area and coarse and fine focusing and a stage with a baseboard with grid and coarse focusing only.

Available cameras

There are 2 cameras available for this application:

- A) Basic: 5.0 MP CMOS USB3 camera, 2448 x 2048 px, pixel size 3.45 μm , 12 bit, up to 35 fps.
- B) Large field of view (FOV): 12.3 MP CMOS USB3 camera, 4096 x 3000 px, pixel size 3.45 μm , 12 bit, up to 30 fps.

	12.3 MP camera		5.0 MP camera		
	<i>PPI</i>	<i>FOV x (mm)</i>	<i>FOV y (mm)</i>	<i>FOV x (mm)</i>	<i>FOV y (mm)</i>
	2000	52	38	31	26
	1500	69	51	42	35
	1000	103	76	62	52
MAX PPI	2690	38	28	23	19
MAX FOV	570	184	135	109	91

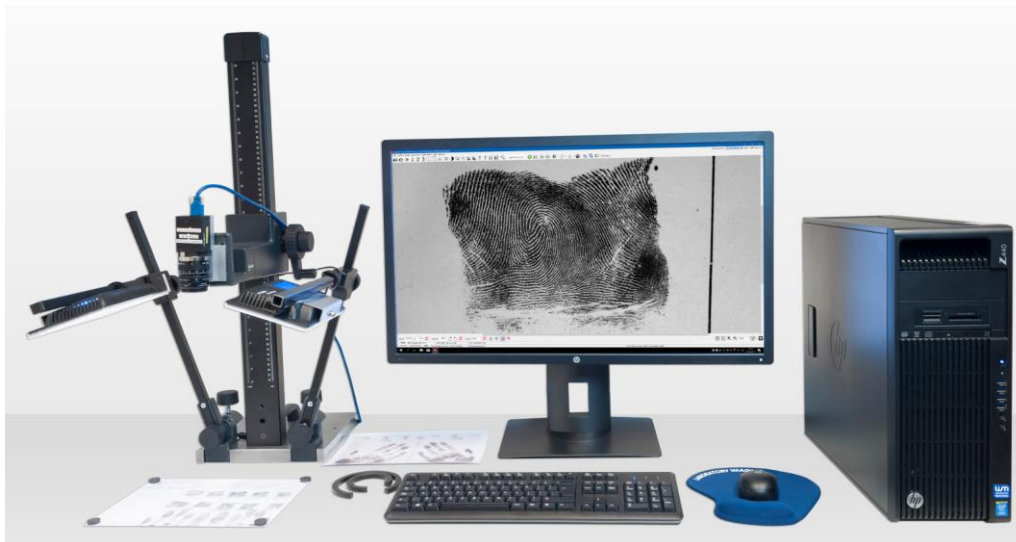
Illumination

1 pair of LED panels with adjustable color temperature (3000 – 8000K) and power (up to 14 W each panel).

Recommended PC

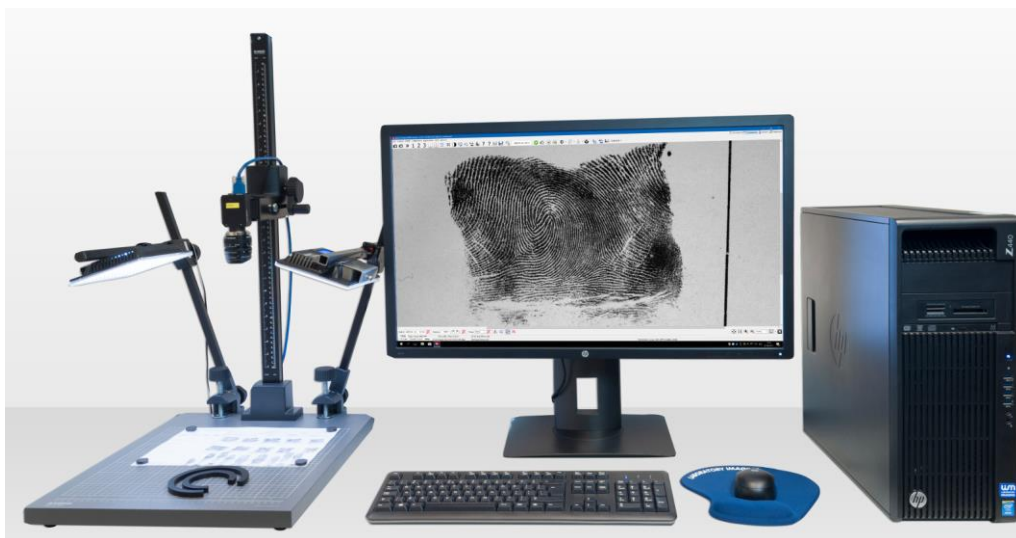
PC – standard	Quad-core Intel i7 CPU, 16 GB RAM, 256 GB SSD + 1 TB HDD
PC – performance	6-core Intel Xeon E5 CPU, 32 GB RAM, GPU nVidia GeForce GTX 1050TI, 512 GB SSD + 1 TB HDD
Monitor	27" or 31.5", 16:9 4K UHD (3840x2160)
OS	Windows 10

FREE worktable variant with precise focusing



- Freely working area – small heavy base fixing the column
- Coarse and also fine positioning of the camera distance from object – more comfortable and precise focusing

BASEBOARD variant



- Stage with a baseboard with a grid
- Only coarse positioning of the camera available
- Lower price