FORENSIC XP-4010 D SPECIFICATIONS

Modes of operation:

1. High resolution visible (VIS) color, ultraviolet (UV) and infrared (IR) image monitoring
2. Hyperspectral imaging of any central wavelength in 400-1000 nm region
3. Spectral Enhancement of Questioned Features in Imaging Spectrometry
4. Passport Schengen Visa and ICAO Machine readable lines

Hyperspectral Image spectrometry:

1. Measures absorption, reflectance, transmission and fluorescence spectra 400 to 1000 nm range in 1360x1024 output pixels. Calibration procedure for normalization of spectrums
2. 16 Bits per color channel processing
3. Flexible spectral range selection
4. Original algorithm for spectral features enhancement on full Field of View
5. Split screen for simultaneous ink analysis from 2 separate documen
6. Difference and normalization of spectrums from any two pixels Field of View

Imaging System:

1. Gigabit Ethernet digital CCD camera, 1360x1024 output pixels
2. Spectral responce 350-1050 nm
3. Image integration: 10 microseconds to 60 seconds in 1 microsecond increment. Unlimited software integration
4. Region of Interest (ROI): independent x and y control with 1 pixel resolution
5. Digitization: 12 Bits

Imaging Fitler:

1. A continuous interference bandpass filtler from 400 to 1000nm
2. FWHM Spectral resolution: from 20nm to 60 nm depends on spectral region

Magnification:

1. Optical: Parfocal x 10 Zoom lens provide continous magnification ranges of x2 to x20 on the Standard 21” display monitor at the high resolution of 1360x1024 pixels
2. Fields of View at the high resolution optical zoom range: 180 x 135 mm – 18 x 13.5 mm
3. Fields of View at the standart resolution 680x512 pixels optical zoom range: 90 x 67.5 mm – 9 x 7 mm
4. Digital magnification: unlimited

Illumination:

Incident:

1. Longwave Ultraviolet at 365 nm
2. Middlewave Ultraviolet at 313 nm
3. Shortwave Ultraviolet at 256 nm
4. Intense White Visible& Infrared broadband
5. Intense quasi monochromatic VIS light at 455,470,505,530,590,615,& 630 nm
6. Intense quasi monochromatic IR light at 850 & 980 nm

Transmitted:

1. Longwave Ultraviolet at 365 nm
2. White Visible& Infrared broadband

Oblique:

1. Visible low divergence light source

Coaxial:

1. Visible & Infrared

Image Comparison and Transformations

1. Side by side comparison of live and stored images by vertical or horizontal split screen
2. Comparison of live and stored images by open window in screen
3. Superimposition of live and stored images with adjustable mix, 0% to 100%
4. Variable speed strobe between live and stored images
5. Image substraction with adjustable mix, 0% to 100%
6. Image rotation on any angle
7. Grey level reversal (black to white)
8. Contrast strech
9. Digital image processing filters

Color Measurements

1. Measures colour parameters: XYZ, xy, uv, Lab in any pixel Field of View
2. Display measures color coordinates on chromaticity chart

Controls

All instrument functions, imaging modes, light sources and filters are selected through software using on-screen control

Video Measurements

Provide measurements of distance between any two pixels Field of View

3D View

Provide 3D view of image on Field of View

Image Analysis (Optional Software Module)

1. Provide measurements of distance, angles, areas, diameters and radii on image
2. Provide measurements of features position coordinates on image
3. Unlimited stitch of images,captured from neighboring areas of document
4. On-screen Rulers, grids and examiner notes
5. Calibration procedure allows absolute measuring values
6. Measuring statistics

3D Forensic View and Measurements (Optional Software Module)

1. User friendly interface
2. Fast real time rendering (rotation on all angles in space to optimize observation)
3. Flexible zoom in all directions
4. Choosing of color palettes
5. Light adjustment
6. Measurement of features
7. Profiling of 3D features
8. 2 separate documents processing

Computer

FORENSIC XP 4010D is provided with up-to-date PC and 21” LCD monitor