

D SCAN[®] AUTHENTICATOR CF

Personal ID document reader as OEM component for system integrators

The Coaxial Light Feature Option



The D SCAN[®] AUTHENTICATOR CF is a high performance device for reading all kinds of personal identification documents such as passports and national ID cards. Any document compliant to the specifications of the ICAO can be placed on the glass plate on top of the device for capturing the image of the personalized page. The optional RFID feature further provides the functionality for reading out the contents of the digital data chip contained in the new electronic passports.

How does the optical reading of the device work?

The D SCAN AUTHENTICATOR CF device contains a built-in high resolution camera and several sources of light. Each light source can be turned on before taking one image with the camera. Thereby the user can take an image of the personalized page as it appears under normal white light or under ultraviolet (UV) or infrared (IR) light. In the interest of a very uniform intensity level of the light on the document page being captured the light sources are arranged in a way to provide a diffuse kind of light rather than a directed light under a specific angle. This is also helpful to avoid reflections. After the image was taken by the build-in camera it is being transferred through the USB 2.0 interface cable to the PC. The software belonging to the D SCAN AUTHENTICATOR CF receives the image and makes it available through the Application Programming Interface (API). Thereby the image becomes accessible for the application software of the system integrator.

Among the available options is the “coaxial light” feature. This is an illumination which works similar to the other ones but delivers its light under the same angle as the camera view angle to the document. Thereby camera and illumination are arranged on the same axis – or coaxially, hence the name.



Image captured with an D SCAN AUTHENTICATOR CF under coaxial light showing a document having a 3M™ Confirm™ Laminate on top of the personalized page. The retro reflective marks are clearly visible while the underlying text and pictures are almost invisible.

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Which functionality does the coaxial light feature of the D SCAN AUTHENTICATOR CF product provide?

This optional feature provides the functionality of turning the coaxial illumination on while all other illuminations are off, taking one image with the camera, turning the coaxial illumination off, and making the captured image available as a digital bitmap via the API to the application software of the system integrator. The application can then take this image and display it on the screen of the PC so that the operator can view it.

A personalized page of a document covered with a protective laminate may show certain retro reflective patterns when viewed with the coaxial illumination. When viewed with one of the diffuse illuminations the same page will not show the retro reflective pattern. Thereby the existence of such a laminate can be checked visually.

The coaxial light product feature of the D SCAN AUTHENTICATOR CF does not provide any kind of image processing or image analysis e.g. intended for the automatic detection of tampering and alteration of documents having security laminates such as the 3M™ Confirm™ Laminates.

Cross Match Technologies does not provide any product option or product extension or separate product for performing such kind of automatic detections.

Notice to system integrators

System integrators shall be aware that an automatic detection of tampering and alteration of documents having security laminates is the subject of a technical invention filed by Minnesota Mining and Manufacturing Co. and published as patent in the following countries: AU 685830, CA 2173230, DE 69418 887 T2, ES 2133583 T3, FR 0722597, GB 0722597, HK 1013873, IT 0722597, JP 09504629 T2, KR 0354883 B, US 6019287, US 6611612, and US publication 2004-022420 A1.

Disclaimer

Cross Match Technologies explicitly reminds the integrators of the D SCAN AUTHENTICATOR CF of the existence of the above mentioned patents. The use of the D SCAN AUTHENTICATOR CF for reading documents with the coaxial light is authorized by Cross Match Technologies only for the purpose of taking the image without any kind of image processing for the automatic detection of tampering and alteration. Cross Match Technologies shall not be liable for any violation of the rights and claims of the patents mentioned above. System integrators and end users interested in performing such automatic detection shall consider to contact the owner of the above mentioned patents for a potential licensing.

This documentation belongs to the D SCAN AUTHENTICATOR CF product if it is equipped with the coaxial lighting feature option (CX2). System integrators and resellers shall forward this documentation to the end user.

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