Regula
forensic science systems

VIDEO SPECTRAL COMPARATOR

REGULA 4306

The device is intended for advanced authenticity verification of passports, ID cards, travel documents, passport stamps, banknotes, driver's licenses, vehicle registration certificates and other vehicle related documents, signatures and handwritten records, paintings, revenue stamps and other security documents.

LIGHT SOURCES			
Incident	white D50		
	ultraviolet	UVA LED – 395 nm	
		UVA LED – 365 nm	
		UVB LED – 313 nm	
		UVC LED – 254 nm	
	infrared	700 nm	
		780 nm	
		850 nm	
		950 nm	
		1020 nm	
Oblique	2×white (left and right)		
	2×infrared 870 nm (left and right)		
For 3D visualization	white		
	infrared 850 nm		
Transmitted	white		
	infrared	870 nm	
		780 nm	
	ultraviolet 365 nm		
	spot	white	
		infrared	950 nm
			850 nm
			780 nm
Coaxial white			
For OVD visualization	horizontal: 31 LEDs		
	vertical: 16 LEDs		
High-intensity LEDs for IR luminescence	Violet – 395 nm		
	Violet – 420 nm		
	Royal Blue – 450 nm		
	Blue – 470 nm		
	Cyan – 505 nm		
	Green – 530 nm		

	Amber – 590 nm
	Red-orange – 615 nm
	Red – 635 nm
	Deep red – 660 nm
	Far red – 700 nm
	Far red – 735 nm
High-intensity, spot, incident	white D50
	ultraviolet 365 nm
Polarized	white with linear polarization
	white with anti-clockwise circular polarization
	white with clockwise circular polarization

FILTERS	
IR High-pass 515 nm	IR High-pass 715 nm
IR High-pass 530 nm	IR High-pass 730 nm
IR High-pass 550 nm	IR High-pass 780 nm
IR High-pass 570 nm	IR High-pass 830 nm
IR High-pass 590 nm	IR High-pass 850 nm
IR High-pass 610 nm	IR High-pass 1000 nm
IR High-pass 630 nm	Visible pass 370–700 nm
IR High-pass 645 nm	UV cut off 450–700 nm
IR High-pass 665 nm	Neutral
IR High-pass 695 nm	

CAMERA

- Image sensor — CMOS BSI
- Sensor resolution — 18 Mp
- Frame size — 2880×2160 pixels
- Spectral range — 340-1100 nm
- Camera zoom — in the range of 1-30x with an additional fixed gradation of 60x
- On-screen zoom — up to x135 (approx.) on a 32” 4K UHD monitor
- Digital zoom — 10x
- Field of view — 216×162 mm (±5%), minimum field of view 3.9×2.9 mm (±5%)
- Field of view — 265×199 mm (±5%) (without the object stage)
- Extended field of view — 296×222 mm (±5%) (frame size 3216×2412 pixels)
- Possibility to capture A4 document without the object stage
- Hardware based autofocus
- Maximum Integration time — 3200 ms
- Increased sensitivity mode
- Resolution — up to 18900 ppi

SOFTWARE FEATURES

- 4095 combination of IR Luminescence narrowband high-intensity lights
- IR Luminescence Visualization (auto capture mode and visualization)
- Pseudo-color mode for IR Luminescence
- Automatic and manual focus, aperture, white balance control
- Manual Aperture control
- Glare free image for incident white and IR 850 nm light sources
- Pulsed 365 nm UV LEDs for differentiating fluorescent and phosphorescent security ink
- High Dynamic Range Imaging (HDRI) technology to generate images for the 365 nm UV light source (HDR images)
- Multi focus image
- Visualization of retroreflective protection
- Visualization of Invisible Personal Information (IPI™)
- Both vertical and horizontal scanning of Diffractive Optically-Variable Devices/Holograms
- ICAO MRZ reading for ID-1, ID-2, ID-3 documents
- 1D, 2D and QR codes processing
- Video recording
- Integration with Regula Information Reference Systems
- Letterscreen++ (optionally)
- Saved document format — .BMP, .JPG, .TGA, .TIFF
- Save all camera parameters into the image
- Possibility to restore shooting conditions
- Image post processing
- Super resolution image (24.8 Mp)
- Examination reports
- Acquire RAW images

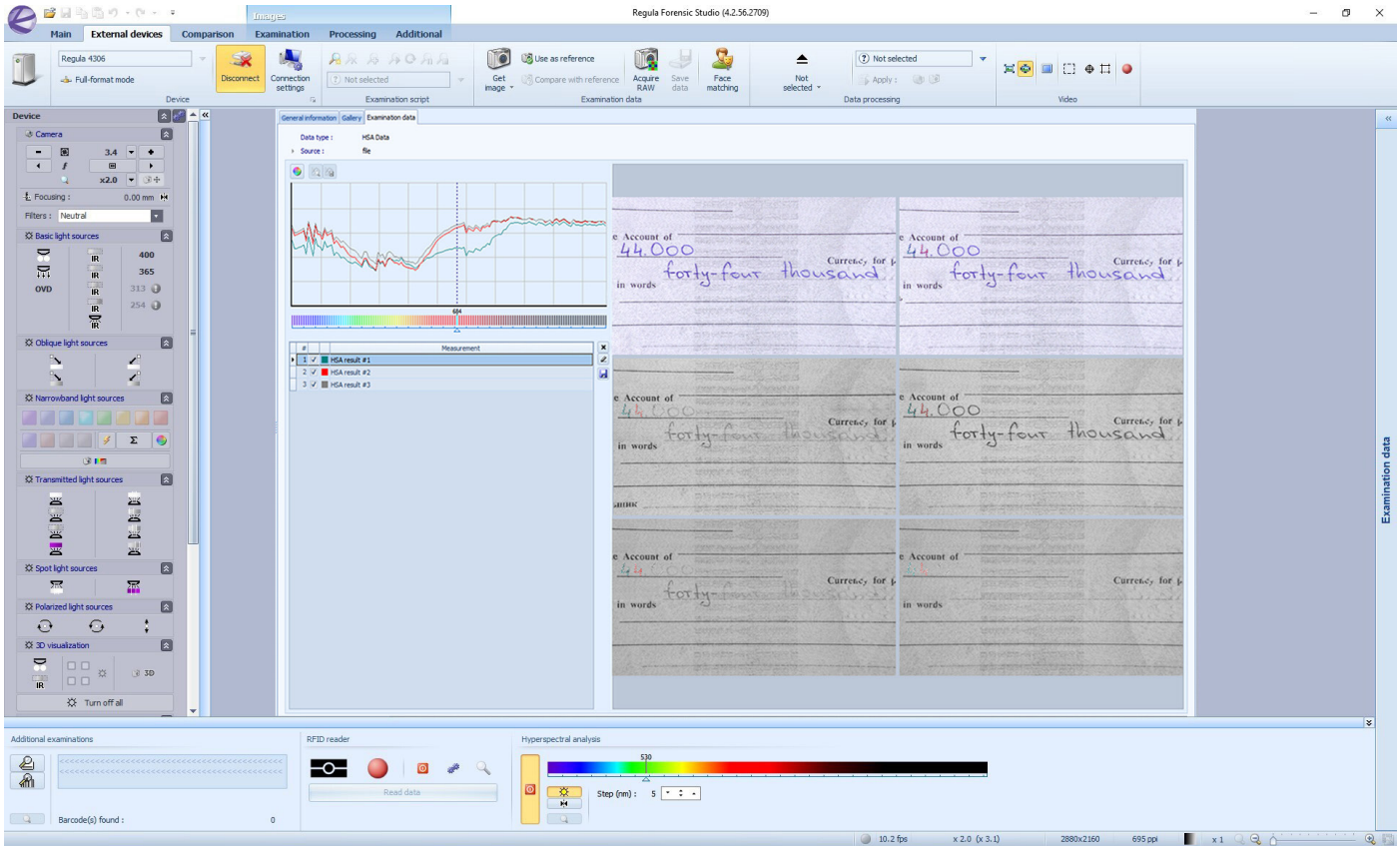
HYPERSPECTRAL IMAGING MODULE

395-1000 nm wavelength range with a step up to 1 nm

The hyperspectral analysis module significantly extends capabilities for differentiating inks used in printed documents, as well as those used in handwritten records and signatures, prints of seals and stamps. This helps an expert to:

- examine various printed documents in order to determine whether they have the same source of origin
- detect alterations (if any) made to the original content of examined documents
- restore the original content of altered handwritten records
- restore the content of obliterated texts and records, etc.

The examination is carried out by non-destructive method, namely by examining and comparing the spectral characteristics (reflectance spectrum) of document areas on a series of document images. The series is captured in the wavelength range of 395-1000 nm with a step of 1 nm.



HARDWARE FEATURE

- Integrated RFID Reader
  - ◊ Supported standards — ISO 14443: type A and B
  - ◊ Data exchange rate, kBaud — 106, 212, 424, 848
- Connection to the PC — USB 3.1 Gen 1
- Built in sensors to prevent unintended exposure from UVB and UVC radiation hazard
- Removable object stage for thick document examination
- Magnetic holders for side flaps
- Three USB ports for external devices (One inside the device, two — outside)
- Additional front and back flaps (for work without the object stage)
- Document clamps — 2 pcs
- Mirror for OVI visualization
- Mirror for examination of the document edge (optionally)
- Dust-proof case (optionally)
- Quartz Glass Holding Plate — 200×200×5 mm (L×W×H) (optionally)
- MRZ reading for ID-1, ID-2, ID-3 documents
- RFID reader (ISO 14443) (built-in)
- 1D, 2D and QR codes processing

ADDITIONAL EQUIPMENT

- Spectral Luminescent Magnifier Regula 4147
- Visualizer of magnetic properties Regula 4197

Contact us

www.regulaforensics.com