

DMK 23GM021.I Monochrome Camera

The Imaging Source "23" Series GigE Camera



Only 29x29x57 mm

Lens not included

The Imaging Source DMK 23GM021.I monochrome camera has a GigE 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 $\frac{1}{3}$ " Aptina CMOS MT9M021 sensor. With up to 60 images per second, the DMK 23GM021.I is a low cost, yet highly versatile imaging solution. The camera includes a C to CS mount adapter, making it compatible to C and CS mount lenses. Using the optional CS to M12 board lens adapter, the camera is also compatible to M12 board lenses.

Drivers, SDKs, programming samples, extensions and end-user software for Microsoft Windows can be freely downloaded from our web site (see below). Community-driven, Open Source projects allow the camera to be used on Linux. Extensions for Microsoft Windows enable the camera to be integrated in to common machine vision software libraries, such as LabView. In addition, the camera is compatible to the Open Source computer vision library, OpenCV.

Features

- GigE interface.
- Power over Ethernet.
- Windowing and high-speed readout.
- $\frac{1}{3}$ " Aptina CMOS MT9M021.
- Global shutter.
- 1,280 x 960 (1.2 MP).
- Up to 60 images per second.
- Auto iris control.
- Compatible to C and CS mount lenses.
- Only 29 x 29 x 57 mm.
- Casing compatible to Sony footprint.

Accessories

- CS to C mount adapter (shipped as standard).
- CS to M12 board lens adapters.
- C and CS mount lenses.
- M12 board lenses.
- Standard GigE cable in various lengths.
- External power supply with cable.

Device Drivers

Device Driver for The Imaging Source GigE Cameras.

Software Development Kits (SDKs)

IC Imaging Control .NET Component, C++ Class Library, IC Imaging Control C Library, IC Imaging Control for VC++ 6.0, IC Imaging Control ActiveX and IC Imaging Control ActiveX Runtime Setup.

Programming Samples

Barcode Scanner C# Sample for IC Imaging Control.

Extensions

TWAIN Source for IC Imaging Control, Cognex VisionPro AIK Plugin for IC Imaging Control, ActivisionTools Driver for IC Imaging Control, HALCON Extension for IC Imaging Control, LabVIEW Extension for IC Imaging Control and IC Matlab Plugin for Matlab 10.0.

End User Software

IC Capture, Image Acquisition.

Software Tools

Processor Idle State Manager.

DMK 23GM021.I Specification

GENERAL BEHAVIOR

Video formats @ frame rate

1,280 x 960 (1.2 MP), Y800 @ 60, 50, 45, 40, 35, 30, 25, 20, 15, 8 FPS
 1,280 x 960 (1.2 MP), Y16 @ 30, 25, 20, 15, 8 FPS
 1,024 x 768 (0.8 MP), Y800 @ 75, 70, 60, 50, 45, 40, 35, 30, 25, 20, 10 FPS
 1,024 x 768 (0.8 MP), Y16 @ 37, 30, 25, 20, 15, 10 FPS
 1,280 x 720 (0.9 MP), Y800 @ 80, 70, 60, 50, 45, 40, 35, 30, 25, 20, 10 FPS
 1,280 x 720 (0.9 MP), Y16 @ 40, 30, 25, 20, 15, 10 FPS
 640 x 480 (0.3 MP), Y800 @ 115, 100, 90, 80, 70, 60, 50, 45, 40, 35, 30, 25, 20, 15 FPS
 640 x 480 (0.3 MP), Y16 @ 58, 50, 45, 40, 35, 30, 25, 20, 15 FPS

Sensitivity	0.015 lx
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	Aptina MT9M021
Shutter	Global
Format	1/3 "
Resolution	H: 1,280 pixel, V: 960 pixel
Pixel size	H: 3.75 μm, V: 3.75 μm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	11 VDC to 13 VDC or PoE: 48 VDC to 56 VDC
Current consumption	approx 400 mA at 12 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 29 mm, W: 29 mm, L: 57 mm
Mass	65 g

ADJUSTMENTS (MANUAL)

Shutter	1/20,000 s to 30 s
Gain	0 dB to 9 dB

ADJUSTMENTS (AUTOMATIC)

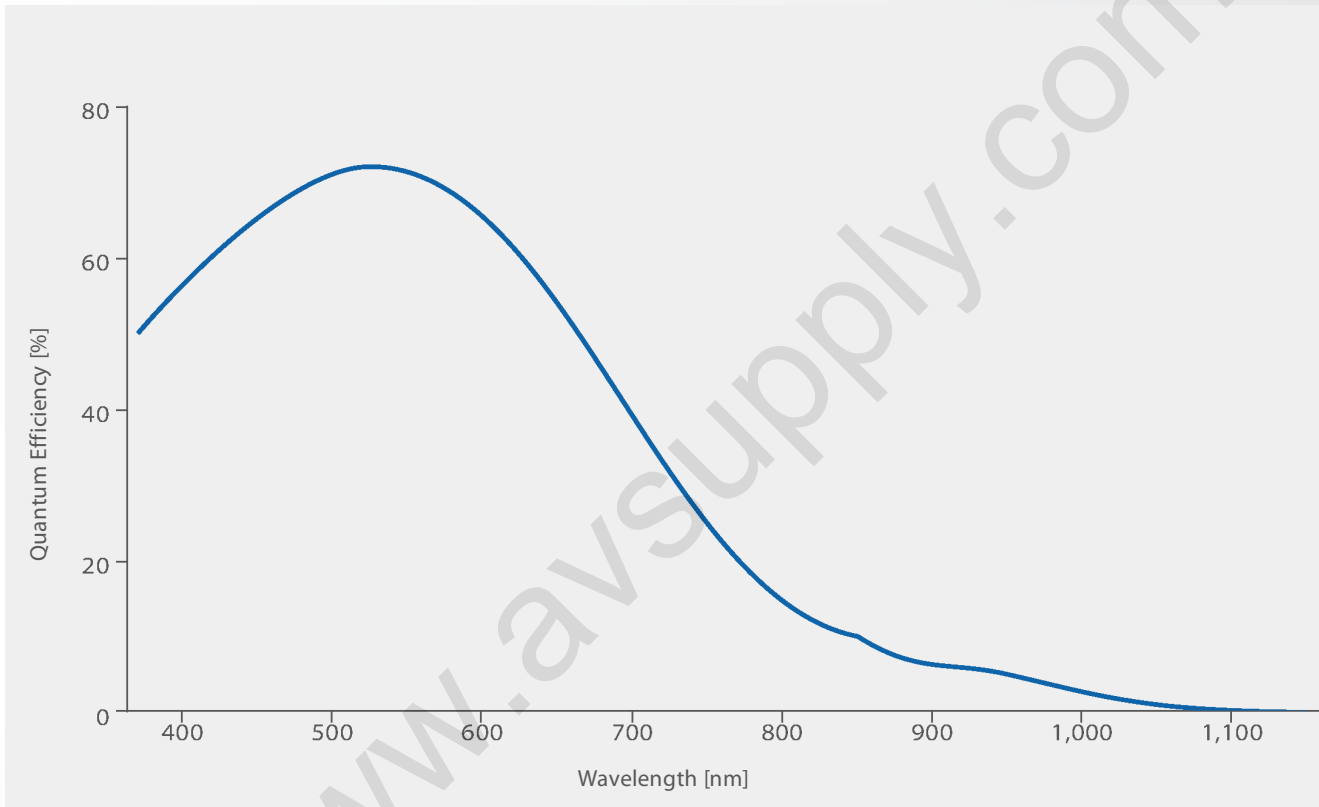
Shutter	1/20,000 s to 30 s
Gain	0 dB to 9 dB

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	

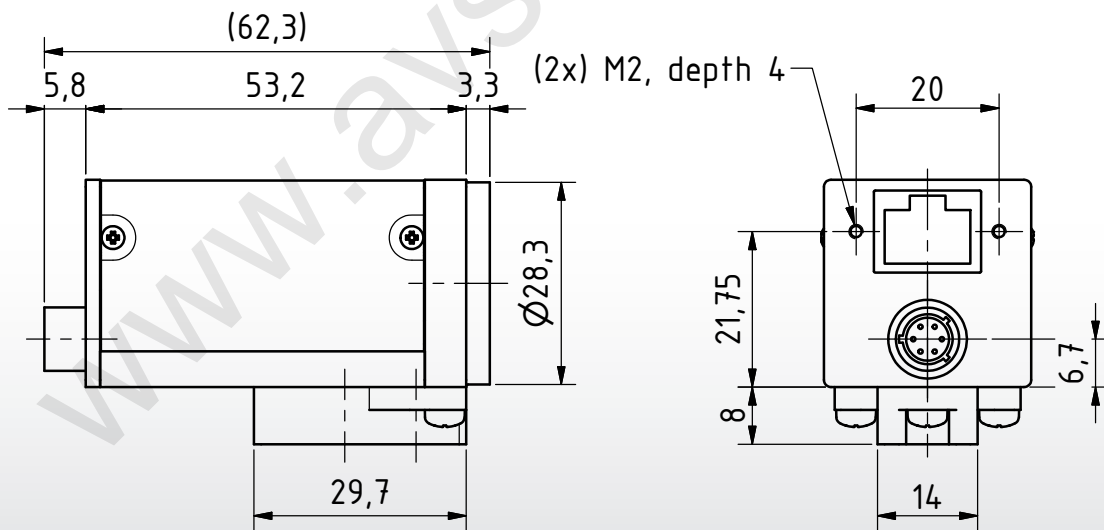
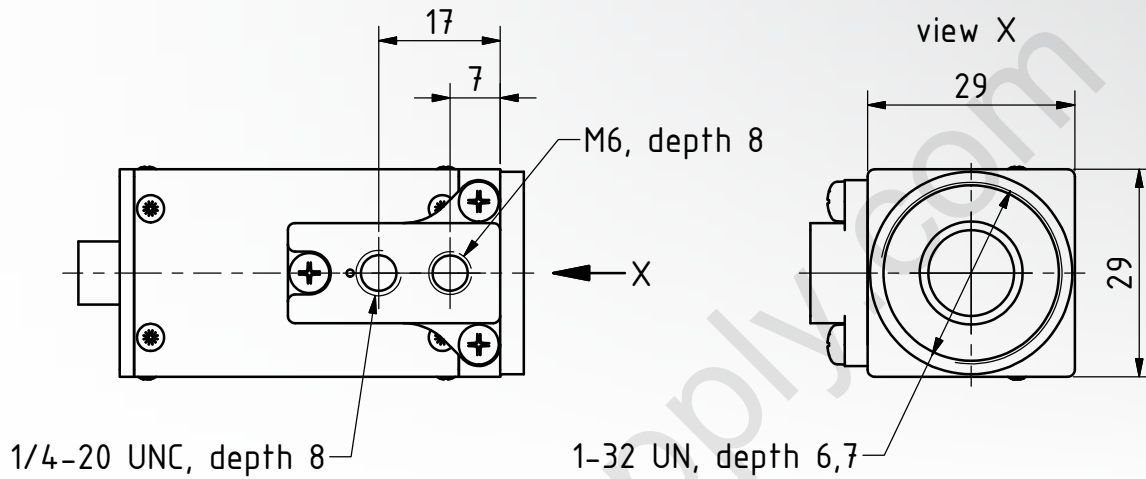
Aptina MT9M021 Spectral Response Curve

CMOS Sensor in DMK 23GM021.J



Distributed By: Audio Video Supply -- Tel: 1-800-284-2288 -- www.avsupply.com

DMK 23GM021.I Dimensional Diagram



Dimensions: mm
 Tolerances: DIN ISO 2768m



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 ease with 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 Support

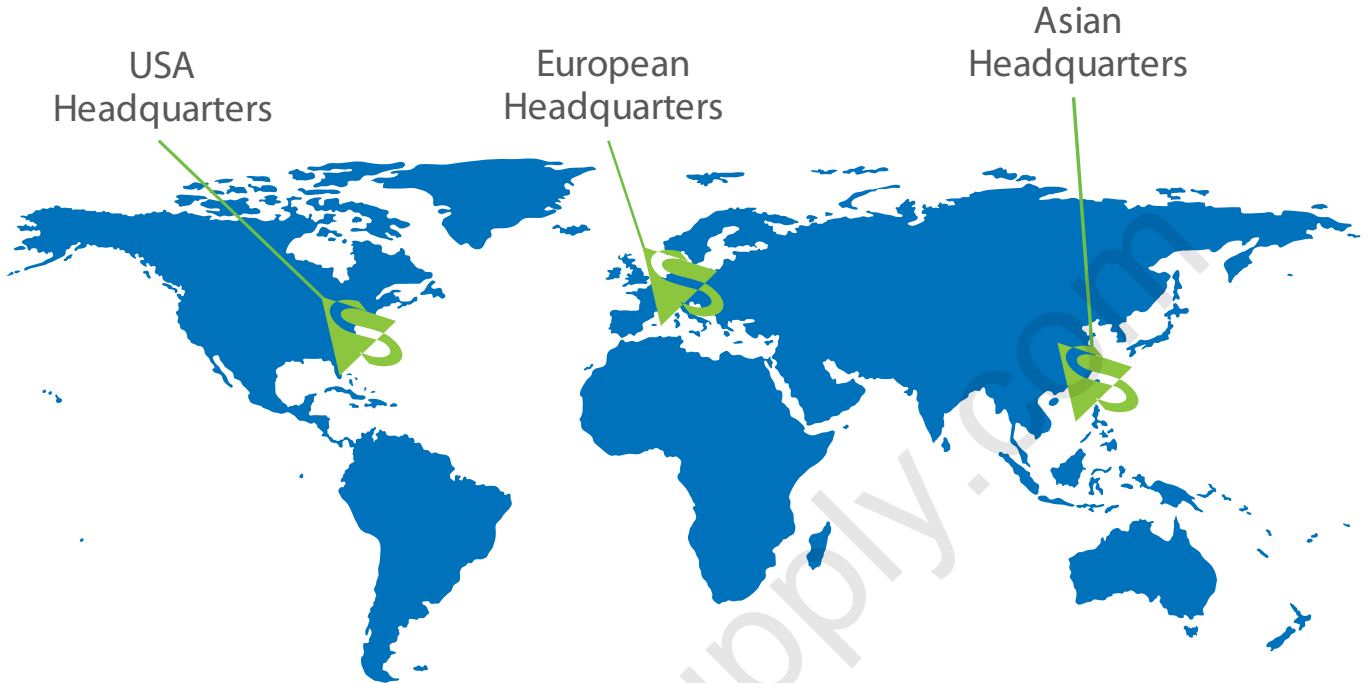


What really separates The Imaging Source from its competitors is the unsurpassed customer service and technical support we provide for our products.

Industrial cameras consist of two basic components: Hardware and software. We guarantee fast and efficient support for both components through our highly skilled support representatives and expert product developers. Not only will we provide support regarding technical issues, but we will also work to provide assistance with software implementation issues.

All cameras, frame grabbers and video converters, manufactured by The Imaging Source, are compatible with IC Imaging Control. Using this SDK, programmers can quickly integrate our machine vision devices into their own applications.

Download IC Imaging Control, drivers, extensions and programming samples from our web site:
www.theimagingsource.com



PRESENT ALL OVER THE WORLD.

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

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