

Signature Cameras

 **PS/DX 40S – CL** | **PS/DX 40S – GigE**
 **PS/DX 4S – CL** | **PS/DX 4S – GigE**

The new Kappa camera models of the DX family provide a special function which allows to authenticate images with an electronic signature. With this signature any manipulation of the image data is evident without any doubt. Thus the signature guarantees authenticity (integrity of content and correct sender).

Implementation and signature generation method follow closely the BSI requirements (Federal Office for Information Security). The BSI is decisive for the elaboration of security criteria in Germany and participates in the international "Common Criteria".

The digital signature generation is based on the "RSA 1024 bit" signature with the SHA-512 bit hash function. The hash function is a complex mathematical function that calculates a 512 bit long value from the image data, which is called the hash value. This value is so unique that it is virtually impossible to find a second matching document.

In the camera a pair of keys is generated – a secret private key and a corresponding public key. Nobody knows the private key and it cannot be read out either.

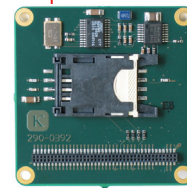
The generated signature is attached to the document. The signature is encrypted and is generated with the private key. The public key is used to verify the accuracy of the signature. In contrast to the encryption method the document is readable in plain text after the signature operation.

Particularly interesting for a multitude of applications: Additional data (e.g., date and time, measuring values) can be transferred via the serial interface into the camera and signed together with the image data as one document.

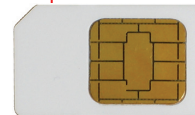
CAMERA
Link
GigE



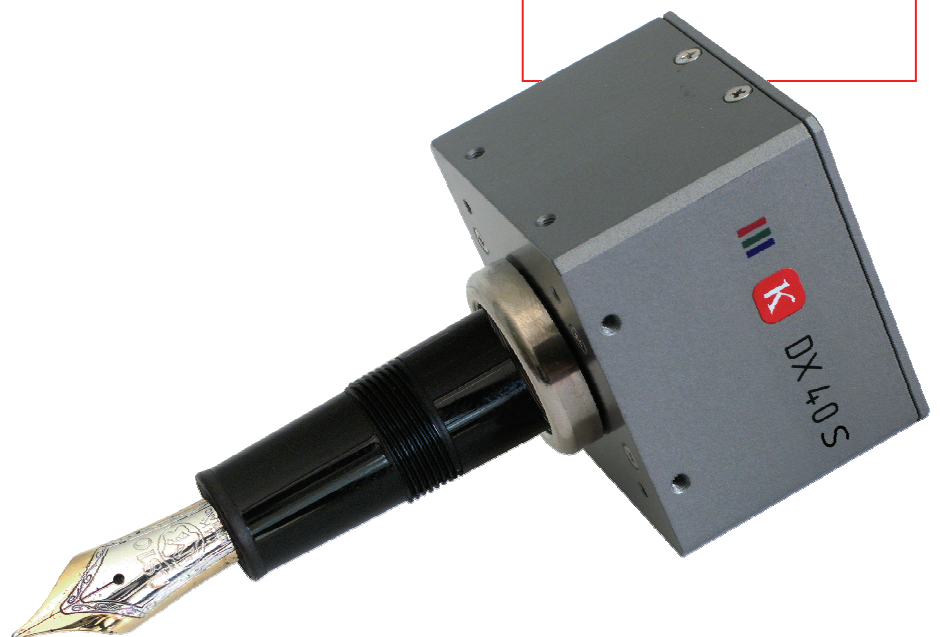
Digital Camera
Kappa DX 40S



Camera internal
signature function



Signature chip with
certificate
(BSI, Certified
according to
common criteria
level eal 5+)



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Technical Data

Electronical Signature	
Signature method	RSA, 1024 Bit
Hash function	SHA-512
Signature generation	Security Controller Chip with key management
Software	Software viewer for signature verification and the display of standard image formats
Signature rate	2 fps (trigger-mode)
Order no.:	For the order numbers of the X and S models, please refer to the data sheet(s) of the respective interface. For signature cameras, please add an "S" after the order number (e.g. PS 40S – 285 GigE: 963-17355).
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We are constantly checking the accuracy of the technical data. We are prepared to provide more detailed information on request. Technical data are subject to change without notice!

