



## VISPRO-WARE SDK

A CryptoMetrics® SecurIDent™ Product

The CryptoMetrics VisPro-ware Software Developers Kit (SDK) enables developers, systems integrators and independent software vendors to create powerful security applications that can acquire, process, display and search based on facial biometric images optimized for the most stringent biometric face-recognition security systems.

VisPro-ware SDK improves the quality of images upon enrollment thus increasing the performance of face-matching solutions and the security aspect of an overall system deployment. Images captured by cameras, particularly with non-cooperative subjects, may lack the correct lighting, contrast, or the pose of the subject may not be suitable. VisPro-ware SDK utilizes the raw images captured by CryptoMetrics biometric camera technology, conducts quality analysis of them, and then normalizes the images so they are suitable for biometric face recognition.

Image *normalization* manipulates images to correct subject positioning (translation), adjusts facial sizes relative image sizes (scaling), corrects the facial image for tilt (rotations), and corrects images for brightness and contrast – all in real time.

VisPro-Ware SDK is supplied in the form of an ActiveX component for Microsoft® Windows® 2000 and XP. Applications can be developed based on this SDK using any development environment supporting the use of ActiveX components. The following have been tested and are supported by CryptoMetrics:

- Microsoft Visual Basic 6
- Microsoft Visual C++ 6

### Features:

- Automatic face finding from single and multi-face images
- Automatic eye landmark determination for each face
- Eye landmark confirmation and manual override
- Optical resizing to specified number of pixels between the eyes without facial image degradation
- Automatic image rotating for optimal biometric sampling
- Transformation of captured facial image to a specified canonical image format (token image)
- Automatic cropping to specified requirements
- Acquisition and display of images with multiple resolutions to support differing requirements for each display portrait, token image and image for printing
- Image quality assessment evaluates face position, pose, color dynamic range and suitability for face-recognition applications and generates out-of-specification alerts
- Display of the color histogram of the captured facial image
- Differential image compression that ensures controlled compression for face “region of interest,” while meeting defined on-chip storage limitations for full image

### Benefits:

- Can be used to improve quality of photos upon enrollment, thus increasing the performance of the face-matching solution and increasing the security aspect of the overall IT deployment
- Enables rapid identification in sub-optimal conditions for incoming images
- Can be integrated with existing security solutions
- Provides developers total control of facial biometric image processing and handling
- Architecture is flexible enough to accommodate current and emerging international standards for global exchange of facial biometrics as specified in ICAO 9303, and industry best practices