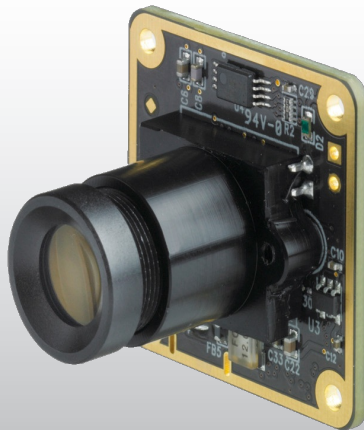THE IMAGINGSOURCE
TECHNOLOGY BASED ON STANDARDS

DMM 72BUC02-ML Monochrome Board Camera

The Imaging Source "72" Series USB 2.0 Board Camera

Only 30 x 30 x 15 mm

Lens and holder not included

The Imaging Source DMM 72BUC02-ML monochrome camera has a USB 2.0 interface and is the perfect solution for many industrial automation, quality assurance, security, surveillance and medical applications. The monochrome camera ships with the very sensitive $1/2.5$ " Micron CMOS MT9P031 sensor. With up to 6 images per second, the DMM 72BUC02-ML is a low cost, yet highly versatile imaging solution. The optional lens holders in various lengths, makes the camera compatible to M12 board lenses. Using the optional C and CS mount lens holder, the camera is also compatible to C and CS mount lenses.

The Imaging Source authors and supports drivers, SDKs, extensions and end-user software for Microsoft Windows, which can be freely downloaded from our web site. Extensions for Microsoft Windows enable the DMM 72BUC02-ML to be integrated in to common machine vision software libraries, such as LabView and OpenCV. Furthermore, we author and support open source Linux drivers and software (Apache License 2.0) to integrate the camera into popular distributions. Download the Linux source code at GitHub.

Features

- USB 2.0 interface.
- Binning, windowing and high-speed readout.
- $1/2.5$ " Micron CMOS MT9P031.
- Global shutter.
- Up to 2,592 x 1,944 (5 MP).
- Up to 6 images per second.
- Trigger input and I/Os.
- Only 30 x 30 x 15 mm.

Accessories

- Lens holder in various lengths (6 mm to 20 mm) for M12 board lenses.
- Lens holder for C and CS mount lenses.
- M12 board lenses.
- C and CS mount lenses.
- Standard USB 2.0 cable in various lengths.
- 5 m USB 2.0 cable with fixing screws.
- I/O cable (shipped as standard).

Device Drivers for Microsoft Windows
Device Driver for The Imaging Source USB Cameras.

Software Development Kits (SDKs) for Microsoft Windows
IC Imaging Control .NET Component, C++ Class Library, IC Imaging Control C Library, IC Imaging Control ActiveX and IC Imaging Control ActiveX Runtime Setup.

Extensions for Microsoft Windows
TWAIN Source for IC Imaging Control, Cognex VisionPro AIK Plugin for IC Imaging Control, ActivVisionTools Driver for IC Imaging Control, HALCON Extension for IC Imaging Control, LabVIEW Extension for IC Imaging Control, IC Matlab Plugin for Matlab 10.0 R2010 and IC Matlab Plugin for Matlab R2013b.

End User Software for Microsoft Windows
IC Capture, Image Acquisition, IC Fullscreen Presenter and Footswitch software for IC Capture.

Software Tools for Microsoft Windows
Processor Idle State Manager and Hot Pixel Correction.

DMM 72BUC02-ML Specification

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
2,592 x 1,944 (5 MP)	$^1/_{2.5}$ "	6	1.4 V/lux-sec
2,048 x 1,536 (3.1 MP)	$^1/_3$ "	9	1.4 V/lux-sec
1,920 x 1,080 (2.1 MP)	$^1/_{3.5}$ "	13	1.4 V/lux-sec
1,600 x 1,200 (1.9 MP)	$^1/_4$ "	13	1.4 V/lux-sec
1,280 x 960 (1.2 MP)	$^1/_{4.5}$ "	19	1.4 V/lux-sec
1,280 x 960 (1.2 MP)	$^1/_{2.5}$ "	15	5.6 V/lux-sec
1,024 x 768 (0.8 MP)	$^1/_{5.5}$ "	27	1.4 V/lux-sec
640 x 480 (0.3 MP)	$^1/_9$ "	52	1.4 V/lux-sec
640 x 480 (0.3 MP)	$^1/_{2.5}$ "	23	22.4 V/lux-sec

Set resolution, format, FPS and sensitivity with shipped software.

Color format	Y800
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	Micron MT9P031
Shutter	Rolling
Format	$^1/_{2.5}$ "
Resolution	H: 2,592 pixel, V: 1,944 pixel
Pixel size	H: 2.2 µm, V: 2.2 µm
Lens mount	M12x0.5

INTERFACE (ELECTRICAL)

Interface	USB
Supply voltage	4.5 VDC to 5.5 VDC
Current consumption	approx 250 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 30 mm, W: 30 mm, L: 15 mm
Mass	7 g

ADJUSTMENTS (MANUAL)

Shutter	$^1/_{10,000}$ s to 30 s
Gain	0 dB to 18 dB

ADJUSTMENTS (AUTOMATIC)

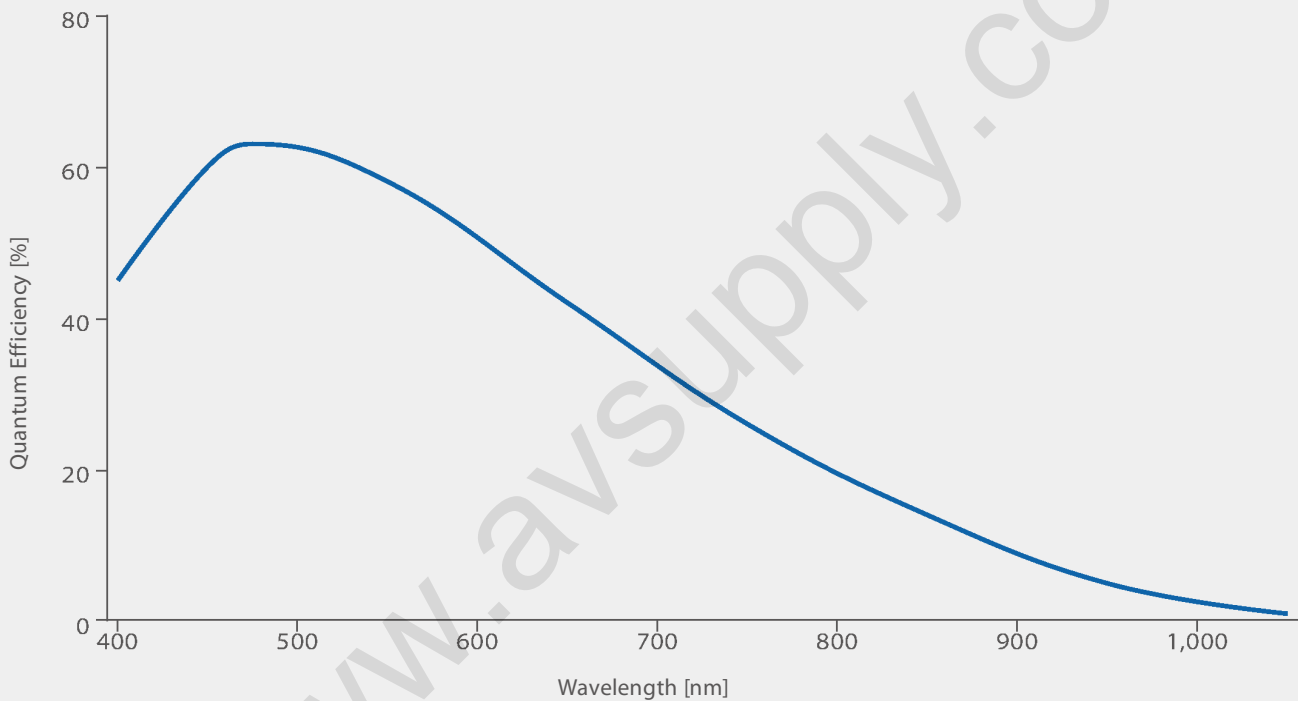|	
Shutter	$^1/_{10,000}$ s to 30 s
Gain	0 dB to 18 dB

ENVIRONMENTAL

Temperature (operation)	-5 °C to 45 °C
Temperature (storage)	-20 °C to 60 °C
Humidity (operation)	20 % to 80 % non-condensing
Humidity (storage)	20 % to 95 % non-condensing

Subject to change

Micron MT9P031 Spectral Response Curve

CMOS Sensor in DMM 72BUC02-ML

DMM 72BUC02-ML Dimensional Diagram

![THE IMAGINGSOURCE — TECHNOLOGY BASED ON STANDARDS]
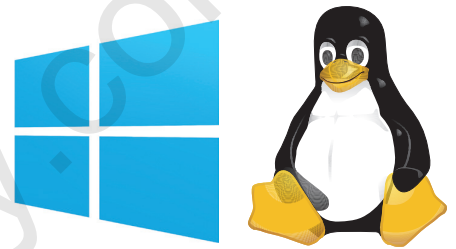
Machine Vision - Designed in Germany

Ever since The Imaging Source was founded in 1990, it has been one of the leading manufacturers of industrial cameras, frame grabbers and video converters for automation, quality assurance, logistics, medicine, science and security.

Our extensive range of industrial cameras ships with USB 3.0, USB 2.0, GigE, FireWire 800 and FireWire 400 interfaces. Thanks to their multi-purpose features and extremely high quality standards, the cameras are commonly used in demanding applications.

The software support offered by the cameras fulfill the requirements of demanding end-users and programmers. The cameras can be put into operation within a few minutes, or integrated into new or existing applications with only a few lines of code. All camera drivers are Microsoft certified. The easy of which the cameras can be integrated, the corresponding low integration costs, and the high quality of the software set the industry standard.

All cameras, frame grabbers and video converters, manufactured by The Imaging Source, are the result of decades of experience, uncompromisingly high quality standards, and continual development. Developers and system engineers prefer The Imaging Source cameras due to their ease of system integration.

World-Class Software and Customer Care

What really separates The Imaging Source from its competitors is the comprehensive Windows and Linux software available free of charge with all its products, and the unsurpassed level of customer service.

The Imaging Source authors and supports device drivers, software development kits (SDKs), programming samples, extensions, end-user software and software tools for Microsoft Windows. All Windows software can be download directly from our web site:
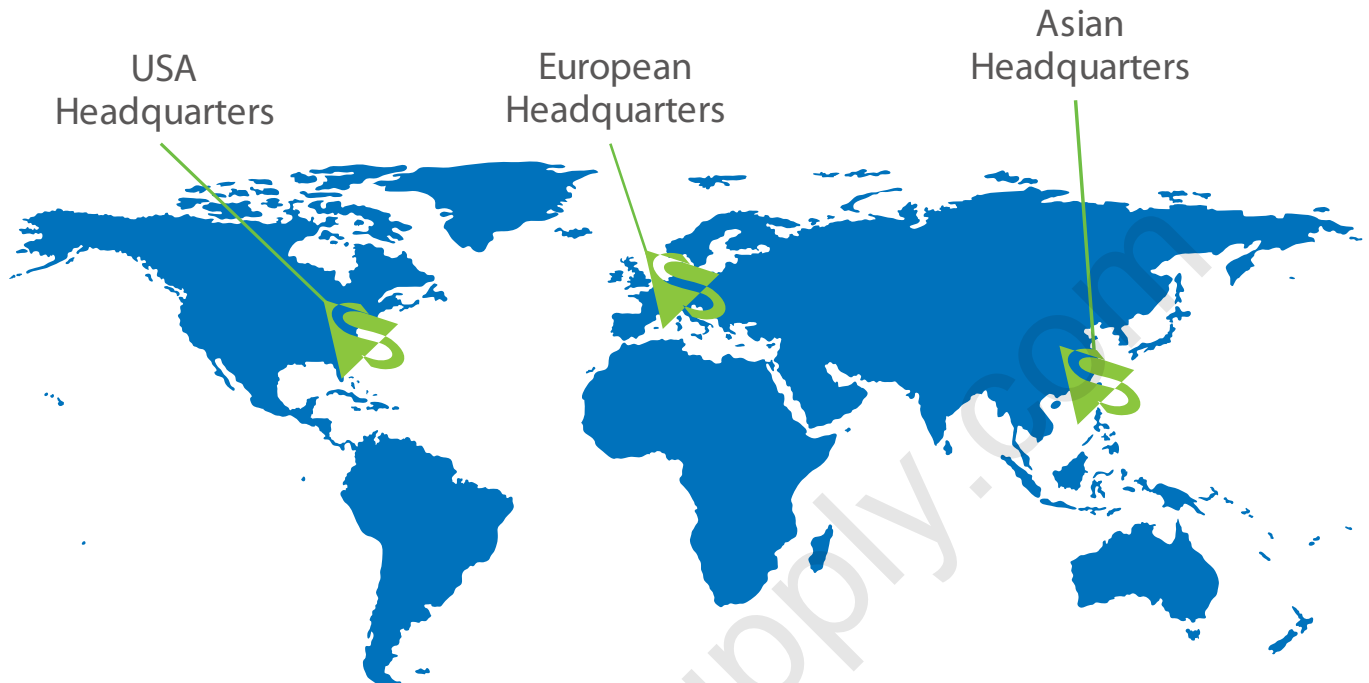
http://www.theimagingsource.com

Additionally, The Imaging Source authors and supports open source drivers and end-user software for Linux. The Linux source code, which is released under the Apache License 2.0, enables you to integrate all machine vision cameras into popular Linux distributions. The Open Source code is available to download from GitHub:

http://www.github.com

The Imaging Source guarantees fast and efficient customer service for all hardware and software issues via our skilled customer service representatives. Not only will we provide support regarding technical issues, but we will also work with you to implement our components into your project. Contact customer service at:

http://www.theimagingsource.com

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