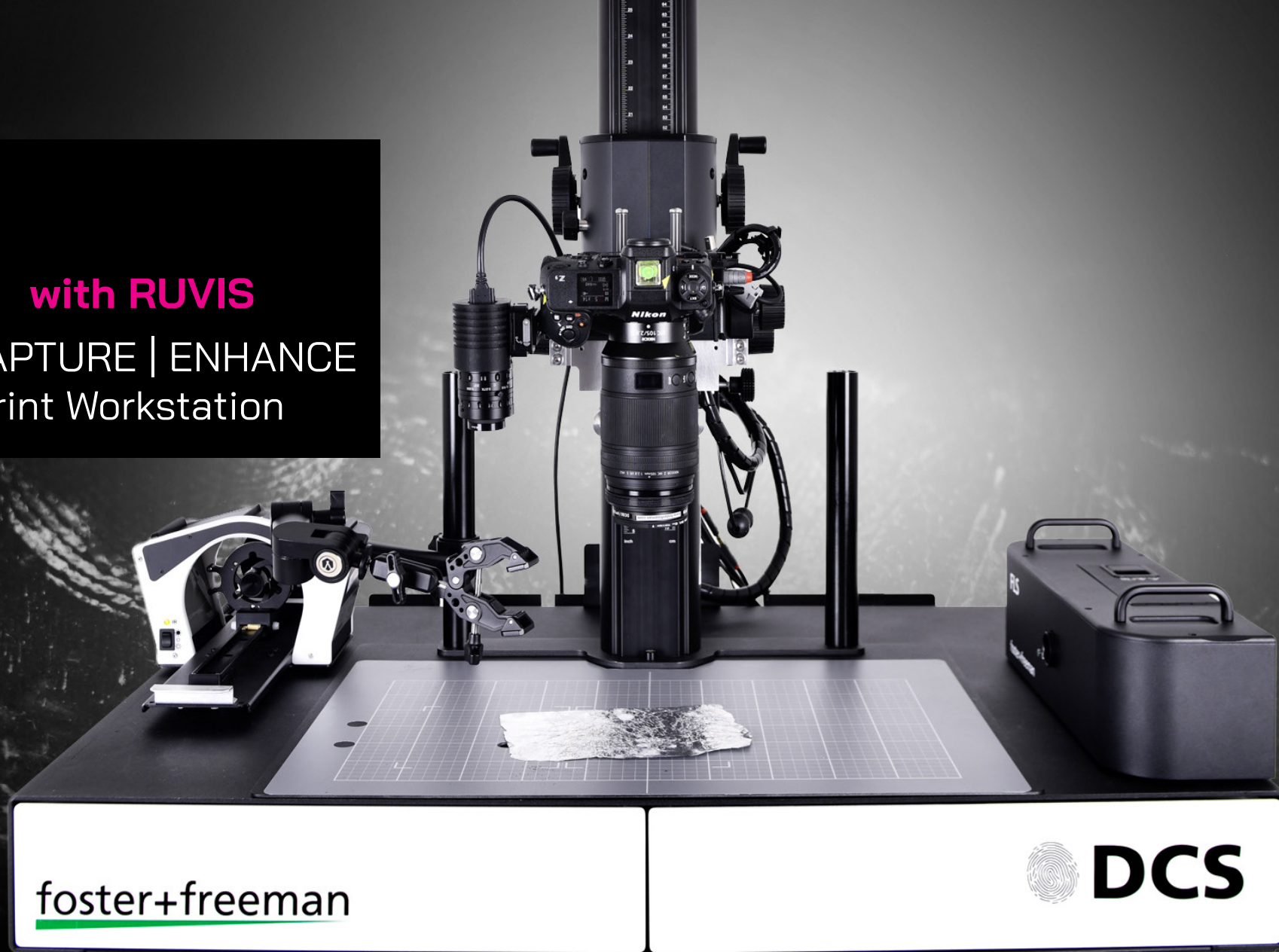


DCS[®] 6 with RUVIS

VISUALISE | CAPTURE | ENHANCE
Expert Fingerprint Workstation



foster+freeman

A large Nikon Z9 mirrorless camera with a long lens is mounted on a black base. A blue light is projected from the base onto a surface below, where a fingerprint is visible. The background is dark and out of focus.

DCS® 6

REVEAL AND RECOVER MAXIMUM RIDGE DETAIL
FROM EVERY FINGERPRINT ON ANY SURFACE

DCS 6 Beyond Expectations

Ten years since DCS took fingerprint imaging beyond the visible spectrum, the benchmark for fingerprint photography has been raised beyond expectations with the new DCS 6 workstation complete with RUVIS latent print capability.

Built around the modified Nikon Z9 mirrorless camera, DCS 6 includes powerful new print enhancement features and a comprehensive photographic toolset for the visualisation, capture, and enhancement of latent and treated fingerprints as evidence.

A close-up view of the front of the camera lens, showing the UV filter and the lens elements. The lens is black and has some text on it, including "UV" and "0.21X".

DCS RUVIS
High-contrast fingerprints
Minimal background interference

Latent print examiners can now, for the first time ever, combine DCS-level imaging with the incredible fingerprint contrast enhancement technique that is RUVIS (Reflected-UV Imaging).

Providing game-changing results, RUVIS offers a highly effective, and time-efficient method for visualising and capturing latent and simply treated fingerprints (superglue etc.)

Visualise

The ultimate multi-spectral illumination toolset

Precisely control high-intensity light across the extended forensic bandwidth (UV-A to Infrared) to reveal latent, patent, dusted, and chemically processed fingerprints with unparalleled clarity.

Capture

Reveal and capture with absolute clarity

At the heart of DCS 6, the custom-modified Nikon Z9 flagship camera ensures accurate ridge clarity and capture of fine detail. The optional RUVIS module is the first of its kind to offer quick and easy capture of prints and marks that exist outside the visual spectrum.

Enhance

Unlock the evidential value of every fingerprint using a radically improved DCS software platform that simplifies the most complex imaging tasks.



DCS 6 : USING RUVIS TO REVEAL FINGERPRINTS

DCS® 6

DCS 6 VISUALISE: THE ULTIMATE MULTI-SPECTRAL ILLUMINATION TOOLSET

Mastery of Light

To capture high-quality identifiable fingerprints, ridge detail must first be visualised using a combination of imaging and illumination techniques engineered to meet the endless variable and challenges presented by fingerprint photography.

DCS 6 offers examiners a comprehensive selection of illumination sources and visualisation accessories including:



Crime-lite 8x4MK2 Multi-spectral LED ring light delivers 98x color combinations to excite fluorescence and suppress backgrounds.



Crime-lite 8x4MK4 For cutting-edge IR techniques, optimised for fpNatural powders with powerful Blue, Red, and IR LEDs.



Crime-lite 82S Pro UV (280nm & 365nm) Intense, directional UV radiation for fluorescence and Reflected-UV applications.



FLS and Halogen Light Sources Provide white light and continuous visible to IR narrowband illumination via fibre optic light guides.

Visualise



Coaxial Light Box



Goosenecks



Ring Light



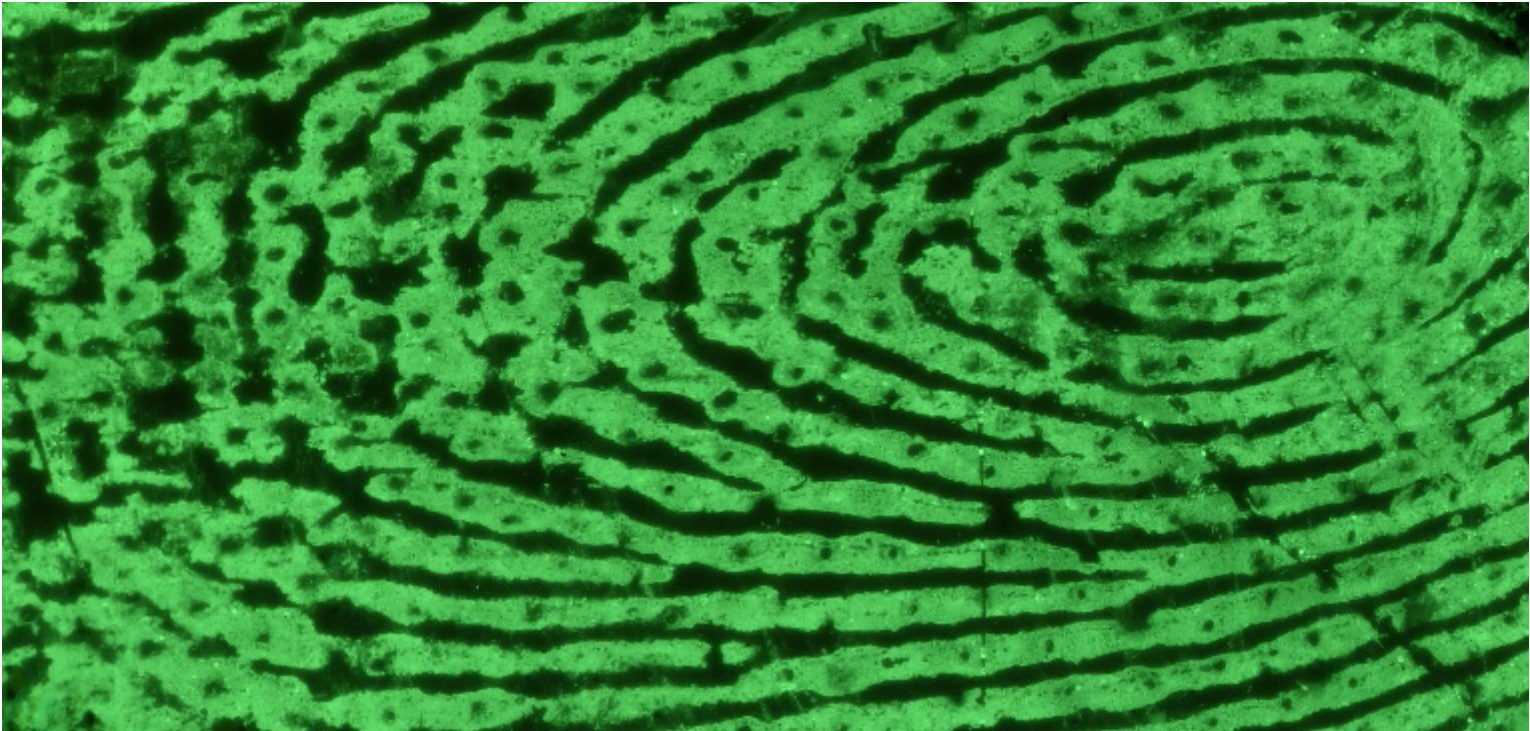
Darkfield Ring Light



Line Light



Transmitted/Paddle



VISUALISATION USING LIGHT: IMAGING FLUORESCENT FINGERPRINTS

DIRECTIONAL SHAPE LIGHT TO REVEAL DETAIL

Manipulate light using specialised guides (ring, paddle, goosenecks, etc.) to reveal 3D ridge detail, enhance contrast on irregular surfaces, and differentiate prints regardless of exhibit shape or texture.

FLS

HALOGEN

CL82 PRO UV

CONTRAST MAXIMISE PRINT VISIBILITY

Maximise print visibility against challenging backgrounds using complimentary or contrasting illumination, to bring out hidden ridge patterns with enhanced clarity for photographic capture.

CL8X4 MK2

CL8X4 MK4

CL82 PRO UV

FLUORESCENCE REVEAL INVISIBLE DETAILS

Employ multi-waveband excitation to activate fluorescence and cause treated or naturally occurring latent fingerprint components to glow. An essential technique that dramatically enhances fingerprint visualisation.

FLS

HALOGEN

CL82 PRO UV

CL8X4 MK2

BEYOND VISIBLE (IR) EXCEED THE LIMITATIONS OF VISION

Exploit the natural IR absorption/reflectance properties of materials or excite fpNatural IR-fluorescent powders. Ideal for visualising prints on challenging substrates where other methods fail.

FLS

CL8X4 MK4



DCS® 6

DCS 6 CAPTURE: A STEP-CHANGE IN OPTICAL QUALITY AND PRECISION

Exceptional Imaging

Above all else, every DCS system is a professional photography workstation of the highest quality. As such, DCS 6 has been configured around the custom-modified flagship NIKON Z9 full-frame mirrorless camera.

"As close to perfect as you can imagine", the NIKON Z9 is the first mirrorless camera to be incorporated into a DCS workstation and offers a powerful feature set ideally suited to the photographic capture of fingerprints:

45.7MP

High-Megapixel Imaging Captures exceptionally fine fingerprint ridge details and minute characteristics

UV-IR

Full-Spectral Conversion Expands the Z9 spectral range to enable full-spectrum imaging from UV-A to Near-IR.

AF

Advanced AutoFocus Precise and rapid autofocus ensures sharp focus on the fingerprint evidence, even at close macro distances.

Z9+

Optimised for Fingerprint Photography Captures enhanced detail across a wider dynamic range and delivers exceptionally low-noise images, ideal for critical low-light fluorescence applications.

Capture



DCS 6 WORKSTATION

Robust, Pro-Grade Copy Stand with Storage

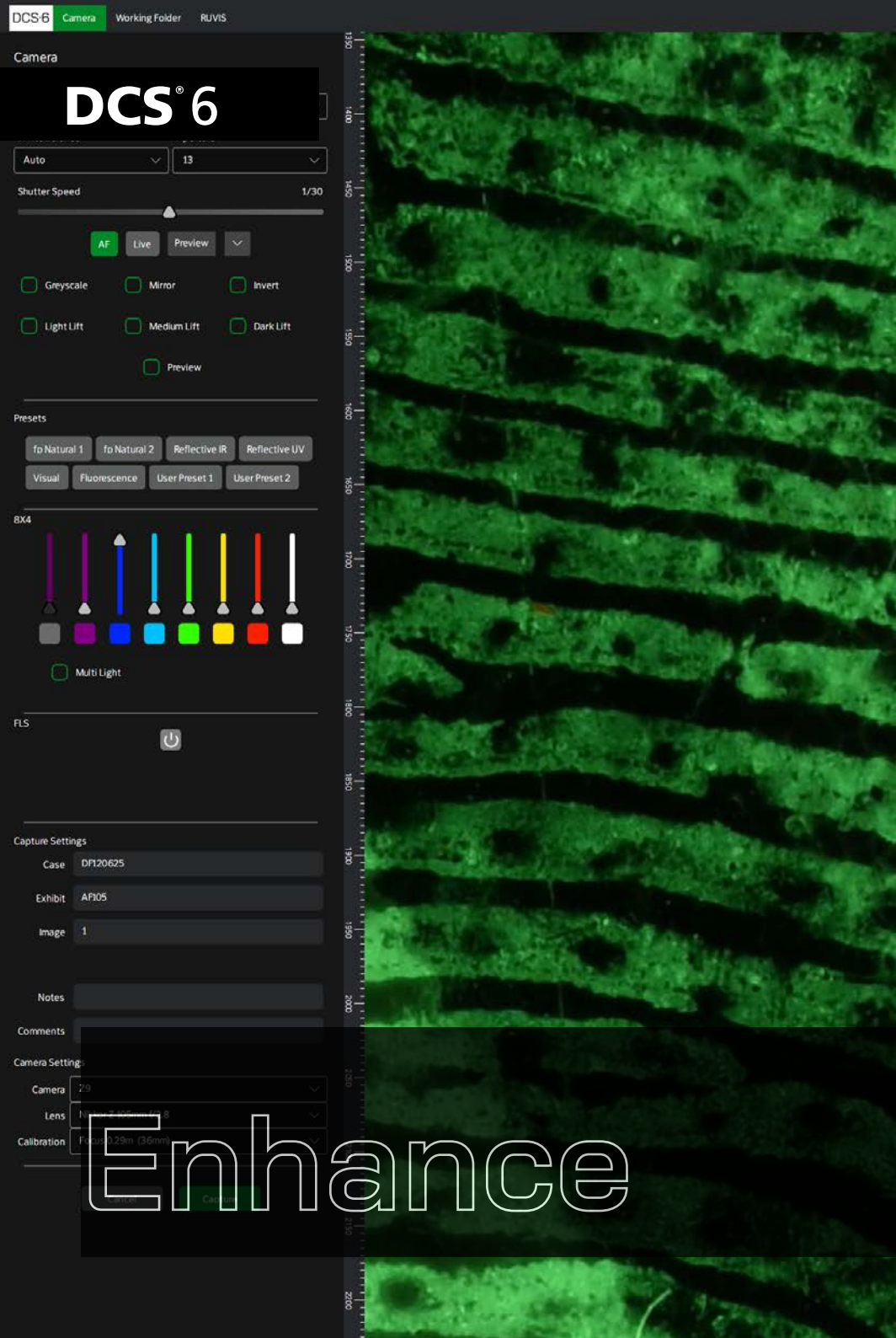
Optimised through 25 years of extensive user input, DCS 6 prioritises precision and the user experience, not least in its professional copystand workstation.

Providing a significant upgrade to the user experience, the DCS 6 workstation features a heavy-weight column and precision engineered imaging base with locations for every light source accessory.

Two Accessory Storage Drawers contain custom foam cut-outs for the safe and tidy storage of valuable filters and accessories.



DCS 6 WORKSTATION: COMPLETE WITH STORAGE (TABLE NOT INCLUDED)



DCS 6 ENHANCE: RETRIEVE AND REVEAL AFIS-QUALITY FINGERPRINTS

Maximise Every Detail

A significant update, the DCS 6 user interface elevates the digital enhancement process, providing a clean intuitive workspace with logically organised panels providing immediate access to essential tools.

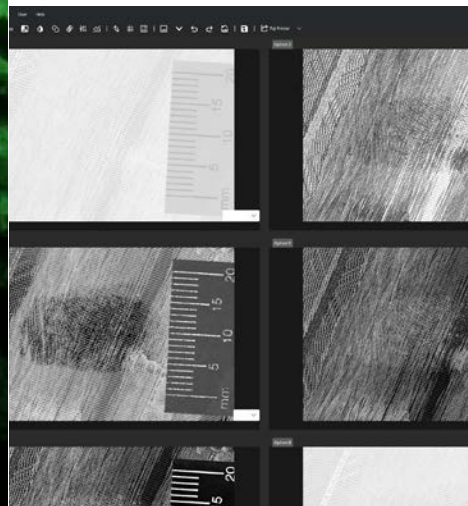
For complete confidence in evidence, SHA-256 Image Tamper Detection (ITD) tracks and records every image interaction to provide irrefutable proof of authenticity and the integrity of the forensic process.

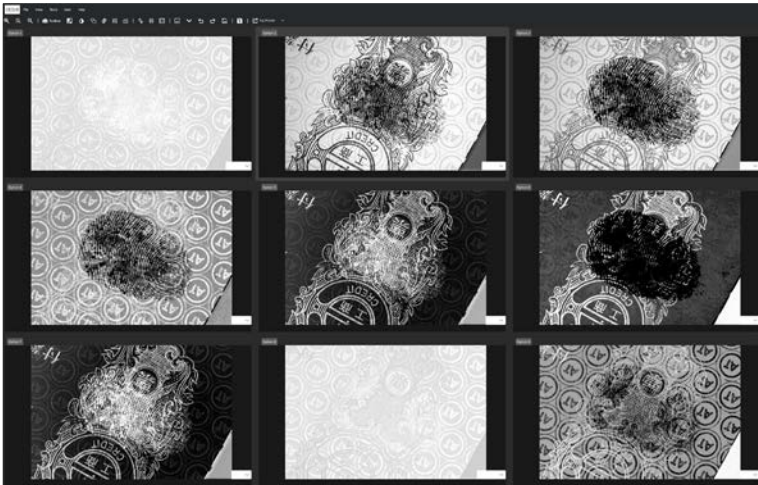


DCS S-I-S Standalone Imaging Suite Access DCS 6 Software Tools from any PC

For the first time, the powerful DCS imaging suite, with its full post-capture enhancement capabilities and ITD Audit Trail, can be remotely installed and operated on a separate PC, independent of the DCS 6 workstation.

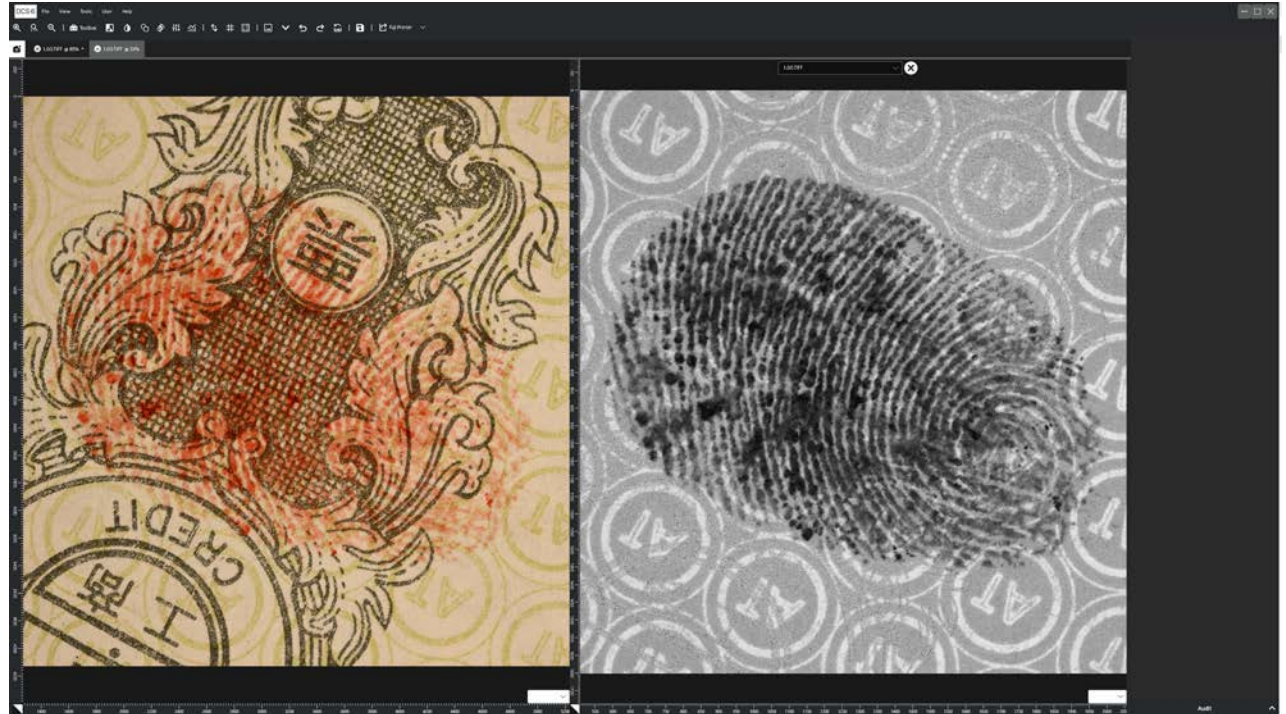
This enables laboratories to seamlessly separate capture and enhancement processes, perfectly matching their desired workflow and operational requirements.



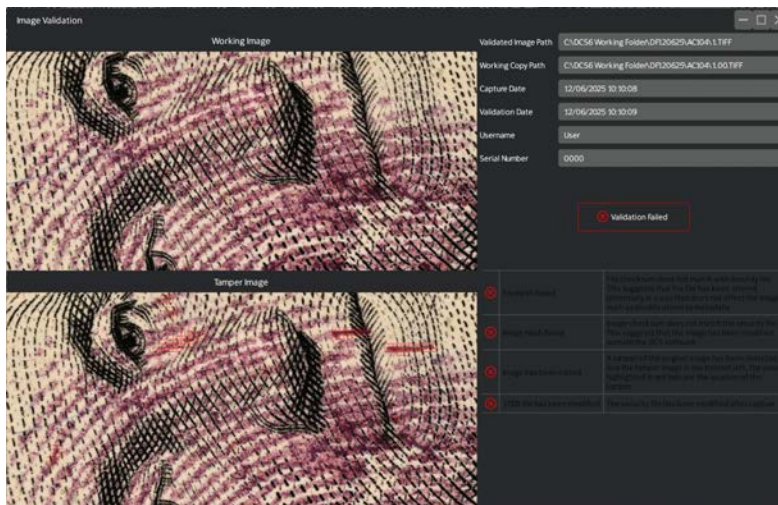


Complex Enhancements, Simply Applied

Central to DCS's success is its powerful, yet uncomplicated, image enhancement. DCS 6 elevates this, significantly boosting enhancement potential while further streamlining workflows for consistently impressive results.



ENHANCEMENT TOOLBOX: IRREGULAR BACKGROUND REMOVAL



DCS 6 IMAGE TAMPER DETECTION (ITD)

For complete confidence in fingerprint evidence

Providing unwavering trust in the forensic process, the DCS 6 Image Tamper Detection system features SHA-256 hashing and comprehensive audit logging, to provide irrefutable proof of image integrity from capture to court.

Logging every enhancement step from capture to save/output

Every action performed on an image within the DCS 6 or DCS RUVIS system, from the initial capture settings to each enhancement applied and the final output format, is automatically recorded with a timestamp and user identification. The detailed log allows examiners to precisely understand and replicate the entire image processing workflow, ensuring the process is transparent and the results can be independently verified.





DCS® 6

DCS 6 RUVIS: HIGH-CONTRAST FINGERPRINT VISUALISATION TECHNIQUE

Game Changing Results

The latest addition to the DCS imaging toolset, DCS RUVIS is a powerful Reflected-UV Imaging solution for the high-contrast visualisation and capture of latent and minimally treated fingerprints.

Pairing DCS-level imaging with the incredible fingerprint contrast enhancement technique that is shortwave (280nm) Reflected-UV imaging, DCS RUVIS is a highly effective, and time-efficient method for visualising and capturing latent fingerprints, particularly on 'difficult' multi-coloured or patterned surfaces.

DCS6 RUVIS hardware includes:



DCS RUVIS Shortwave UV Imaging Camera

High-sensitivity invisible light spectrum camera captures AFIS-ready 1000ppi fingerprint images.

35mm RUVIS Imaging Lens

Manual-focus imaging lens provides 200-1100nm transmission.

Crime-lite 82S PRO UV 280nm

Handheld, 16x LED source provides intense shortwave UV for RUVIS. Simply angle and manoeuvre the light source to maximise UV scattering and reveal greater detail.

RUVIS

DCS 6 RUVIS: SHORTWAVE REFLECTED UV IMAGING OF LATENT & MINIMALLY PROCESSED FINGERPRINTS



DCS 6 RUVIS: USING RUVIS TO REVEAL FINGERPRINTS ON PACKAGING AND POLYMER, MINIMALLY TREATED WITH CYANOCRYLATE



DCS 6 RUVIS: Reflected Ultra-Violet Imaging System

A powerful and effective technique, capable of eliminating background interference

While RUVIS has long been a recognised fingerprint visualisation technique, recent advancements in component technology now enables examiners, for the first time, to achieve DCS-quality fingermark images using this powerful method.

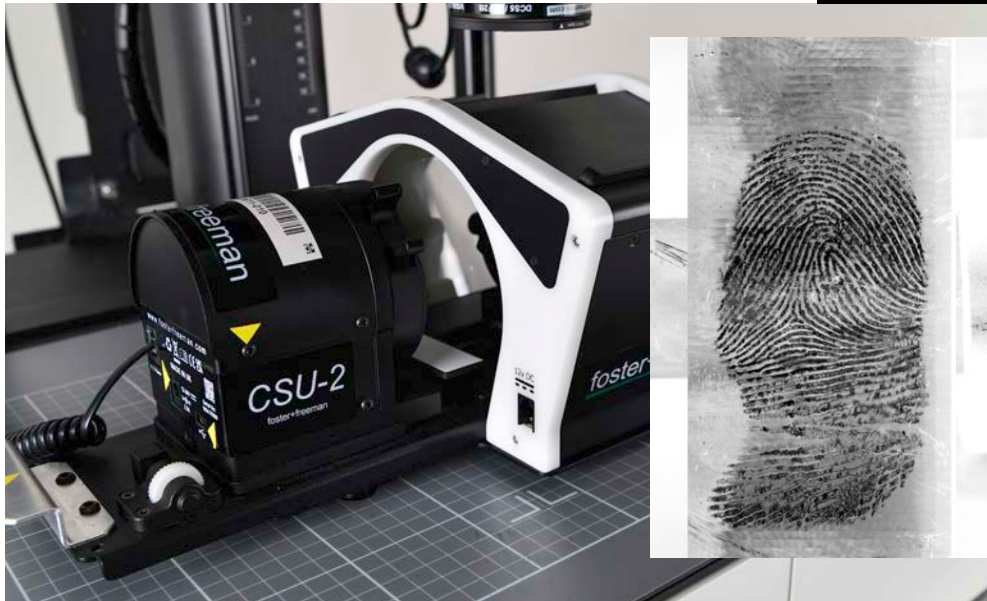
RUVIS: Mitigating Risks for Unprecedented Detail

While shortwave UV requires careful workflow planning and full PPE provision with DCS 6 due to health and DNA degradation risks, this consideration is far outweighed by RUVIS's powerful capability to reveal exceptional detail from latent or minimally treated fingerprints, enabling enhanced forensic analysis.



Cylindrical Surface Unwrapping (CSU)

DCS6/KIT/015



For the capture of fingerprints from cylindrical surfaces (bullet casings, pens, hand tools etc.) the CSU uniformly rotates items of evidence while the DCS 6 captures, stitches, and blends a series of images together to create a single 2D image.

CSU imaging is further enhanced with uniform illumination provided by the Polarised Light Tunnel (PLT).

Cylindrical Surface Unwrapper



Polarised Light Tunnel



Tilt and Shift Imaging

DCS6/KIT/009



For larger curved items and surfaces the Tilt/Shift lens can be used to control perspective and depth of field, increasing the area of focus.

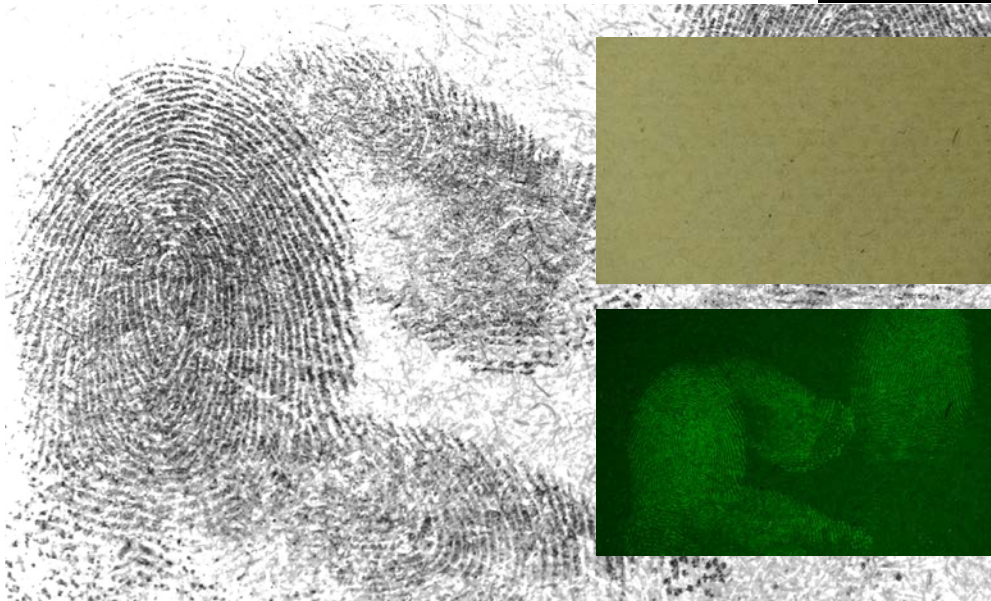
Suitable for visible and fluorescence photography, the Tilt/Shift lens provides the flexibility to ensure maximum sharpness and accurate representation of fingerprints on challenging surfaces, overcoming limitations of traditional lenses.

Tilt/Shift Lens



Band Pass Imaging

DCS6/KIT/017



A specialist Crime-lite 8x4MK2 imaging filter for the examination of fingerprints treated with 1,2-indandione.

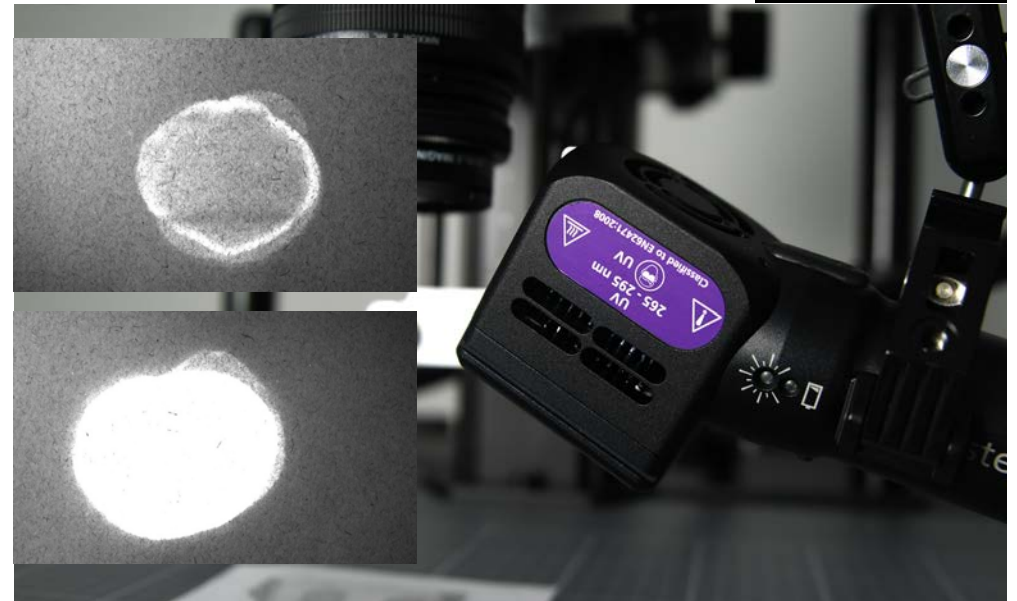
The 560nm bandpass filter blocks the green excitation illumination, and any background fluorescence, allowing only the fingerprint's distinct emission to be captured, significantly enhancing contrast and visibility.

BandPass Filter



RUVIS: Narcotics and Synthetics

DCS6/RUVIS/FILTER2



Sub-visible RUVIS imaging is a powerful tool for detecting illicit substances like synthetic opioids and cannabinoids. Criminals often try to smuggle these drugs into prisons and secure facilities by applying them to mail or other printed documents.

Using DCS RUVIS as a screening tool, examiners can reveal the presence of illicit substances without physically contacting the suspect paper. Once detected, documents can then be sent to the laboratory for further qualitative testing.

RUVIS 330nm Filter



The DCS 6 is available in various powerful configurations, from the essential DCS 6 CORE to the comprehensive DCS 6 PRO + RUVIS, each tailored to specific forensic needs. Contact foster+freeman to discuss the full range of options, including seamless upgrade paths for existing DCS 5 installations.

DCS 6 CORE VISIBLE IMAGING SYSTEM

The essential imaging system for experts seeking to visualise & capture fingerprints in the visible spectrum.

DCS 6 PRO FULL-SPECTRAL IMAGING SYSTEM

Exploit the forensic spectrum, from UV-A to Near-IR, to reveal prints and suppress backgrounds.

DCS 6 PRO +RUVIS FULL-SPECTRAL IMAGING WITH RUVIS

Adds the impressive capability of RUVIS imaging to the Full-Spectral PRO Imaging System.

RUVIS ONLY STANDALONE RUVIS SYSTEM

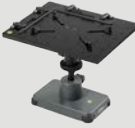
Introduce RUVIS imaging to your fingerprint workflow with the addition of a standalone workstation.

KIT NUMBER	KIT COMPONENTS	DCS 6 CORE	DCS6 PRO	DCS6 PRO RUVIS	RUVIS ONLY
DCS6/KIT/001	DCS6 COPY STAND, COMPUTER, MONITOR & FULL SOFTWARE	✓	✓	✓	
DCS6/KIT/002	NIKON Z9 CAMERA	✓	✓	✓	
DCS6/KIT/003	IR CAMERA FILTERS	✓	✓	✓	
DCS6/KIT/004	LIGHT GUIDE KIT	✓	✓	✓	
DCS6/KIT/006	HALOGEN FIBRE OPTIC LIGHT SOURCE AND FILTERS	✓	✓	✓	
DCS6/KIT/007	FLS LIGHT SOURCE		✓	✓	
DCS6/KIT/008	DCS6 MACRO LENS & VIS PASS FILTER KIT	✓	✓	✓	
DCS6/KIT/010	DCS6 UV IMAGING LENS, LIGHTING AND FILTERING		✓	✓	
DCS6/KIT/011	EXTENSION TUBE SET		✓	✓	
DCS6/KIT/012	DCS6 CL8X4MK2 WHITE LIGHT & VIS FLUORESCENCE INCLUDES FILTERS	✓	✓	✓	
DCS6/KIT/013	DCS6 CL8X4MK4 FOR IR POWDERS 1&2 INCLUDES FILTERS		✓	✓	
DCS6/KIT/014	LINE LIGHT ATTACHMENTS FOR FLS OR HALOGEN LIGHT SOURCES		✓	✓	
DCS6/KIT/022	RUVIS CAMERA, IMAGING LENS, AND CRIME-LITE 82S PRO UV280			✓	✓
DCS6/KIT/001/RUVIS	RUVIS COMPUTER, MONITOR, & SOFTWARE				✓



SYSTEM SPECIFICATION **DCS® 6**

Full technical details are available directly from foster+freeman:

	COPY STAND, PC, MONITOR DCS6/KIT/001 <i>Core system components with software</i> - Professional workstation - Heavy-duty copy stand - Contact f+f for PC and Monitor spec		90mm TILT/SHIFT LENS KIT DCS6/KIT/009 <i>For visible and IR applications</i> 90mm T/S lens with EF-mount 77mm circular polarising filter 77mm visible pass filter		BANDPASS FILTER SET DCS6/KIT/017 <i>Specialist fluorescence imaging filters</i> - BP530nm filter - BP560nm filter with trimming filters - For use with Crime-lite 8x4
	DCS6 NIKON Z9 CAMERA DCS6/KIT/002 <i>Custom-modified mirrorless camera</i> - Megapixels: 45.7 - Sensor type: Full Frame CMOS - Sensor size: 35.9 mm x 23.9 mm		60mm UV-IR IMAGING KIT DCS6/KIT/010 <i>For UV-IR applications (not RUVIS)</i> 60mm quartz glass lens - Crime-lite 82S PRO UV 365 52mm visible pass filter		TRANSMITTED LIGHT PANEL DCS6/KIT/018 <i>A3 illuminated panel/back light</i> - Dimmable 5600K illumination 435mm x 320mm
	INFRARED FILTER SET DCS6/KIT/003 <i>For IR Imaging Applications</i> 4x 72mm camera filters 715nm, 780nm, 850nm, 900nm - Quick release magnetic filter holders		EXTENSION TUBE SET DCS6/KIT/011 <i>Reduces minimum focal distance of lens</i> 10mm and 16mm extension tubes - To be used with (KIT/010) or (KIT/009)		MOBILE PLATFORM DCS6/KIT/019
	LIGHT GUIDE KIT DCS6/KIT/004 <i>Comprehensive light guide set</i> - Collection of 5 specialist light guides - Includes 1.3M fibre optic bundle - for use with FLS and Halogen lights		CRIME-LITE 8X4MK2 DCS6/KIT/012 <i>Multi-wavelength light source (visible)</i> 32xLED multi-wavelength ringlight 11x slot-in lens filters - Photographic lens bellows		EVIDENCE TILT PLATE DCS6/KIT/020 <i>Angle and tilt items of evidence</i> - Accommodates items up to A4 in size - Swivel and tilt in all directions
	MULTI-USE ARM MOUNT DCS6/KIT/005 <i>For positioning light guides or 82S</i> - Compatible with DCS6 copy stand - Durable aluminum alloy - Total arm length: 48cm		CRIME-LITE 8X4MK4 DCS6/KIT/013 <i>Multi-wavelength light source (IR)</i> 32xLED multi-wavelength ringlight 4x slot-in lens filters - Supplied with fpNatural powders		DCS6 PHOTO PRINTER DCS6/KIT/021 <i>Fuji ASK400 Dye-Sublimation Printer</i> 300x300 dpi (Standard mode) 300x600 dpi (High Quality mode)
	HALOGEN LIGHT SOURCE DCS6/KIT/006 <i>High intensity visible illumination</i> 150W halogen light source 150W mirrored halogen lamp - Includes coloured filter set		LINE LIGHT ATTACHMENT DCS6/KIT/014 <i>Bright white illumination of surfaces</i> 12" (305mm) line light - Includes cylindrical lens attachment		DCS6 RUVIS IMAGING KIT DCS6/KIT/022 <i>See dedicated brochure for full details</i> - RUVIS camera and lens kit - Crime-lite 82S PRO UV 280nm
	FLS LIGHT SOURCE DCS6/KIT/007 <i>Vis-IR continuous narrowband illumination</i> 100W halogen light source - Continuous interference bandpass filter from 400-1000nm		CSU AND PLT DCS6/KIT/015 <i>Cylindrical Surface Unwrapper with Polarised Light Tunnel</i> Extract 2D images from 3D cylindrical surfaces		NARCOTICS DETECTION KIT DCS6/RUVIS/FILTER2 <i>Detect the presence of illicit substances</i> 330nm bandpass filter - For use with DCS6/KIT/022
	105mm MACRO LENS KIT DCS6/KIT/008 <i>General-purpose macro imaging lens</i> 105mm macro lens with Z-mount 62mm circular polarising filter 62mm visible pass filter		DCS6 FOOT PEDAL DCS6/KIT/016 <i>Hands-free image preview and capture</i> Programmable USB foot pedal	For a full system specification, please contact: sales@fosterfreeman.com	

DCS®6

Ready to find out more?



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