THE IMAGINGSOURCE
TECHNOLOGY BASED ON STANDARDS

DFK 22AUC03-F Color Autofocus Camera

The Imaging Source "22" Series USB 2.0-Autofocus Camera

Only 35.2 x 43.2 x 27 mm

Lens not included

The Imaging Source DFK 22AUC03-F color camera has a USB 2.0 interface and is the perfect solution for many industrial automation, quality assurance, security, surveillance and medical applications. The color camera ships with the very sensitive $1/3$ " Micron CMOS MT9V024 sensor. With up to 76 images per second, the DFK 22AUC03-F is a low cost, yet highly versatile imaging solution. The camera has an integrated focus unit for M12 board lenses, which can be adjusted manually, using the shipped SDK or end-user software. In addition, the driver is able to adjust the focus unit automatically.

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

- USB 2.0 interface.
- Software driven *One Push* autofocus.
- Windowing and high-speed readout.
- $1/3$ " Micron CMOS MT9V024.
- Global shutter.
- Up to 744 x 480 (0.4 MP).
- Up to 76 images per second.
- Only 35.2 x 43.2 x 27 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.

Device Drivers
Device Driver for The Imaging Source USB 2.0 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, ActivVisionTools 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
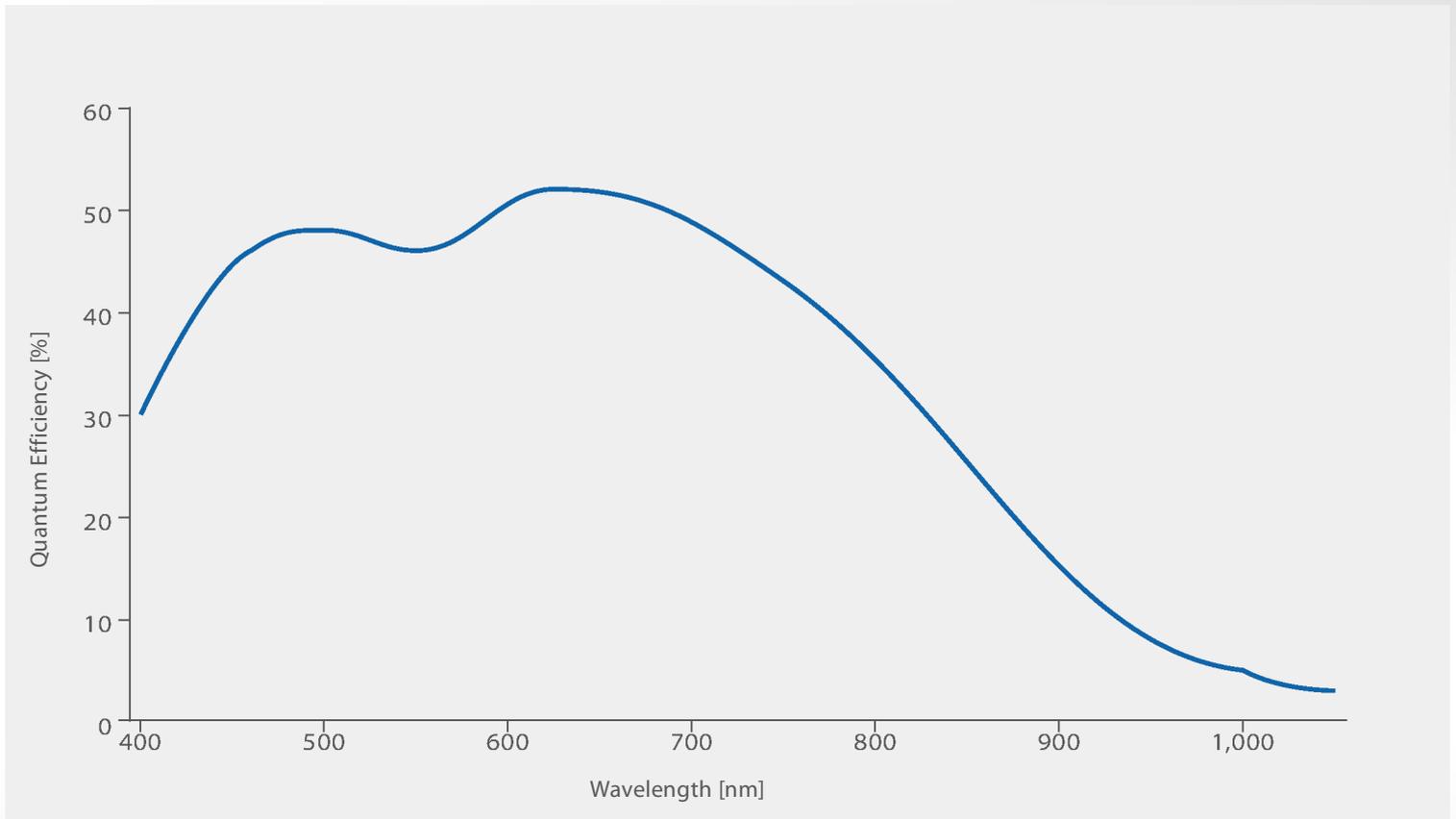IC Capture, Image Acquisition.

Software Tools
Processor Idle State Manager.
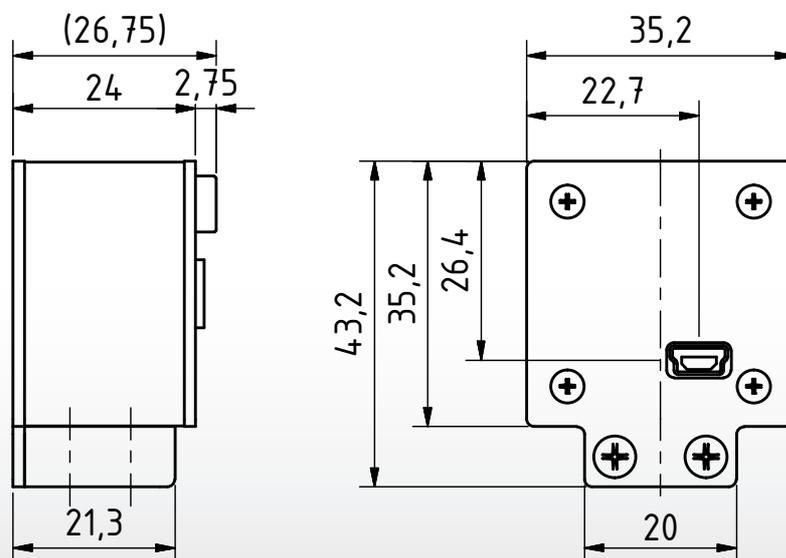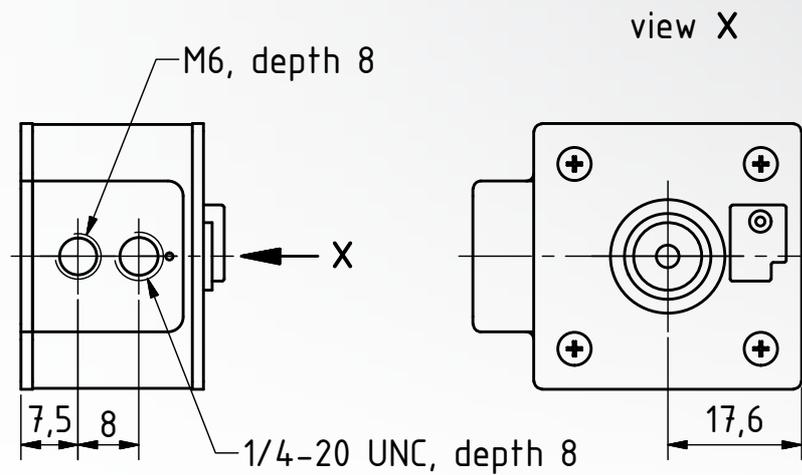
DFK 22AUC03-F Specification

GENERAL BEHAVIOR

Example Configurations

Resolution	Format	FPS	Sensitivity
744 x 480 (0.4 MP)	$^1/_3$ "	76	4.8 V/lux-sec
640 x 480 (0.3 MP)	$^1/_{3.5}$ "	87	4.8 V/lux-sec
320 x 240 (0.1 MP)	$^1/_7$ "	150	4.8 V/lux-sec

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

Color format	Y800, RGB32
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	no
Sensor specification	Micron MT9V024
Shutter	Global
Format	$^1/_3$ "
Resolution	H: 744 pixel, V: 480 pixel
Pixel size	H: 6 µm, V: 6 µm
Lens mount	M12x0.5

INTERFACE (ELECTRICAL)

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

INTERFACE (MECHANICAL)

Dimensions	H: 43.2 mm, W: 35.2 mm, L: 27 mm
Mass	50 g

ADJUSTMENTS (MANUAL)

Shutter	$^1/_{10,000}$ s to $^1/_4$ s
Gain	0 dB to 18 dB
White balance	-6 dB to 6 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	$^1/_{10,000}$ s to $^1/_4$ s
Gain	0 dB to 18 dB
White balance	-6 dB to 6 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 MT9V024 Spectral Response Curve

CMOS Sensor in DFK 22AUC03-F

DFK 22AUC03-F Dimensional Diagram

view **X**

M6, depth 8

X

7,5 8

1/4-20 UNC, depth 8

17,6

(26,75)

24 2,75

21,3

35,2

22,7

43,2

35,2

26,4

20

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 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.
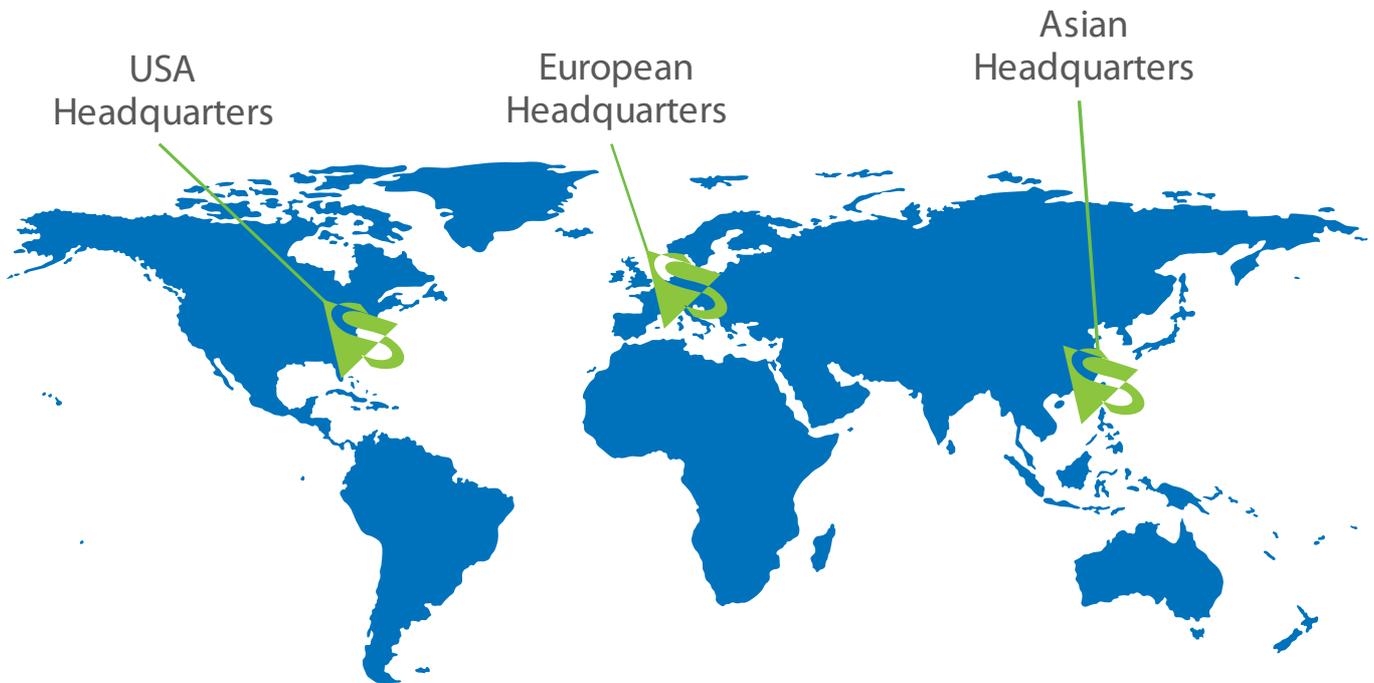
World Class Support

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

THE IMAGINGSOURCE
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