USB3.0 AND USB3 VISION CMOS CAMERAS – INDUSTRIAL AND OEM VERSION

The easy performance camera.
3iCube - DYNAMICS IN VISION

3iCube USB3.0 AND USB3 VISION SERIES

NET’s easy to use compact camera with USB3.0 interface taps the full potential of the latest CMOS image sensors to set new standards in regard of achievable frames rates and image quality. It supports 24-bit RGB true color while offering a high speed interface to meet the most challenging applications like multi-camera systems.

Moreover, the 3iCube series supports monochrome and low light image sensors reflecting an extensive range of selectable resolutions and frame rates for all requirements.

3iCube is available as industrial and board-level camera. Due to a high-performance processing unit the lightweight camera can perform challenging real-time image processing tasks to meet any particular demand in factory automation, quality inspection, surveillance, biometrics and microscopy.

3iCube complies the USB3 Vision standard, which uses the GenICam generic programming interface. This turns 3iCube into a real plug-and-play camera as integration into many existing applications can be achieved without development effort.

The cameras feature power supply over one USB port when connected to a notebook, PC or an embedded computer system. No additional cabling is necessary.

The included SDK and Explorer, SynView, allows quick implementation as well as access to and handling of several 3iCube cameras at once.

NET’s lens portfolio:
- high resolution mega pixel,
- telecentric, CCTV and macro lenses

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3iCube USB3.0 AND USB3 CMOS CAMERAS

3iCube – DYNAMICS IN VISION

3iCube – meet challenging applications at an optimal price-performance ratio.

NET’s lens portfolio:
- high resolution mega pixel,
- telecentric, CCTV and macro lenses

robust and small aluminum housing
(30 x 30 x 31.5 mm)

C-/CS-lens mount

trigger/strobe/GPIO connection

lockable micro USB3.0 B

S-mount with M12 optics available
USB3.0 AND USB3 VISION CMOS CAMERAS

PRODUCT OVERVIEW

The 3iCube series with USB3.0 / USB3 Vision 5 Gbps interface features the latest CMOS image sensors with an excellent image quality for a broad range of applications. NET offers 3iCube with resolutions ranging from 0.4 to 10 megapixel and performing high speed frame rates at full resolution. Its sensor design encompasses global shutter for fast moving objects and rolling shutter, also with global reset image readout, to capture images with outstanding signal quality. In case of processing image sections, 3iCube offers multiple regions of interest (ROI) with extensively configurable windows embedded on chip. Due to its enhanced image sensor sensitivity, 3iCube realizes a high quantum efficiency and thus is a perfect fit for applications in the near infrared region (NIR). In addition, long exposure photography is supported by 3iCube. The series allows to benefit fully from the possibilities of state-of-the-art camera technology. 3iCube’s attractive price-performance ratio at an extraordinary quality level speaks for itself.

TECHNICAL DATA – CMOS CAMERA LINE

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APPLICATION & SOFTWARE

APPLICATION OVERVIEW
3iCube targets industries in rough environments like quality inspection, completeness, surface and printing inspection, bar code, data matrix applications and others. Being also appropriate for non-industrial segments like medicine applications and microscopy, security, document management and access control, the small and efficient 3iCube is a versatile and reliable solution for your application requirements. Because of its high speed interface, 3iCube is particularly suitable for video traffic in HD quality or multi-camera systems.

CAMERA CUSTOMIZATION
Particular applications require specific camera features and functions. To fulfill these requirements NET is able to offer camera customization, e.g. through onboard processing of specific available NET or customers’ algorithms:
- high end de-mosaicing
- full color matrix and color correction
- gain offset correction
- flatfield correction
- defect pixel correction
- white balance
- gamma correction

OEM APPLICATION
The 3iCube series is suitable as lightweight board-level cameras for OEM use due to its compact size. Being a flexible and powerful solution, 3iCube can be offered with custom features such as customized firmware, FPGA, real-time processing.

SOFTWARE DEVELOPMENT KIT (SDK) & 3RD PARTY SOFTWARE
SynView, the included SDK, is compliant with GigE Vision, GenTL and GenICam (with XML files) standards and runs under Win XP/7 and Linux. It supports the programming languages C, C++, .NET environment and enables quick integration into existing customer systems. The setting and evaluation of image data is achieved by means of various functionalities for camera calibration, preview, image evaluation and code examples.

NET supports all GenTL consumer image processing libraries, i.e. Adaptive Vision Studio, Halcon, VisionPro, LabView Vision, and MATLAB.

About NET New Electronic Technology GmbH
NET has more than 20 years of experience in supporting customers’ applications with smart camera technology and custom camera solutions. NET adds value to the applications of OEMs, system integrators and machine builders through custom vision solutions and a portfolio of cameras and components with unique features. The company offers both know-how in vision technologies and an extensive portfolio.

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