

**We are your partner for high-quality system solutions.**

// State-of-the-art automation technology requires innovative and intelligent solutions. As your partner for design and manufacturing we provide the optimal solutions in automation and quality assurance for industrial signal conditioning and image processing.

With our data processing sensor-actuator system we are capable of gathering any sensor data quickly and accurately, processing them and triggering the appropriate actions. The use of various image sensors furthermore makes the use of data processing cameras for application-specific image processing possible. Selecting and designing illumination facilities optimally adapted to your application is another element of our work.

With our competence and strong commitment we stand for a reliable partnership. We strengthen your competitiveness by providing comprehensive consulting, concerted support and efficient engineering. Thus, we assist you in reaching your targets more quickly. Because success to us is your competitive edge.

Let us realize your innovations together and we will guide you on your way from the idea to the start of production.



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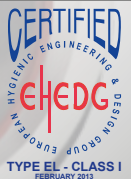
**DCAM**

Data processing sensor-actuator system

**DSAM** | **DCAM**

Highly-precise intelligent modules with complete data and image processing in real time for flexible automation and quality assurance.

also Casing(a)-HD





// Data and image processing camera

## State-of-the art technology

Increase your competitiveness together with us. For this purpose DCAM renders possible a maximum of reliable image data collection and analysis in real time.

- Cameras in CMOS technology enable readout by frame (ROI, MROI).
- Quick image and signal processing inside the same housing using FPGA and soft processor, without requiring an external computer!

## Head start due modularity

DCAM will be adjusted exactly to your individual requirements.

- Little time required for design and development.
- Components that are already available, reduce the cost for design and development.
- You can use the DCAM with digital E/A's, also you have connections for digital and analogue encoder with interpolation, D/A-converter, supply for led/laser and sensor.

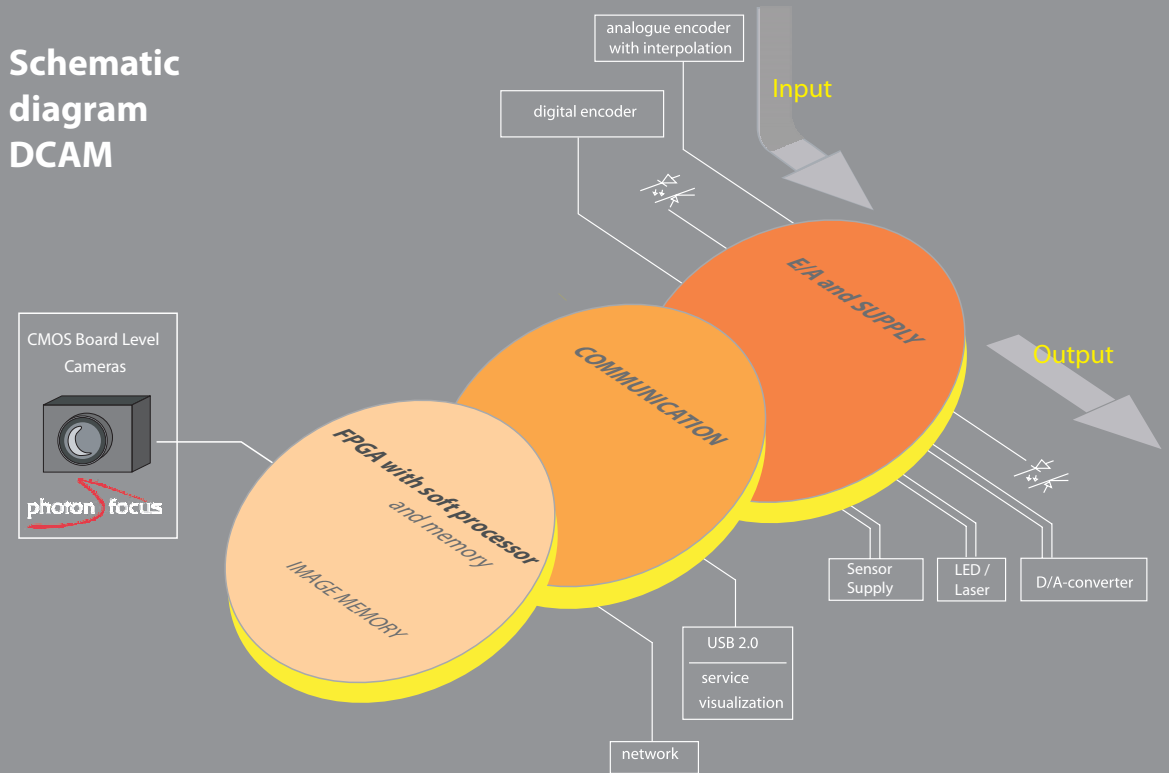
## Scope of applications and benefits

Due to its compact design DCAM can be used in varied applications in industrial environments as well as in the food processing and pharmaceutical industries.

**Note: No external computer is required for operation, only for servicing.**

- Object recognition for determining quantity and position.
- Measurement and position determination, also using triangulation (3D) and subpixel interpolation
- Optimally suitable for automation, quality assurance and monitoring
- Cost reduction due to shorter cycle times
- Less rework and rejects.
- Low in maintenance and low operating costs.

## Schematic diagram DCAM



## Product description

**Modular designed, very fast image processing with using a FPGA, without an external computer. Stainless steel housings in three designs, one of it for food processing (look at Flyer DCAM-HOUSING).**

We use extremely powerful megapixel cameras with very high scanning rates for ROIs and MROIs from Photonfocus AG. Image data in correlation with data from the system open up totally new possibilities

all the way to targeted photos depending on events, as well as taking on open and closed loop control tasks. Image and signal processing are performed on high-capacity computer platform using FPGA with soft processor technology inside DCAM. Even simultaneous processing of 2D and 3D image information is possible. We achieve high image rates, minimal reaction times and thus short cycle times. A network connection (Ethernet TCP/IP) serves to transmit parameter and result data records. Stand alone operation is also possible. Transmission of image data via USB is only required for maintenance.

Find out more about DCAM and DSAM at: [www.nophut-gmbh.de](http://www.nophut-gmbh.de) or +49 9503 7090

### Features:

Computer	DKAM-I	DKAM-HD	Casing(a)-HD	Communication	Connectors	Power supply	I/O's
FPGA with 32-bit RISC soft processor 64MB DDR RAM 64MB Image-RAM	Industrial housing, stainless steel	Hygienic Design Casing(a)-HD certified		Ethernet TCP/IP USB 2.0	Pluggable except for DKAM-HD	DCAM in: 24 Volt= DCAM out: led / laser and sensor	5E and 5A, digital and analogue encoder with interpolation