



GigE Cameras | USB Cameras | MIPI | Converters | Software | Optics |



Machine Vision – Designed in Germany

The Imaging Source manufactures a comprehensive range of cameras with USB 3.1, USB 3.0, USB 2.0 and GigE interfaces. The products are renowned for being innovative, high quality and constantly meeting the performance requirements of demanding industrial applications.

Decreasing Integration Costs

The development of our soft and hardware components is driven by our customers requirements and demands. This intimate interplay guarantees that our products work in perfect harmony with one another. We are driven by manufacturing products that have attractive pricing, low integration costs and longevity.

High-Quality and Ease of Use

All cameras, frame grabbers and video converters, manufactured by The Imaging Source, are the result of

decades of experience, uncompromisingly high quality standards, and constant development by global teams consisting of experts and end-users.

Developers and system engineers prefer The Imaging Source cameras due to their ease of system integration. With branches and a strong network of distributors in Europe, USA and Asia, we are available for our customers across all time zones.



NVIDIA® Development Kits



The Imaging Source's embedded development kit for the Jetson Nano platform enables rapid development of embedded vision and AI projects.

The Imaging Source offers compiled MIPI CSI-2 and FPD-Link III drivers for the latest NVIDIA[®] JetPack versions. For integration of the drivers into a custom kernel, the drivers are available as source code upon request.

All sensors use either the standard video4linux API or NVIDIA[®]'s proprietary API based on the libargus programming interface.

The video4linux interface provides RAW video data and allows direct control of all sensor parameters.

Leveraging the hardware ISP (Image Signal Processor) available on all Jetson platforms,

the NVIDIA[®] libargus interface delivers a processed video stream to the application with de-mosaicing, color correction and white balance algorithms applied. The Imaging Source provides a default configuration file for the ISP.

Using the NVIDIA[®] GStreamer interface for libargus, the application can interface with

NVIDIA[®]'s standard Jetson ecosystem software stack which enables the efficient integration of powerful image processing frameworks such as DeepStream, Visionworks and others.

Features	Drivers
Sony and ONSomi concer modulos	Pre-built kernel drivers are available for NVIDIA®
- Sony and ONSemi sensor modules	JetPack 4.3 SDK.
- USB card reader	The drivers are compliant with the NVIDIA [®] I4t
- Additional hardware	video4Linux interface and work with the standard
(cables, screws, standoffs etc.)	NVIDIA [®] software stack like JetCam, DeepStream
- Downloadable kernel images	SDK and others.
- HALCON Ready	The source code for all drivers is available upon
	request.
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MIPI® CSI-2 / FPD-Link® III Camera Modules



The Eye in AI: Vision Systems in "Smart" Cars

In most mobile devices, transmission distances between the SoC and the camera module, e.g. in smartphones, are short, resulting in maximum cable lengths for a standard MIPI[®] CSI-2 camera connection of 30 cm. MIPI[®] CSI-2 interface has since entered additional markets where longer cable lengths are required. Applications for Advanced Driver Assistance Systems (ADAS) are one such example from the automotive sector. Automobile manufacturers are relying increasingly on vision systems to deliver a variety of safety and convenience features: Surround view, bird's eye view, traffic sign recognition, parking assistance and lane departure warnings.

FPD-Link® III: The Solution for Modern ADAS Systems

Typically, the cameras in a system are connected to a central computing unit, where the distances between the computing unit and each camera module are longer than 30 cm. In order to maintain the advantages offered by the MIPI[®] CSI-2 interface while allowing for significantly longer cable lengths is the FPD-Link[®] III protocol. This protocol enables data transmission, power and bidirectional control channels over a single robust coaxial cable with cable lengths up to 15 m, making it an ideal solution for ADAS applications. Via a serializer, the MIPI[®] CSI-2 signal is converted to the FPD[®]-Link III signal and is deserialized to MIPI[®] CSI-2 again on the computing unit.

The FPD-Link[®] III bridge allows a placement of the MIPI[®] CSI-2 camera modules everywhere in the car, enabling modern ADAS functionality at low cost and maximum flexibility.

NVIDIA® Jetson Nano

NVIDIA® Jetson TX2 with FPD Link® III

MIPI Board Cameras Color



Product Code	Resolution	FPS	Туре	Sensor	Format	Shutter
DFM 37MX297-ML	640 x 480 (0.3 MP)	120 fps	Pregius	Sony IMX297	1∕2.9 ″смоѕ	global
DFM 37MX296-ML	1440 x 1080 (1.6 MP)	60 fps	Pregius	Sony IMX296	1/2.9 " CMOS	global
DFM 37MX290-ML	1920 x 1080 (2.1 MP)	120 fps	STARVIS	Sony IMX290	1/2.8 " CMOS	rolling
DFM 37MR0234-ML	1920 x 1200 (2.3 MP)	120 fps		OnSemi AR0234CS	1/2.6 " CMOS	global
DFM 37MX390-ML	1920 x 1200 (2.3 MP)	60 fps		Sony IMX390	1/2.7 "CMOS	rolling
DFM 37MX335-ML	2592 x 1944 (5 MP)	60 fps	STARVIS	Sony IMX335	1/2.8 " CMOS	rolling
DFM 37MX334-ML	3840 x 2160 (8.3 MP)	30 fps	STARVIS	Sony IMX334	1⁄1.8 ″ смоs	rolling

The Imaging Source board-level color cameras feature the latest Sony and ONSemi CMOS color sensors for embedded machine vision applications and support the platforms: NVIDIA[®] Jetson Nano, TX2, AGX Xavier and Raspberry Pi 4. These high-performance MIPI CSI-2 color board-camera modules enable direct processor / ISP connection, avoiding latency issues and minimizing footprint. The MIPI CSI-2 camera modules are perfect for single and multi-camera embedded vision applications such as automotive and IoT as well as standard machine vision applications.

Features	Drivers
- Resolution: 0.3 MP - 8.3 MP	Pre-built kernel drivers are available for NVIDIA® JetPack 4.3 SDK.
 Frame rate: up to 120 Dimensions: 30 x 30 x 12 mm Pre-built OpenEmbedded images (standard sensor config.) 	The drivers are compliant with the NVIDIA® I4t video4Linux interface and work with the standard
- OpenEmbedded layers to build custom images	SDK and others.
- HALCON Ready	request.



MIPI Board Cameras Monochrome



Product Code	Resolution	FPS	Туре	Sensor	Format	Shutter
DMM 37MX397-ML	640 x 480 (0.3 MP)	240 fps	Pregius	Sony IMX297	1∕6.4 ″ cmos	global
DMM 37MX297-ML	640 x 480 (0.3 MP)	120 fps	Pregius	Sony IMX296	1/2.9 " CMOS	global
DMM 37MX296-ML	1440 x 1080 (1.6 MP)	60 fps	Pregius	Sony IMX290	1/2.9 " CMOS	global
DMM 37MX290-ML	1920 x 1080 (2.1 MP)	120 fps	STARVIS	OnSemi AR0234CS	1/2.8" CMOS	rolling
DMM 37MR0234-ML	1920 x 1200 (2.3 MP)	120 fps		Sony IMX390	1/2.6 "CMOS	global
DMM 37MX335-ML	2592 x 1944 (5 MP)	60 fps	STARVIS	Sony IMX335	1/2.8" CMOS	rolling
DMM 37MX334-ML	3840 x 2160 (8.3 MP)	30 fps	STARVIS	Sony IMX334	1/1.8 " CMOS	rolling

The Imaging Source offers a wide variety of high-performance MIPI CSI-2 monochrome board-level cameras for embedded machine vision applications. The MIPI CSI-2 protocol enables direct processor / ISP connection, avoiding latency issues and minimizing footprint. The MIPI CSI-2 camera modules are perfect for single and multi-camera embedded vision applications in automotive and IoT as well as standard machine vision applications. The board cameras feature the latest Sony and ONSemi CMOS sensors (gloabal and rolling shutter) and are available for use with NVIDIA[®] Jetson Nano, TX2, AGX Xavier and Raspberry Pi 4.

Features	Drivers
- Resolution: 0.3 MP - 8.3 MP	Pre-built kernel drivers are available for NVIDIA [®] JetPack 4.3 SDK.
 Dimensions: 30 x 30 x 12 mm Pre-built OpenEmbedded images 	The drivers are compliant with the NVIDIA [®] l4t video4Linux interface and work with the standard
(standard sensor config.)	NVIDIA [®] software stack like JetCam, DeepStream
 OpenEmbedded layers to build custom images 	SDK and others.
- HALCON Ready	The source code for all drivers is available upon
	request.

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FPD-Link Board Cameras Color



Product Code	Resolution	FPS	Туре	Sensor	Format	Shutter
DFM 37CX297-ML	640 x 480 (0.3 MP)	120 fps	Pregius	Sony IMX297	1/2.9" CMOS	global
DFM 37CX296-ML	1440 x 1080 (1.6 MP)	60 fps	Pregius	Sony IMX296	1/2.9" CMOS	global
DFM 37CX290-ML	1920 x 1080 (2.1 MP)	120 fps	STARVIS	Sony IMX290	1/2.8 " CMOS	rolling
DFM 37CR0234-ML	1920 x 1200 (2.3 MP)	120 fps		OnSemi AR0234CS	1/2.6" CMOS	global
DFM 37CX390-ML	1920 x 1200 (2.3 MP)	60 fps		Sony IMX390	1∕2.7 ″ cmos	rolling
DFM 37CX335-ML	2592 x 1944 (5 MP)	60 fps	STARVIS	Sony IMX335	1/2.8 " CMOS	rolling
DFM 37CX334-ML	3840 x 2160 (8.3 MP)	30 fps	STARVIS	Sony IMX334	1/1.8 " CMOS	rolling

The Imaging Source MIPI CSI-2 cameras with FPD-Link III serializer boards offer nearly the same feature set as MIPI CSI-2 cameras, but allow cable lengths up to 15m. Image data, commands and power supply are transmitted via a thin coaxial cable. The FPD-Link board cameras can be used with NVIDIA Jetson Nano, TX2, Xavier as well as Raspberry Pi 4 and feature the latest Sony and ONSemi CMOS sensors (rolling or global shutter). The board cameras are suitable for single or multi-camera embedded systems for automotive, IoT and standard machine vision applications.

Features

- Resolution: 0.3 MP 8.3 MP
- Frame rate: up to 120 fps
- Dimensions: 30 x 30 x 12 mm
- Pre-built OpenEmbedded images (standard sensor config.)
- OpenEmbedded layers to build custom images
- HALCON Ready

Drivers

Pre-built kernel drivers are available for NVIDIA[®] JetPack 4.3 SDK.

The drivers are compliant with the NVIDIA[®] l4t video4Linux interface and work with the standard

NVIDIA® software stack like JetCam, DeepStream SDK and others.

The source code for all drivers is available upon request.



FPD-Link Board Cameras Monochrome



Product Code	Resolution	FPS	Туре	Sensor	Format	Shutter
DMM 37CX397-ML	640 x 480 (0.3 MP)	240 fps	Pregius	Sony IMX297	1∕6.4 ″смоѕ	global
DMM 37CX297-ML	640 x 480 (0.3 MP)	120 fps	Pregius	Sony IMX296	1/2.9 " CMOS	global
DMM 37CX296-ML	1440 x 1080 (1.6 MP)	60 fps	Pregius	Sony IMX290	1/2.9 " CMOS	global
DMM 37CX290-ML	1920 x 1080 (2.1 MP)	120 fps	STARVIS	OnSemi AR0234CS	1/2.8″ CMOS	rolling
DMM 37CR0234-ML	1920 x 1200 (2.3 MP)	120 fps		Sony IMX390	1/2.6 " CMOS	global
DMM 37CX335-ML	2592 x 1944 (5 MP)	60 fps	STARVIS	Sony IMX335	1/2.8″ CMOS	rolling
DMM 37CX334-ML	3840 x 2160 (8.3 MP)	30 fps	STARVIS	Sony IMX334	1/1.8 " CMOS	rolling

Suitable for single or multi-camera embedded systems for automotive, IoT and standard machine vision applications, The Imaging Source MIPI CSI-2 board-level cameras with FPD-Link III serializer boards offer a similar feature set as the standard MIPI CSI-2 cameras but allow cable lengths of up to 15m. Image data, commands and power supply are transmitted via a thin coaxial cable. The FPD-Link board cameras can be used with NVIDIA Jetson Nano, TX2, Xavier as well as Raspberry Pi 4 and feature the latest Sony and ONSemi CMOS sensors (rolling or global shutter).

Features	Drivers
- Resolution: 0.3 MP - 8.3 MP	Pre-built kernel drivers are available for NVIDIA® JetPack 4.3 SDK.
- Dimensions: 30 x 30 x 12 mm - Pre-built OpenEmbedded images	The drivers are compliant with the NVIDIA [®] I4t video4Linux interface and work with the standard
(standard sensor config.)	NVIDIA [®] software stack like JetCam, DeepStream
 OpenEmbedded layers to build custom images HALCON Ready 	SDK and others. The source code for all drivers is available upon request.





FPD-Link Housed Cameras Color



Product Code	Resolution	FPS	Туре	Sensor	Format	Shutter
DFK 37CX297-I67	640 x 480 (0.3 MP)	120 fps	Pregius	Sony IMX297	1∕2.9 ″смоѕ	global
DFK 37CX296-I67	1440 x 1080 (1.6 MP)	60 fps	Pregius	Sony IMX296	1/2.9 " CMOS	global
DFK 37CX290-I67	1920 x 1080 (2.1 MP)	120 fps	STARVIS	Sony IMX290	1/2.8 " CMOS	rolling
DFK 37CR0234-I67	1920 x 1200 (2.3 MP)	120 fps		OnSemi AR0234CS	1/2.6 " CMOS	global
DFK 37CX390-I67	1920 x 1200 (2.3 MP)	60 fps		Sony IMX390	1⁄2.7 ″ cmos	rolling
DFK 37CX335-I67	2592 x 1944 (5 MP)	60 fps	STARVIS	Sony IMX335	1/2.8" CMOS	rolling
DFK 37CX334-I67	3840 x 2160 (8.3 MP)	30 fps	STARVIS	Sony IMX334	1/1.8 " CMOS	rolling

FPD-Link III color industrial cameras offer top embedded vision performance with an IP67-rated housing for harsh industrial environments. The cameras feature Sony and ONSemi's newest CMOS sensor technology (rolling and global shutter) using an FPD-Link III protocol which allows for cable lengths of up to 15m. Image data, commands and power supply are transmitted via a thin coaxial cable. The FPD-Link industrial cameras support the NVIDIA® Jetson Nano, TX2, AGX Xavier as well as Raspberry Pi 4 platforms.

Features

- Resolution: 0.3 MP 8.3 MP
- Frame rate: up to 120 fps
- Dimensions: 36 x 36 x 32.8 mm
- OpenEmbedded layers to build custom images
- HALCON Ready

Drivers

Pre-built kernel drivers are available for NVIDIA[®] JetPack 4.3 SDK.

The drivers are compliant with the NVIDIA[®] I4t video4Linux interface and work with the standard

NVIDIA[®] software stack like JetCam, DeepStream SDK and others.

The source code for all drivers is available upon request.



FPD-Link Housed Cameras Monochrome



Product Code	Resolution	FPS	Туре	Sensor	Format	Shutter
DMK 37CX397-167	640 x 480 (0.3 MP)	240 fps	Pregius	Sony IMX297	1/6.4 " CMOS	global
DMK 37CX297-I67	640 x 480 (0.3 MP)	120 fps	Pregius	Sony IMX296	1/2.9 " CMOS	global
DMK 37CX296-I67	1440 x 1080 (1.6 MP)	60 fps	Pregius	Sony IMX290	1/2.9 " CMOS	global
DMK 37CX290-167	1920 x 1080 (2.1 MP)	120 fps	STARVIS	OnSemi AR0234CS	1/2.8 " CMOS	rolling
DMK 37CR0234-I67	1920 x 1200 (2.3 MP)	120 fps		Sony IMX390	1/2.6 "CMOS	global
DMK 37CX335-I67	2592 x 1944 (5 MP)	60 fps	STARVIS	Sony IMX335	1/2.8 " CMOS	rolling
DMK 37CX334-I67	3840 x 2160 (8.3 MP)	30 fps	STARVIS	Sony IMX334	1/1.8 ″ смоз	rolling

To meet the demands of harsh industrial environments, The Imaging Source offers FPD-Link III monochrome industrial cameras with an IP67-rated housing and exceptional embedded vision performance. Featuring Sony and ONSemi's newest CMOS sensor technology (rolling and global shutter), the cameras use an FPD-Link III protocol which allows for cable lengths of up to 15m. Image data, commands and power supply are transmitted via a thin coaxial cable. The FPD-Link industrial cameras support the NVIDIA® Jetson Nano, TX2, AGX Xavier as well as Raspberry Pi 4 platforms.

Features

- Resolution: 0.3 MP 8.3 MP
- Frame rate: up to 240 fps
- Dimensions: 36 x 36 x 32.8 mm

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- OpenEmbedded layers to build custom images
- HALCON Ready

Drivers

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Pre-built kernel drivers are available for NVIDIA[®] JetPack 4.3 SDK.

The drivers are compliant with the NVIDIA[®] l4t video4Linux interface and work with the standard

NVIDIA[®] software stack like JetCam, DeepStream SDK and others.

The source code for all drivers is available upon request.



Polarization Cameras

featuring IMX250MZR / IMX250MYR Sensors



USB 3.0 Polarization Cameras

Dimensions: 29 x 29 x 43 mm Mass: 65g

Model	Resolution	Frame Rate	Pixel Size	Sensor	Format	Shutter	Chroma
DZK 33UX250	5.1 MP	75 fps	3.45 µm	Sony IMX250MZR	2∕3 " ⊂MOS	global	mono
DYK 33UX250	5.1 MP	75 fps	3.45 µm	Sony IMX250MYR	2∕3 " cmos	global	color

GigE Polarization Cameras

Dimensions: 29 x 29 x 57 mm Mass: 65g

Model	Resolution	Frame Rate	Pixel Size	Sensor	Format	Shutter	Chroma
DZK 33GX250	5.1 MP	24 fps	3.45 µm	Sony IMX250MZR	2∕3 " ⊂MOS	global	mono
DYK 33GX250	5.1 MP	24 fps	3.45 µm	Sony IMX250MYR	2/3 " CMOS	global	color

Sony's Polarsens[™] 5.1 MP global-shutter CMOS image sensors (IMX250MZR / IMX250MYR) capture visual data which cannot be obtained using other standard monochrome and color sensors. The sensor's Polarsens technology uses four-directional (0°, 45°, 90°, 135°) nanowire micro-polarizers placed in front of each 2x2 pixel array (calculation unit) to deliver multi-directional polarized images.

Many materials, such as plastics, glass, metals and liquids display intrinsic polarization properties. The sensors' polarization filters make use of this to visualize material stress and surface scratches as well as to reduce unwanted glare, improve edge detection or to enhance contrast in low-contrast materials. The supplied IC Measure software supports various methods of processing the 2x2 pixel arrays.

The 5.1 MP cameras are available as color and monochrome variants with either a GigE (max. 24 fps) interface or a faster USB 3.0 interface (max. 75 fps).





Visible-light intensity image

Black pyramid displaying poor contrast overall with ambient light





Images from DZK 33UX250 camera with Polarsens sensor

Image using DoLP image data, removes shadows and adds contrast Image using AoLP image data and HSV color mapping for effective segmentation

Glare Reduction



Standard visible-light intensity image with glare on windshield obstructing view inside.



Standard visible-light intensity image of pills in blister pack. Glare and low contrast make presence detection difficult.



Standard visible-light intensity image of plastic cutlery displaying almost no useful visual data.



Image from DZK 33UX250: DoLP image data to reduce glare, making inside-view of cabin possible.



Image from DZK 33UX250 showing reduced glare and added contrast, enabling more precise presence detection.



Image using AoLP data from DZK 33 UX250 and HSV color mapping visualizes residual stress in plastics and glass (birefringence).



Visualization of Residual Stress

Presence Detection

Pick & Load: 3D Vision System

Software and 3D Camera for Pick and Place Applications

- Robot independent
- No training or CAD files needed
- No part palletizing required.
- No expertise in image processing or robotics is required.



Easy Installation

Simply mount the system on your robot arm and calibrate with the intuitive user interface. Multiple calibrations are not necessary. No external integrator needed for installation, set-up and ramp-up.

Compatibility

Easily integrate Pick & Load with your robot with the open communication protocol. Use it with four, five or six axis robots. Pick & Load is robot independent.

No training, no CAD files

Pick & Load is able to automatically segment basic geometries of your raw materials and finished parts. No training or CAD files needed.

Small form factor

The light-weight, credit-card-sized 3D sensor can be easily mounted to most robot end-effectors.

Improved Efficiency and Accuracy

Pick & Load not only automates: it is even faster than humans. Increased throughput and fewer errors due to fatigue and human factors.

Robust 3D sensor

The active 3D sensor allows an operation independent of environment lighting conditions. Load and unload your machines day and night.

Anyone can use it!

Smart software and simplified user interaction ensure that Pick & Load can be used by everyone. No expertise in image processing or robotics is required.

Unpalletized parts?

No Problem. Special staging containers or trays are not necessary. Pick & Load detects parts on tables, palettes or even drawers. No part palletizing required.





Flexible Camera Configuration and Easy Camera Calibration

Pick & Load offers two possible configurations for visual servoing: eye-in-hand (camera mounted on robot) and eye-to-hand (fixed camera viewing robot).

The Pick & Load GUI allows for straight-forward camera calibration in four steps.

Pick & Load is an affordable and efficient solution for the automation of machine loading and unloading tasks. Even small and medium sized enterprises can now automate their CNC machine tending. A compact 3D sensor with active illumination is integrated with smart software to deliver a cost-effective solution in a compact form factor. Pick & Load can be quickly configured to load and unload unpalletized parts from tables, palettes or drawers.

Technical Data: 3D Sensor

Camera technology	3D stereo with active IR illumination
Field of view	69° x 42°
Camera dimensions	98 mm x 20 mm x 22 mm
Camera protection	dustproof, waterproof
Camera weight	200g
Supported part geometries	cuboids, cylinders, rings, N-gons
Segmentation accuracy x/y/z	1 mm / 1 mm / 2 mm
Connectors	USB Type C
Power consumption	~ 3.5 W
Operating temperature	0 ~ 60° C



USB 3.1 CMOS Cameras : 38 Series

- Compatible to UVC and USB3 Vision
- Sony Pregius 9 and 12 megapixel
- Onboard image pre-processing





Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DxK 38UX267	4096 x 2160	9	3.45 µm	35 fps	Sony IMX267 Pregius	1" CMOS	8/12 bit
DxK 38UX255	4096 x 2160	9	3.45 µm	42 fps	Sony IMX255 Pregius	1" CMOS	8/12 bit
DxK 38UX304	4096 x 3000	12	3.45 µm	26 fps	Sony IMX304 Pregius	1.1" CMOS	8/12 bit
DxK 38UX253	4096 x 3000	12	3.45 µm	30 fps	Sony IMX253 Pregius	1.1" CMOS	8/12 bit

DxK: x = M (= monochrome) or F (= color)

The Imaging Source "38 series" industrial cameras are equipped with highly-sensitive, low-noise Sony Pregius global-shutter sensors which offer exceptional distortion-free image quality and color fidelity. The 9 and 12 MP cameras support the USB3 Vision standard which ensures stability and compatibility for easy integration and flexible configuration. Available in color and monochrome, the cameras feature a compact and robust industrial design and support applications such as intelligent traffic systems (ITS), inspection tasks and automation as well as microscopy. Additionally, their sensor sizes (2/3" and 1/1.8") mean they are easily combined with a variety of low-priced standard industrial lenses available from The Imaging Source.

Inc	luc	de	d:

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to DirectShow, DirectX, TWAIN, VfW, WDM, ActivVisionTools, HALCON, LabVIEW, Matlab, and NeuroCheck
- IC Capture camera control and acquisition software for W 7/8/10, Vista, XP
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10, Vista, XP
 Free barcode SDK for W 7/8/10
- Open source drivers and end-user software for Linux (Apache License 2.0)

connector - Digital I/O strobe

 C/CS/M12 mount adapter
 Binning and ROI

- Reversible Type-C

Features:

- CS to M12 adapters - C, CS and M12 lenses - USB 3.1 (Gen 1) cable

Accessories:

60 mm

44 mm

29 mm



USB 3.1 CMOS Cameras : 37 Series

- Reversible Type-C port connection
- Sony STARVIS and Pregius CMOS sensors
- Single-board cameras







DxK: x = M (= monochrome) or F (= color)

"37" series industrial cameras offer Sony's latest high-performance STARVIS and Pregius Sony CMOS sensors with the USB 3.1 (gen. 1) reversible Type-C port connection. Designed specifically to meet the demands of industrial imaging, Pregius sensors provide excellent image quality for moving machine vision applications, while the STARVIS (IMX178) is optimal in environments where fluctuations in light or lower light levels are an issue. These USB Vision compliant cameras are well-suited to applications such as automated inspection, quality control and medical diagnostics.

Included:	Features:	Accessories:
 Camera, CS to C mount adapter and tripod mount Drivers compatible to DirectShow, DirectX, TWAIN, VfW, WDM, ActivVisionTools, HALCON, LabVIEW, Matlab, and NeuroCheck 	 Reversible Type-C connector Digital I/O strobe C/CS/M12 mount 	- CS to M12 adapters - C, CS and M12 lenses - USB 3.1 (Gen 1) cable
 IC Capture camera control and acquisition software for W 7/8/10, Vista, XP IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10, Vista, XP Eree baccode SDK for W 7/8/10 	adapter - Binning and ROI	25 mm
Open source drivers and end-user software for Linux (Apache License 2.0)		

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USB 3.0 CMOS Cameras: 33 Series

- Compatible to UVC and USB3 Vision
- Sony Pregius and STARVIS sensors
- Onboard image pre-processing





Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DxK 33UP1300	1280 x 1024	1.3	4.8 µm	168 fps	OnSemi P1300	1⁄2" CMOS	8/10 bit
DxK 33UX290	1920 x 1080	2.1	2.9 µm	143 fps	Sony IMX290 STARVIS	¹ /2.8" CMOS	8/12 bit
DxK 33UP2000	1920 x 1200	2.3	4.8 µm	129 fps	OnSemi P2000	⅔" CMOS	8/10 bit
DxK 33UX174	1920 x 1200	2.3	5.86 µm	162 fps	Sony IMX174 Pregius	1/1.2" CMOS	8/12 bit
DxK 33UX249	1920 x 1200	2.3	5.86 µm	48 fps	Sony IMX249 Pregius	1/1.2" CMOS	8/12 bit
DxK 33UX252	2048 x 1536	3.1	3.45 µm	120 fps	Sony IMX252 Pregius	¹ /1.8" CMOS	8/12 bit
DxK 33UX265	2048 x 1536	3.1	3.45 µm	60 fps	Sony IMX265 Pregius	¹ /1.8" CMOS	8/12 bit
DxK 33UX250	2448 x 2048	5	3.45 µm	75 fps	Sony IMX250 Pregius	⅔" CMOS	8/12 bit
DxK 33UX264	2448 x 2048	5	3.45 µm	38 fps	Sony IMX264 Pregius	⅔" CMOS	8/12 bit
DxK 33UP5000	2592 x 2048	5.3	4.8 µm	60 fps	OnSemi P5000	1" CMOS	8/10 bit
DxK 33UX178	3072 x 2048	6.3	2.4 µm	30 fps	Sony IMX178 STARVIS	1/1.8" CMOS	8/12 bit
DxK 33UJ003	3856 x 2764	10.7	1.67 µm	14 fps	Aptina MT9J003	¹ /2.3" CMOS	8/12 bit

DxK: x = M (= monochrome) or F (= color)

Included:

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to DirectShow, DirectX, TWAIN, VfW, WDM, ActivVisionTools, HALCON, LabVIEW, Matlab, and NeuroCheck
- IC Capture camera control and acquisition software for W 7/8/10
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10
- Free barcode SDK for W 7/8/10
- Open source drivers and end-user software for Linux (Apache License 2.0)

- Accessories:
- Variable trigger delay CS to M12 adapters (4 µs to 1 s) - C, CS and M12 lenses
- Digital I/O strobe 12-pin Hirose trigger cable

47 mm

- C/CS/M12 mount

Features:

- adapter
- Binning and ROI (CMOS only)

_____ 29 mm

29 mm





USB 3.0 CMOS Cameras : 27 Series

- Flat compact housing
- 5 and 10 megapixel
- Available as 1 PCB





Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMK 27A (B) UR0135	1280 x 960	1.2	3.75 µm	60 fps	OnSemi AR0135 M	1∕3 " CMOS	8/12 bit
DFK 27A (B) UR0135	1280 x 960	1.2	3.75 µm	60 fps	OnSemi AR0135 C	1∕3 " CMOS	8/12 bit
DMK 27A (B) UP006	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P006 M	1⁄3 " CMOS	8/12 bit
DFK 27A (B) UP006	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P006 C	1⁄3 " CMOS	8/12 bit
DMK 27A (B) UJ003	3856 x 2764	10	1.67 µm	7 fps	Aptina MT9J003 M	1⁄2.3 " CMOS	8/12 bit
DFK 27A (B) UJ003	3856 x 2764	10	1.67 µm	7 fps	Aptina MT9J003 C	1⁄2.3 " CMOS	8/12 bit
DMK = monochrome	DFK = color						

The Imaging Source 27 series of CMOS machine vision cameras is the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the highly sensitive Aptina CMOS sensors, the housed products are very compact and are ideally suited to cost sensitive applications. Binning, windowing and high-speed readout are but a few of the performance enhancements that dramatically reduces image noise levels.

The Imaging Source 27 series CMOS cameras are characterized by small housings and very competitive prices.

Included:	Features:	Accessories:
- Camera, CS to C mount adapter and tripod mount	- Digital I/O strobe	- CS to M12 adapters
- Drivers compatible to DirectShow, DirectX, TWAIN,	- C/CS/M12 mount	- C, CS and M12 lenses
VfW, WDM, ActivVisionTools, HALCON, LabVIEW,	adapter	
Matlab, and NeuroCheck	- Binning and ROI	
- IC Capture camera control and acquisition software		25 mm 36 mm
for W 7/8/10, Vista, XP		
including a .NET component, an ActiveX component,		Russell.
and a C++ class library for W 7/8/10, Vista, XP		36 mm
Open source drivers and end-user software for		
Linux (Apache License 2.0)		

18

HOI

USB 3.0 Cameras : 42 Megapixel Camera

- Flat compact housing
- Resolution 7728 x 5368
- C/CS-Mount





Product Code	Resolution	Megapixel	Frame Rate	Sensor Size	Shutter
DFK AFU420-CCS	7716 x 5360	41.4	110 fps	⅔ ″ CMOS	rolling
DFK AFU420-L62 with integrated lens	7716 x 5360	41.4	110 fps	² / ₃ " CMOS	rolling

The Imaging Source DFK AFU420-CCS color camera has a USB 3.0 interface and is the perfect solution for many industrial automation, quality assurance, security, surveillance and medical applications. With up to 110 images per second, the DFK AFU420-CCS is a low cost, yet highly versatile imaging solution. The cameraincludes a C to CS mount adapter, making it compatible to C and CS mount lenses. Using the optional CS to M12 boardlens adapter, the camera is also compatible to M12 board lenses. The Imaging Source authors and supports drivers, SDKs, extensions and end-user software for Microsoft Windows, which can be freely downloaded from our website.

Extensions for Microsoft Windows enable the DFK AFU420-CCS to be integrated in to common machine vision software libraries, such as LabView and OpenCV.

Included:

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to DirectShow, DirectX, TWAIN, VfW, WDM, ActivVisionTools, HALCON, LabVIEW, Matlab, and NeuroCheck
- IC Capture camera control and acquisition software for W 7/8/10, Vista, XP
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10, Vista, XP
- Free barcode SDK for W 7/8/10
- Open source drivers and end-user software for Linux (Apache License 2.0)

Features:

Accessories:

- Digital I/O strobe - Binning and ROI
- CS to C adapters
- C and CS mount lenses
- USB 3.0 cable in various lengths
- 3 m USB 3.0 cable with fixing screws





The Imaging Source One4all Series: USB 2.0 CMOS Cameras

- Dimensions 36 x 36 x 25 mm
- Several CMOS sensors available
- Free measurement tool included
- Free barcode SDK included





Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMK 22A (B) UC03	744 x 480	0.3	6 µm	76 fps	Aptina MT9V024 M	1∕₃ " CMOS	8 bit
DFK 22A (B) UC03	744 x 480	0.3	6 µm	76 fps	Aptina MT9V024 C	1∕₃ " CMOS	8 bit
DMK 42A (B) UC03	1280 x 960	1.2	3.75 µm	25 fps	Aptina MT9M021 M	1∕3 " CMOS	8 bit
DFK 42A (B) UC03	1280 x 960	1.2	3.75 µm	25 fps	Aptina MT9M021 C	1∕3 " CMOS	8 bit
DMK 42A (B) UE03	1280 x 960	1.2	3.75 µm	25 fps	Aptina AR0132 M	1∕3 " CMOS	8 bit
DFK 42A (B) UE03	1280 x 960	1.2	3.75 µm	25 fps	Aptina AR0132 C	1∕3 " CMOS	8 bit
DMK 72A (B) UC02	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P031 M	1/2.5 " CMOS	8 bit
DFK 72A (B) UC02	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P006 C	1⁄2.5 " CMOS	8 bit
DMK = monochrome	DFK = color	-					

The Imaging Source "One4all" series of CMOS machine vision cameras is the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the highly sensitive Aptina CMOS sensors, the housed products are very compact and are ideally suited to cost sensitive applications.

Binning, windowing and high-speed readout are but a few of the performance enhancements that dramatically reduces image noise levels. The Imaging Source "One4all" CMOS cameras are characterized by small housings and very competitive prices.

Included:	Features:	Accessories:
- Camera, CS to C mount adapter and tripod mount	- Digital I/O strobe	- CS to M12 adapters
- Drivers compatible to DirectShow, DirectX, TWAIN,	- C/CS/M12 mount	- C, CS and M12 lenses
VfW, WDM, ActivVisionTools, HALCON, LabVIEW,	adapter	- USB 2.0 cable (1.8m, 3m, 4.5m)
Matlab, and NeuroCheck	- Binning and ROI	- 4-pin Hirose trigger cable
 IC Capture camera control and acquisition software for W 7/8/10, Vista, XP IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10, Vista, XP Free barcode SDK for W 7/8/10 	25 mm	36 mm 36 mm
- Open source drivers and end-user software for Linux (Apache License 2.0)	() (dear	

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GigE Cameras: 38 Series

- Dimensions 29 x 44 x 60 mm
- New interface ix Industrial
- GigE Vision compliant
- Free measurement tool included
- Free barcode SDK included



Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D	
DxK 38GX267	4096 x 2160	9	3.45 µm	13 fps	Sony IMX267 Pregius	1" CMOS	8/12 bit	
DxK 38GX304	4096 x 2160	12.3	3.45 µm	9 fps	Sony IMX304 Pregius	1.1" CMOS	8/12 bit	
DxK: x = M (= monochrome) or F (= color)								

The Imaging Source "38 series" GigE industrial cameras are equipped with high-sensitivity, low-noise Sony Pregius global-shutter sensors which offer exceptional color fidelity. The 9 and 12 MP cameras are GigE Vision compliant and feature a compact and robust industrial design and support applications such as intelligent traffic systems (ITS), inspection tasks and automation as well as microscopy. Using the new ix Industrial Ethernet interface, which requires 70% less installation space than RJ45 and is set to replace RJ45 connectors, the cameras are ideal for applications with miniaturized requirements.

An active locking mechanism ensures a secure, shock and vibration-resistant connection - making the need for locking screws obsolete. Additionally, the cameras' sensor sizes (2/3" and 1/1.8") mean they are easily combined with a variety of low-priced standard industrial lenses available from The Imaging Source.

Included:

- Camera, CS to C mount adapter and tripod mount
- Drivers compatible to DirectShow, DirectX, TWAIN, VfW, WDM, ActivVisionTools, HALCON, LabVIEW, Matlab, and NeuroCheck
- IC Capture camera control and acquisition software for W 7/8/10
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10
- Free barcode SDK for W 7/8/10
- Open source drivers and end-user software for Linux (Apache License 2.0)

Features:

(4 µs to 1 s)

optional)

- Digital I/O strobe

Binning and ROI

driven auto iris

controller

- C mount (CS mount

- Power over Ethernet

Direct power option
 Optional external DC

Accessories:

- Variable trigger delay CS to M12 adapters
 - C, CS and M12 lenses
 - 12VDC power adapter
 - 6-pin Hirose break-out cable
 - External power and trigger cable





GigE Cameras: 33 Series

- Dimensions 29 x 29 x 57 mm
- GigE Vision compliant
- Wide range of CCD and CMOS sensors
- Power over Ethernet
- Free measurement tool included
- Free barcode SDK included



Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DxK 33GX287	720 x 540	0.4	6.9 µm	300 fps	Sony IMX287 Pregius	1⁄2.9" CMOS	8/12 bit
DxK 33GV024	752 x 480	0.4	6 µm	100 fps	Aptina MT9V024	⅓" CMOS	8/10 bit
DxK 33GR0134	1280 x 960	1.2	3.75 µm	70 fps	ARO134	⅓" CMOS	8/12 bit
DxK 33GP1300	1280 x 1024	1.3	4.8 µm	90 fps	PYTHON 1300	1⁄2" CMOS	8/10 bit
DxK 33GX273	1440 x 1080	1.6	3.45 µm	75 fps	Sony IMX273 Pregius	1⁄2.9" CMOS	8/12 bit
DxK33GX290	1920 x 1080	2.1	2.9 µm	56 fps	Sony IMX290 STARVIS	1⁄2.8" CMOS	8/12 bit
DxK 33GX174	1920 x 1200	2.3	5.86 µm	50 fps	Sony IMX174 Pregius	1/1.2" CMOS	8/12 bit
DxK 33GX236	1920 x 1200	2.3	2.8 µm	50 fps	Sony IMX236 STARVIS	1⁄2.8" CMOS	8/12 bit
DxK 33GX249	1920 x 1200	2.3	5.86 µm	30 fps	Sony IMX249 Pregius	1/1.2" CMOS	8/12 bit
DxK 33GX265	2048 x 1536	3.1	3.45 µm	36 fps	Sony IMX265 Pregius	1⁄1.8" CMOS	8/12 bit
DxK 33GX264	2448 x 2048	5	3.45 µm	24 fps	Sony IMX264 Pregius	⅔" CMOS	8/12 bit
DxK 33GP006	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P006	1⁄2.5" CMOS	8/12 bit
DxK 33GX178	3072 x 2048	6.3	2.4 µm	19 fps	Sony IMX178 STARVIS	1⁄1.8" CMOS	8/12 bit
DxK 33GX226	4000 x 3000	12	1.85 µm	9 fps	Sony IMX226 STARVIS	1/1.7" CMOS	8/12 bit
DxK 33GX183	5472 x 3648	20	2.4 µm	6 fps	Sony IMX183	1" CMOS	8/12 bit

DxK: x = M (= monochrome) V F (= color)

Included:

- Camera, CS to C mount adapter and tripod mount
 Drivers compatible to DirectShow, DirectX, TWAIN, VfW, WDM, ActivVisionTools, HALCON, LabVIEW, Matlab, and NeuroCheck
- IC Capture camera control and acquisition software for W 7/8/10
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10
- Free barcode SDK for W 7/8/10
- Open source drivers and end-user software for Linux (Apache License 2.0)

Features:

 Variable trigger delay (4 µs to 1 s)

- Digital I/O strobe

- C/CS/M12 mount

- Binning and ROI

- Power over Ethernet

- Direct power option

DC driven auto iris

- Optional external

controller

(CMOS only)

adapter

- r delay CS to M12 adapters
 - C, CS and M12 lenses

Accessories:

- 12VDC power adapter
- 6-pin Hirose break-out cable
- External power and trigger cable



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22

GigE Cameras: 33e Series

- Dimensions 44 x 29 x 57 mm
- GigE Vision compliant
- Large image buffer
- Free measurement tool included
- Free barcode SDK included



Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DxK 33GP1300e	1280 x 1024	1.3	4.8 µm	90 fps	OnSemi P1300	1⁄2 " CMOS	8/10 bit
DxK 33GX290e	1920 x 1080	2.1	2.9 µm	56 fps	Sony IMX290 STARVIS	1⁄2.8 " CMOS	8/12 bit
DxK 33GP2000e	1920 x 1200	2.3	4.8 µm	50 fps	OnSemi P2000	⅔ " CMOS	8/10 bit
DxK 33GX174e	1920 x 1200	2.3	5.86 µm	50 fps	Sony IMX174 Pregius	1⁄1.2 " CMOS	8/12 bit
DxK 33GX249e	1920 x 1200	2.3	5.86 µm	48 fps	Sony IMX249 Pregius	1⁄1.2 " CMOS	8/12 bit
DxK 33GX265e	2048 x 1536	3.1	3.45 µm	36 fps	Sony IMX265 Pregius	1⁄1.8 " CMOS	8/12 bit
DxK 33GX264e	2448 x 2048	5	3.45 µm	24 fps	Sony IMX264 Pregius	⅔ " CMOS	8/12 bit
DxK 33GP5000e	2592 x 2048	5.3	4.8 µm	22 fps	OnSemi P5000	1 " CMOS	8/10 bit
DxK 33GX178e	3072 x 2048	6.3	2.4 µm	19 fps	Sony IMX178 STARVIS	1⁄1.8 " CMOS	8/12 bit
DxK 33GJ003e	3856 x 2764	10.7	1.67 µm	11 fps	Aptina MT9J003	1⁄2.3 " CMOS	8/12 bit

DxK: x = M (= monochrome) V F (= color)

With an assortment of global and rolling shutter CMOS sensors to choose from as well as on-board image pre-processing and frame buffering, the "33e" GigE camera series offers a broad portfolio of ethernet cameras that are ideal for any number of machine vision applications. A Hirose port allows for a variety of input, output, strobe and trigger options, and the Gigabit Ethernet interface enables easy setup and integration into existing and new applications.

Included:	Features:	Accessories:
- Camera, CS to C mount adapter and tripod mount	- Variable trigger delay	- CS to M12 adapters
- Drivers compatible to DirectShow, DirectX, TWAIN,	(4 µs to 1 s)	- C, CS and M12 lenses
VfW, WDM, ActivVisionTools, HALCON, LabVIEW,	- Digital I/O strobe	- 12VDC power adapter
Matlab, and NeuroCheck	- C/CS/M12 mount	- 6-pin Hirose break-out cable
- IC Capture camera control and acquisition software	adapter	- External power and trigger cable
for W 7/8/10	- Binning and ROI	57 mm 👝 44 mm
- IC Imaging Control Software Development Kit (SDK)	- Power over Ethernet	
including a .NET component, an ActiveX component,	- Direct power option	
and a C++ class library for W 7/8/10	- Optional external	29 mm
- Free barcode SDK for W 7/8/10	DC driven auto iris	
- Open source drivers and end-user software for	controller	
Linux (Apache License 2.0)		



Customized Cameras

- Save time and money
- You design, we manufacture
- Take advantage of our experience



In addition to manufacturing a wide variety of ready-made machine vision cameras, The Imaging Source also manufactures customized camera solutions for customer-specific requirements. Customers may specify minor or major changes to casing design, PCB layout, connection type, location and pinning, in addition to alterations to software drivers and end-user applications. The Imaging Source guarantees to manufacture customized camera solutions to the same high technical level as our ready-made cameras.

OEM customers have direct access to our decades of experience, and our internal design and development processes, to ensure customized camera solutions fulfill customer-specific requirements perfectly. Furthermore, The Imaging Source offers feasibility studies, application-specific training, and practical advice for the integration of our products into customer-specific solutions.

Customization services:

- Camera setup services, such as cable, lens and mount installation.
- OEM solutions: Modifications to shape, size and design of casing and labeling.
- Customized connector type, location and pinning.
- Modifications to camera casing, or PCB shape in the case of board cameras.
- Modifications to PCB and other electronic components.
- Customization of software drivers and end-user applications.

HO

GigE 12x/30x Zoom Cameras

- Integrated motorized 12x/30x zoom, focus and iris
- Several CMOS and CCD sensors
- Free measurement tool included
- Free barcode SDK included





Product Code	Mega- pixel	Resolution	Frame Rate	Sensor	Focal Lenght (mm)	Sensor Size	Focus
DxK Z12G445	1.2	1280 x 960	30 fps	Sony ICX445ALA	4.8 to 57,6	⅓ " CCD	auto/man
DxK Z12GX236	2.3	1920 x 1200	41 fps	Sony IMX236LLJ	4.8 to 57,6	1⁄2.8 " CMOS	auto/man
DxK Z12GP031	5.0	2592 x 1944	15 fps	Aptina MT9P031	4.8 to 57,6	1⁄2.5 " CMOS	auto/man
DxK 39GX265-Z20	3.1	2048 x 1536	36 fps	Sony IMX265LQR	6.8 to 136	1/1.8 " Pregius	auto/man
DxK Z30GP031	5.0	2592 x 1944	15 fps	Aptina MT9P031	4.3 to 129	¹ /2.5 " CMOS	auto/man

DxK: x = M (= monochrome) or F (= color)

The Imaging Source 12x and 30x zoom cameras have an integrated 12x or 30x optical zoom lens, iris and focus. Using the included SDK or end-user software IC Capture the camera functions can be adjusted automatically or manually. The cameras, which ship with Gigabit Ethernet interfaces, are ideally suited to a wide range of applications in the fields of industrial automation, quality assurance, traffic (ITS), surveillance and medicine.

Included: Features: Accessories: - Camera, tripod mount - Integrated motorized - 12VDC power adapter - Drivers compatible to DirectShow, DirectX, TWAIN, lens - External power and trigger cable VfW, WDM, ActivVisionTools, HALCON, LabVIEW, - Zoom, focus and iris Close-up lenses for macro imaging Matlab, and NeuroCheck adjustable by software - Trigger and digital I/O - IC Capture camera control and acquisition software 147 mm for W 7/8/10 - Binning and ROI - IC Imaging Control Software Development Kit (SDK) (CMOS only) including a .NET component, an ActiveX component, - Power over Ethernet 71 m and a C++ class library for W 7/8/10 - Free barcode SDK for W 7/8/10 116 mm - Open source drivers and end-user software for Linux (Apache License 2.0) 50 mm 60 mn 50 mm 103 mm



USB 3.0 & 2.0 Autofocus Cameras

- Dimensions 36 x 36 x 25 mm
- C/CS mount or integrated optics
- Motorized focus control (via software)
- Free measurement tool included
- Free barcode SDK included



Product Code	Interface	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size
DxK AFUX236-M12	USB 3.0	1920 x 1200	2	2.8 µm	54 fps	Sony IMX236LQJ	¹ ⁄2.8 " CMOS
DxK AFUP031-M12	USB 3.0	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P031	½.₅ " CMOS
DxK AFUJ003-M12	USB 3.0	3856 x 2764	10	1.67 µm	7 fps	Aptina MT9J003	¹ ⁄2.3 " CMOS
DxK AFUX178-M12	USB 3.0	3072 x 2048	6	2.4 µm	22 fps	Sony IMX178LQJ	¹ ⁄1.8 " CMOS
DFK AFU420-L62	USB 3.0	7716 x 5360	42	1.12 µm	110 fps	N/A	⅔ " CMOS
DxK 22AUC03-F	USB 2.0	744 x 1944	0.3	6 µm	76 fps	Aptina MT9V024	⅓ " CMOS
DxK 72AUC02-F	USB 2.0	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P031 M	1⁄2.5 " CMOS

DxK: x = M (= monochrome) or F (= color)

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The Imaging Source autofocus cameras are the perfect solution for many industrial automation, quality assurance, security, and surveillance applications. Utilizing the highly sensitive Aptina CMOS sensors with selectable windows and pixel binning capabilities, the accurate 125 micron stepper motor accepts a wide range of M12 lenses for a broad range of uses. With wide VGA global shutter model, as well as, 5 megapixel rolling shutter versions, the application possibilities are endless. The easy to use USB 2.0 and 3.0 protocol, the software driven automatic 'One Push' focus, and the small housing makes this camera both elegant and versatile.

ncluded:	Features:	Accessories:
Camera, tripod mount	 Motorized focus 	- M12 lenses
Drivers compatible to DirectShow, DirectX, TWAIN,	control (via software)	- USB 2.0 / USB 3.0 cables
VfW, WDM, ActivVisionTools, HALCON, LabVIEW,	- Manual & automatic	with fixing screws
Matlab, and NeuroCheck	control	
IC Capture camera control and acquisition software	- For M12 lenses	For 42 MP Cameras:
for W 7/8/10	optimized	- CS to M12 adapters
IC Imaging Control Software Development Kit (SDK)	- Binning and ROI	- C/CS/M12 lenses
including a .NET component, an ActiveX component,		25 mm
and a C++ class library for W 7/8/10	For 42 MP Cameras:	30
Free barcode SDK for W 7/8/10	- Integrated Optics	A LERON
Open source drivers and end-user software for Linux	(f=6.2) or	36 mm

- C/CS/M12 mount

- Binning and ROI

adapter

(Apache License 2.0)

26

USB 3.1 Board Cameras: 37 Series

- Dimensions 36 x 36 x 15 mm / 30 x 30 x 15 mm
- Sony STARVIS & Pregius CMOS sensors
- Free measurement tool included
- Free barcode SDK included





Megapixel **Pixel Size** Frame Rate Sensor Size A/D Product Code Resolution Sensor DMM 37AUX287-ML 720 x 540 Sony IMX287 Pregius 1/2.9 " CMOS 8/12 bit 0.4 6.9 µm 539 fps 1/2.9 " CMOS 8/12 bit DFM 37BUX287-ML 720 x 540 0.4 6.9 µm 539 fps Sony IMX287 Pregius DMM 37UX273-ML 1440 x 1080 1.6 3.45 µm 236 fps Sony IMX273 Pregius 1/2.9 " CMOS 8/12 bit DFM 37UX273-ML 1440 x 1080 1.6 3.45 µm Sony IMX273 Pregius 1/2.9 " CMOS 8/12 bit 236 fps DMM 37UX290-ML 1920 x 1080 2.1 143 fps Sony IMX290 STARVIS 1/2.8 " CMOS 8/12 bit 2.9 µm DFM 37UX290-ML 1920 x 1080 2.1 Sony IMX290 STARVIS 1/2.8 " CMOS 8/12 bit 2.9 µm 143 fps Sony IMX178 STARVIS 1/1.8 " CMOS 8/12 bit DMM 37UX178-ML 3072 x 2048 6.3 2.4 µm 60 fps Sony IMX178 STARVIS DFM 37UX178-ML 3072 x 2048 6.3 2.4 µm 60 fps 1/1.8 " CMOS 8/12 bit DMM = monochrome | DFK = color

As with the "37" series industrial cameras, the board-level versions feature Sony's STARVIS and Pregius sensors – the first sensors developed by Sony especially for industrial applications. These USB Vision compliant cameras deliver superb image quality suitable for demanding embedded machine vision tasks - making them a cost-effective solution for a range of applications such as intelligent traffic systems (ITS), optical inspection, medical engineering, logistics etc. The cameras' small form-factor and reversible Type-C port connection allow for easy integration in applications adhering to the standard.

Features:	Accessories:
- Reversible Type-C	- M12 lenses
connector	- USB 3.1 (Gen 1) cables
- Digital I/O strobe	
- C/CS/M12 mount	15 mm > 30 / 36 mm
adapter	Y I I
- Binning and ROI	
	30 / 36 mm
	a standard for
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	11/25
	Features: - Reversible Type-C connector - Digital I/O strobe - C/CS/M12 mount adapter - Binning and ROI

USB 3.0 Board Cameras: 27 Series

- Dimensions 30 x 30 x 10 mm
- Several CMOS sensors available
- JST trigger connector cable included

Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMM 27UR0135-ML	1280 x 960	1.2	3.75 µm	60 fps	OnSemi AR0135	1∕3 " CMOS	8/12 bit
DFM 27UR0135-ML	1280 x 960	1.2	3.75 µm	60 fps	OnSemi AR0135	¹ ∕₃ " CMOS	8/12 bit
DMM 27UP006-ML	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P006 M	1/2.5 " CMOS	8/12 bit
DFM 27UP006-ML	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P006 C	¹ / _{2.5} " CMOS	8/12 bit
DMM 27UJ003-ML	3856 x 2764	10.7	1.67 µm	7 fps	Aptina MT9J003 M	¹ / _{2.3} " CMOS	8/12 bit
DFM 27UJ003-ML	3856 x 2764	10.7	1.67 µm	7 fps	Aptina MT9J003 C	¹ /2.3" CMOS	8/12 bit
DMM = monochrome	DFK = color						

The Imaging Source 27 series of CMOS machine vision cameras is the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the highly sensitive Aptina CMOS sensors, the board version products are very compact and are ideally suited to cost sensitive applications. Binning, windowing and high-speed readout are but a few of the performance enhancements that dramatically reduces image noise levels. The Imaging Source 27 series CMOS board cameras are characterized by small PCB dimensions and very competitive prices.

- Dimensions: 30 x 30 x 18 mm
- Aptina color CMOS sensorsWindowing and high-speed readout
- M12 lens compatibility
- Free software for camera control
- Free barcode SDK for Windows 7/8/10

HO

The Imaging Source One4all Series USB 2.0 CMOS Board Cameras

- Dimensions 30 x 30 x 10 mm
- Several CMOS sensors available
- Free measurement tool included
- Free barcode SDK included

Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DxM 22BUC03-ML	744 x 480	0.3	6 µm	76 fps	Aptina MT9V024	1∕3 " CMOS	8 bit
DxM 42BUC03-ML	1280 x 960	1.2	3.75 µm	25 fps	Aptina MT9M021	⅓ " CMOS	8 bit
DxM 72BUC02-ML	2592 x 1944	5	2.2 µm	6 fps	Aptina MT9P031	1⁄2.5 " CMOS	8 bit
DxM: x = M (= monoc	chrome) or F (= o	color)					

The Imaging Source "One4all" series of CMOS machine vision cameras is the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the highly sensitive Aptina CMOS sensors, the board version products are very compact and are ideally suited to cost sensitive applications. Binning, windowing and high-speed readout are but a few of the performance enhancements that dramatically reduces image noise levels. The Imaging Source "One4all" CMOS board cameras are characterized by small PCB dimensions and very competitive prices.

Included:

- Camera

- Drivers compatible to DirectShow, DirectX, TWAIN, VfW, WDM, ActivVisionTools, HALCON, LabVIEW, Matlab, and NeuroCheck
- IC Capture camera control and acquisition software for W 7/8/10, Vista, XP
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10, Vista, XP
- Free barcode SDK for W 7/8/10
- Open source drivers and end-user software for Linux (Apache License 2.0)

Features:

- Digital I/O strobe

- Binning and ROI

- Molex Picoblade

connector available

connector available

- Angled USB

Accessories:

- M12 adapters
- M12 lenses

10 mm

- USB 2.0 cable (1.8m, 3m, 4.5m)
- JST trigger connector cable included

- C/CS-Mount frontplate available

_____ 30 mm

GigE Board Cameras

- Dimensions 45 x 45 x 20 mm
- Power over Ethernet
- JST trigger connector cable included

Product Code	Resolution	Megapixel	Pixel Size	Frame Rate	Sensor	Sensor Size	A/D
DMM 25G445-ML	1280 x 960	1.2	3.75 µm	30 fps	Sony ICX445ALA	⅓ " CCD	8/12 bit
DFM 25G445-ML	1280 x 960	1.2	3.75 µm	30 fps	Sony ICX445AQA	1⁄3 " CCD	8/12 bit
DMM 25GX236-ML	1920 x 1200	2.3	2.8 µm	36 fps	Sony IMX236LL	1⁄2.8 " CMOS	8/12 bit
DFM 25GX236-ML	1920 x 1200	2.3	2.8 µm	36 fps	Sony IMX236LQ	1⁄2.8 " CMOS	8/12 bit
DMM 25GP031-ML	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P031 M	1⁄2.5 " CMOS	8/12 bit
DFM 25GP031-ML	2592 x 1944	5	2.2 µm	15 fps	Aptina MT9P006 C	1⁄2.5 " CMOS	8/12 bit

DMM = monochrome | DFK = color

The Imaging Source "GigE Board Camera" series of machine vision cameras is the perfect solution for many industrial automation, quality assurance, security, surveillance, and medical applications. Utilizing the highly sensitive Sony and Aptina sensors, the board version products are very compact and are ideally suited to cost sensitive applications. Binning, windowing and high-speed readout are but a few of the performance enhancements of the CMOS cameras, dramatically reduces image noise levels. The Imaging Source GigE board cameras are characterized by small PCB dimensions and very competitive prices.

Included:	Features:	Accessories:
- Camera	- Trigger and digital I/O	- M12 adapters
- Drivers compatible to DirectShow, DirectX, TWAIN,	- Binning and ROI	- M12 lenses
VfW, WDM, ActivVisionTools, HALCON, LabVIEW,	(CMOS only)	- JST trigger connector cable included
Matlab, and NeuroCheck	- Power of Ethernet	
- IC Capture camera control and acquisition software		20 mm 45 mm
for W 7/8/10, Vista, XP		
- IC Imaging Control Software Development Kit (SDK)		
including a .NET component, an ActiveX component,		
and a C++ class library for W 7/8/10, Vista, XP		45 mm
- Free barcode SDK for W 7/8/10		
- Open source drivers and end-user software for		
Linux (Apache License 2.0)		
		LIAUDC

High Quality 5 MP Lenses

Available focal lengths: 4 - 75 mm

Optical Resolution: 5 megapixel

For sensors up to 1"

Type: C/CS Mount

Product Code	Format	Mount	Iris Range	MOD (m)	Focal Length	Filter	Mass (g)
TCSL 0418 5MP	1/2.5"	CS	1.8	0.1	4	N/A	28
TCL 0616 5MP	1/1.8"	С	1.6 - 16	0.1	6	M34 x 0.5mm	110
TCSL 0618 5MP	1/2.5"	CS	1.8	0.1	6	N/A	33
TCL 0814 5MP	1/1.8"	С	1.4 - 16	0.1	8	M27 x 0.5mm	94
TCSL 0818 5MP	1/2.5"	CS	1.8	0.1	8	N/A	35
TCL1216 5MP	² / ₃ "	С	1.6 - 16	0.1	12	M27 x 0.5mm	100
TCL 1616 5MP	² / ₃ "	С	1.6 - 16	0.2	16	M27 x 0.5mm	108
TCL 2518 5MP	2⁄3"	С	1.8 - 16	0.3	25	M27 x 0.5mm	86
TCL 3520 5MP	2⁄3"	С	2 - 16	0.4	35	M27 x 0.5mm	84
TCL 5026 5MP	² / ₃ "	С	2.6 - 32	0.5	50	M30.5 x 0.5mm	113
TCL 7528 5MP	1"	С	2.8 - 32	0.6	75	M34 x 0.5mm	146

The lenses are available in C- or CS-mount types with a focal length of 4 mm up to 75 mm. To ensure **maximum stability**, the C-mount lenses are of a screw-thread type with a **locking screw**. The very competitively priced CS-mount lenses, on the other hand, are exceptionally **light and compact**.

With image formats of up to 1" and an optical resolution of 5 megapixel, the lenses can be used in conjunction with a variety of CCD and CMOS sensors.

The 5 megapixel lenses are delivered in a **compact, robust metal housing** making them well suited to industrial applications.

In cases where the working distance is less than the minimum object distance (MOD) of the lens, The Imaging Source offers a range of moderately-priced **extension rings and tubes.**

These features make the lenses especially practical for measurement and imaging tasks in automation, quality control, medical, logistics, sciences and security.

Compact Lenses

Optical Resolution: 6 - 10 megapixel

Available focal lengths: 4 -50 mm

7 different lenses

Product Code	Format	Filter Thread	Iris Range	Focal Length	MOD
TPL 0420 6MP	1/1.8"	-	2 - C	4	0.1
TPL 0620 6MP	1/1.8"	M25.5 x 0.5mm	2 - C	6	0.1
TPL 0820 7MP	1/1.8"	M25.5 x 0.5mm	2 - C	8	0.1
TPL 1220 8MP	1/1.8"	M25.5 x 0.5mm	2 - C	12	0.1
TPL 1620 9MP	1/1.8"	M25.5 x 0.5mm	2 - C	16	0.1
TPL 2520 10MP	1/1.8"	M25.5 x 0.5mm	2 - C	25	0.1
TPL 5028 10MP	1/1.8"	M28 x 0.5mm	2 - C	50	0.3

1" Lenses

Available focal lengths: 12.5 - 75 mm

6 different lenses

Product Code	Format	Filter Thread	Iris Range	Focal Length	MOD
TOL 1214 5MP	1"	M46 x 0.75mm	1.4 - 16	12.5	0.1
TOL 1614 5MP	1"	M46 x 0.75mm	1.4 - 16	16	0.1
TOL 2514 5MP	1"	M40.5 x 0.50mm	1.4 - 16	25	0.1
TOL 3514 5MP	1"	M46 x 0.75mm	1.4 - 16	35	0.15
TOL 5014 5MP	1"	M46 x 0.75mm	1.4 - 16	50	0.3
TOL 7518 5MP	1"	M55 x 0.75mm	1.8 - 16	75	0.7

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Macro 1.1" Lenses

Magnification: 0.3x - 8.5x

8 different lenses

For sensors up to 1.1"

Product Code	Magnifi- Working		Magnifi- Working Field of Coverage (mm)						
Product Code	(x)	(mm)	1⁄3"	1⁄2"	¹ /1. ⁸ "	² / ₃ "	1"	1.1"	
TMN 0.3/110	0.3	110	16 x 12	21 x 16	25 x 18	28 x 21	42 x 32	47 x 35	
TMN 1.0/50	1.0	50	4.8 x 3.6	6.4 x 4.8	7 x 5	9 x 6	13 x 9	14 x 10	
TMN 1.5/35	1.5	35	3.2 x 2.4	4.3 x 3.2	5 x 3.4	6 x 4	9 x 6	10 x 7	
TMN 2.5/30	2.5	30	1.9 x 1.4	2.6 x 1.9	3 x 2.1	3.3 x 2.5	5.1 x 3.8	5.7 x 4.2	
TMN 3.0/25	3.0	25	1.6 x 1.2	2.1 x 1.6	2.5 x 1.8	2.8 x 2.1	4.2 x 3.2	4.7 x 3.5	
TMN 4.0/20	4.0	20	1.2 x 0.9	1.6 x 1.2	1.8 x 1.3	2.1 x 1.6	3.2 x 2.4	3.6 x 2.6	
TMN 6.0/6	6.0	6	0.8 x 0.6	1.1 x 0.8	1.2 x 0.9	1.4 x 1.0	2.1 x 1.6	2.4 x 1.7	
TMN 8.5/4	8.5	4	0.6 x 0.4	0.8 x 0.6	0.8 x 0.6	1.0 x 0.7	1.5 x 1.1	1.7 x 1.2	

The Imaging Source's new macro lenses deliver an excellent price-to-performance ratio. The eight new lenses have a high optical resolution and can be used with pixels < 2µm and camera sensors up to 1.1".

The Imaging Source macro lenses are optimized for use with high-resolution industrial cameras for close-up (macro) images. Designed to deliver superior resolution at short working distances, these lenses are optimal for applications in microscopy, electronics and surface inspection.

PCB / Electronics Inspection

Pathology

Surface Inspection

Vario Lenses

High-End Lenses

Vario Lenses

Product Code	Format	Filter Thread	Iris Range	Focal Length	MOD	Mount
T2Z 1816 CS	1/3"	N/A	1.6 - C	1.8 - 3.6	0.2	CS
T3Z 3510 CS	1⁄3"	N/A	1 - 16	3.5 - 10.5	0.3	CS
H3Z 4512 CS-IR	1⁄2"	35.5 x 0.5 mm	1.2- 16	4.5 - 12.5	0.3	CS

High-End Lenses

Product Code	Format	Filter Thread	Iris Range	Focal Length	MOD
M111FM08	1.1	M77 x 0.75	1.8 - 22	8	0.3
M111FM16	1.1	M55 x 0.75	1.8 - 22	16	0.3
M111FM25	1.1	M55 x 0.75	1.8 - 22	25	0.3
M111FM50	1.1	M49 x 0.75	1.8 - 22	25	0.4
V0828-MPY	1.1	N/A	2.8 - 16	8	0.2
V1228-MPY	1.1	M40.5 x 0.5	2.8 - 16	12	0.3
V2528-MPY	1.1	M34 x 0.5	2.8 - 16	25	0.3
V3528-MPY	1.1	M34 x 0.5	2.8 - 16	35	0.3
V5028-MPY	1.1	M34 x 0.5	2.8 - 16	50	0.5

Tubes, Rings and Filters

Tubes and Rings

Product Code	Mount	Length (mm)
LAex0.5	C/CS	0.5
LAex1	C/CS	1
LAex5	C/CS	5
LAexSet	C/CS	0.5, 1, 5, 10, 20, 40

Filters

Filter Type	27 x 0.5	30.5 x 0.5	35.5 x 0.5	40.5 x 0.5	43 x 0.75	46 x 0.75	49 x 0.75	52 x 0.75	55 x 0.75	58 x 0.75
092	х	х	х	х	х	х	х	х	х	х
093	х	х	х	х	х	х	х	x	х	х
486	х	х	х	х	х	х	х	x	х	х

Mega-Pixel Board Lenses

Available focal lengths: 1.4 - 16 mm

Optical Resolution: 5 megapixel

12 different Lenses

Type: M12

Product Code	Format	Mount	Iris Range	Focal Length	IR Cut Filter
TBL 1.4 5MP	¹ /2.5"	M12 x 0.5mm	2.0	1.4	x
TBL 1.4 C 5MP	1⁄2.5"	M12 x 0.5mm	2.0	1.4	\checkmark
TBL 2.5 5MP	1/2.5"	M12 x 0.5mm	2.4	2.5	x
TBL 2.5 C 5MP	1⁄2.5"	M12 x 0.5mm	2.4	2.5	\checkmark
TBL 2.9 5MP	1/2.5"	M12 x 0.5mm	2.0	2.9	x
TBL 2.9 C 5MP	1⁄2.5"	M12 x 0.5mm	2.0	2.9	\checkmark
TBL 3.6 5MP	1⁄2.5"	M12 x 0.5mm	1.8	3.6	x
TBL 3.6 C 5MP	1⁄2.5"	M12 x 0.5mm	1.8	3.6	\checkmark
TBL 4 5MP	1⁄2.5"	M12 x 0.5mm	1.8	4	×
TBL 4 C 5MP	1⁄2.5"	M12 x 0.5mm	1.8	4	\checkmark
TBL 6 5MP	1⁄2.5"	M12 x 0.5mm	1.8	6	×
TBL 6 C 5MP	1⁄2.5"	M12 x 0.5mm	1.8	6	\checkmark
TBL 8 5MP	1/2.5"	M12 x 0.5mm	1.8	8	×
TBL 8 C 5MP	1/2.5"	M12 x 0.5mm	1.8	8	\checkmark
TBL 8.4-2 5MP	1/2"	M12 x 0.5mm	2.8	8.4	x
TBL 8.4-2 5MP	1/2"	M12 x 0.5mm	2.8	8.4	\checkmark
TBL 9.6-2 C 3MP	1⁄2"	M12 x 0.5mm	3.0	9.6	\checkmark
TBL 12-2 5MP	1/2"	M12 x 0.5mm	2.8	12	×
TBL 12-2 C 5MP	1⁄2"	M12 x 0.5mm	2.8	12	\checkmark
TBL 12 3MP	1⁄2.5"	M12 x 0.5mm	1.6	12	×
TBL 12 C 3MP	1/2.5"	M12 x 0.5mm	1.6	12	\checkmark
TBL 16 3MP	1/2.5"	M12 x 0.5mm	1.6	16	×
TBL 16 C 3MP	1/2.5"	M12 x 0.5mm	1.6	16	HOU

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Low Distortion Lenses

- Type: M12
- Available focal lengths: 3.5-16 mm
- 5 different Lenses
- Format: Up to 1/1.8"
- Optical Resolution: Up to 10 megapixel

Product Code	Format	Mount	Iris Range	Focal Length	IR Cut Filter
TBN 3.4 5MP	1⁄2"	M12 x 0.5mm	2.8	3.4	x
TBN 3.5 3MP	1/2.5"	M12 x 0.5mm	1.8	3.5	×
TBN 4.5 3MP	1/1.8"	M12 x 0.5mm	1.8	4.5	x
TBN 4.5 C 3MP	1/1.8"	M12 x 0.5mm	1.8	4.5	\checkmark
TBN 5.4 10MP	1/2.3"	M12 x 0.5mm	2.5	5.4	x
TBN 5.4 C 10MP	1/2.3"	M12 x 0.5mm	2.5	5.4	\checkmark
TBN 6 5MP	1/1.8"	M12 x 0.5mm	2.8	6	x
TBN 7.2 10MP	1/2.3"	M12 x 0.5mm	2.4	7.2	x
TBN 7.2 C 10MP	1/2.3"	M12 x 0.5mm	2.4	7.2	\checkmark
TBN 8 5MP	1/1.8"	M12 x 0.5mm	2.8	8	x
TBN 12 5MP	1/1.8"	M12 x 0.5mm	2.8	12	×
TBN 16 5MP	1/1.8"	M12 x 0.5mm	1.8	16	×
TBN 16 C 5MP	1/1.8"	M12 x 0.5mm	1.8	16	\checkmark
TBN 25 5MP	1/1.8"	M12 x 0.5mm	2.8	25	×

²/₃" Board Lenses

Available focal lengths: 1.4 - 16 mm

Optical Resolution: 10 megapixel

5 different Lenses

Type: M12

Product Code	Format	Mount	Iris Range	Focal Length	Megapixel	
TB23 12 10MP	2/3"	M12 x 0.5mm	2.8	12	10	
TB23 16 10MP	² / ₃ "	M12 x 0.5mm	2.2	16	10	
TB23 25 10MP	² / ₃ "	M12 x 0.5mm	2.5	25	10	
TB23 35 10MP	2/3"	M12 x 0.5mm	2.8	35	10	
TB23 50 10MP	² / ₃ "	M12 x 0.5mm	4	50	10	
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The Imaging Source Standard Lenses

Available focal lengths: 2.1 - 50 mm

IR Cut Filter available

11 different Lenses

Type: M12

Product Code	Format	Mount	Iris Range	Focal Length	IR Cut Filter
TBL 2.1	1⁄3"	M12 x 0.5mm	2	2.1	x
TBL 2.1 C	1⁄3"	M12 x 0.5mm	2	2.1	\checkmark
TBL 2.9	1⁄3"	M12 x 0.5mm	2	2.9	×
TBL 2.9 C	1⁄3"	M12 x 0.5mm	2	2.9	\checkmark
TBL 3.6	1⁄3"	M12 x 0.5mm	2	3.6	x
TBL 3.6 C	1⁄3"	M12 x 0.5mm	2	3.6	\checkmark
TBL 4.6	1⁄3"	M12 x 0.5mm	2	4.6	x
TBL 4.6 C	1⁄3"	M12 x 0.5mm	2	4.6	\checkmark
TBL 6	1⁄3"	M12 x 0.5mm	2	6	×
TBL 6 C	1⁄3"	M12 x 0.5mm	2	6	\checkmark
TBL 8	1⁄3"	M12 x 0.5mm	2	8	×
TBL 8 C	1⁄3"	M12 x 0.5mm	2	8	\checkmark
TBL 12b	1⁄3"	M12 x 0.5mm	2	12	×
TBL 12b C	1⁄3"	M12 x 0.5mm	2	12	\checkmark
TBL 16b	1⁄3"	M12 x 0.5mm	2	16	×
TBL 16b C	1⁄3"	M12 x 0.5mm	2	16	\checkmark
TBL 25	1⁄3"	M12 x 0.5mm	2.5	25	x
TBL 35	1⁄2"	M12 x 0.5mm	2.5	35	×
TBL 50	1⁄2"	M12 x 0.5mm	2.5	50	x
					1

Cables

- Cameras and accessories from one source
- Save time
- Make sure it all fits

USB 3.1						
Product Code	Connects		То		Length	Manufacturer
CA-USB31-AC-BLS/	3 USB 3.1 (Type-	A)	USB 3.1 (Type Locking screv	-C) vs	3 m	The Imaging Source
USB 3.0						
Product Code	Connects.		То		Length	Manufacturer
CA-USB30-AmB-BLS	5/3 USB 3.0 (Type	e-A)	USB 3.0 (Mic Locking scre	ro-B) ews	3 m	The Imaging Source
CA-USB30-AmB-BLS	/10 USB 3.1 (Type	e-A)	USB 3.0 (Mic Locking scre	ro-B) ews	10 m	The Imaging Source
USB 2.0						
Product Code	Connects		То		Length	Manufacturer
CA-USB20-AmB-BLS	/5 USB 2.0 (Type-	A)	USB 3.1 (Type Locking screv	-C) vs	3 m	The Imaging Source
GigE						
Product Code	Connects		То		Length	Manufacturer
CA-GigE-ix/5	GigE (RJ-45)	ix Ind	GigE (ix) dustrial [®] Etherne	et Interface	5 m	The Imaging Source
CA-GigE-ix/5 CA-GigE/5/BLS	GigE (RJ-45) GigE (RJ-45)	ix Ind	GigE (ix) dustrial® Etherne GigE (RJ-4 Locking scre	et Interface 5) ws	5 m 5 m	The Imaging Source
CA-GigE-ix/5 CA-GigE/5/BLS CA-GigE/10/BLS	GigE (RJ-45) GigE (RJ-45) GigE (RJ-45)	ix Ind	GigE (ix) dustrial® Etherne GigE (RJ-4 Locking scre GigE (RJ-4 Locking scre	et Interface 5) ws 5) ws	5 m 5 m 10 m	The Imaging Source The Imaging Source The Imaging Source
CA-GigE-ix/5 CA-GigE/5/BLS CA-GigE/10/BLS GigE23/PWR/Trig	GigE (RJ-45) GigE (RJ-45) GigE (RJ-45) Trigger (Trigger in) Power (Power in)	ix Ind	GigE (ix) dustrial® Etherne GigE (RJ-4 Locking scre GigE (RJ-4 Locking scre Hirose (Hiros 3 and 33 camer	et Interface 5) ws 5) ws se) a series o	5 m 5 m 10 m 0.2 m	The Imaging Source The Imaging Source The Imaging Source The Imaging Source

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HD-SDI to USB 3.0 Converter

- Dimensions 27 x 56 x 95 mm
- HD-SDI to USB 3.0
- Free measurement tool included
- Free barcode SDK included

HD-SDI is a serial, digital interface, primarily designed to transmit uncompressed and unencrypted video data over one or more coaxial cables with BNC connectors at a nominal impedance of 75 ohms. The cabling and connector type are relics from the previous analog video signal standard. When using high quality cable, the maximum cable length can be up to 100 meters.

The DFG/HDSDI converts digital serial video signals into uncompressed image data streams for USB 3.0 interfaces.

Included:

- HD-SDI converter
- Drivers compatible to DirectShow, DirectX, TWAIN, VfW, WDM, ActivVisionTools, HALCON, LabVIEW, Matlab, and NeuroCheck
- IC Capture camera control and acquisition software for W 7/8/10, Vista, XP
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10, Vista, XP
- Free barcode SDK for W 7/8/10

Features:

- Inputs: HD-SDI
- Output: USB 3.0, uncompressed image data stream

95 mm

- Video formats:
- SD 525i and 625i HD 720p
- . HD 1080i
- HD 1080p
- .

56 mm

Video to USB Converter

- Dimensions 27 x 56 x 95 mm
- Video / Audio to USB
- Free measurement tool included
- Free barcode SDK included

Despite the fast growing world of digital cameras, there is still an enormous number of analog video sources. Using a Video-to-USB converter, such as the DFG/US2pro and the DFG/USB2aud, analog video sources become usable in a digital environment.

The DFG/USB2pro converts analog video signals (PAL, NTSC, CCIR, EIA) into uncompressed image data streams. The DFG/USB2aud additionally converts analog audio signals.

Included:

- Converter
- Drivers compatible to DirectShow, DirectX, TWAIN, VfW, WDM, ActivVisionTools, HALCON, LabVIEW, Matlab, and NeuroCheck
- IC Capture camera control and acquisition software for W 7/8/10, Vista, XP
- IC Imaging Control Software Development Kit (SDK) including a .NET component, an ActiveX component, and a C++ class library for W 7/8/10, Vista, XP
- Free barcode SDK for W 7/8/10

Additional Features Audio Version:

- Inputs: Audio
- Output: USB 2.0, uncompressed image stream with audio

Features:

- Inputs: composite and Y/C
- Output DFG/USB2pro: USB 2.0, uncompressed image data stream without audio

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- Output DFG/USB2aud: USB2.0, uncompressed image and audio data stream
- Video formats: PAL/CCIR, NTSC/RS-170
- Max resolution (NTSC/RS-170): 640x480 @ 30 Hz
- Max resolution (PAL/CCIR): 768x576 @ 25 Hz

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Software Development Kit: IC Imaging Control

- SDK to capture images and video streams, and parameterize video sources
- Save images and image sequences
- Overlay graphics and text on live stream

IC Imaging Control is an SDK for acquiring images from a video source, such as The Imaging Source machine vision cameras, frame grabbers and video converters. The SDK automatically recognizes video sources, which are installed on the PC and enables you to switch between them via program code. You can capture single images, sequences of single images, and live video streams from the connected video source.

Key features:

- Programmable access to video capture sources
- Set and adjust device parameters
- Save images and image sequences
- Overlay graphics and text on live stream
- .NET component, ActiveX component and C++ class library
- Supports all cameras and frame grabbers from The Imaging Source

IC Imaging Control allows the real-time preview of video streams, up to the maximum frame rate of the video capture device. Furthermore, IC Imaging Control can preview multiple video streams at once, making it suited to surveillance applications. This SDK provides built in scrolling and zooming. The image can be easily zoomed to fit the size of the control or the entire window. Single image frames can be captured from a live video stream. Once images have been acquired to the image buffer, they may be saved as a BMP, TIFF or JPEG file. A number of frames can be acquired to image buffers, which are organized as a ring buffer. IC Imaging Control fires an event each time it has finished writing to an image buffer. This has the advantage that the end-user application does not have to check the most recent complete image.

IC Imaging Control provides a dialog box that allows the end-user to open a device and to configure the video norm, video format, input channel, frame rate and orientation (horizontal and vertical flip state). Video capture devices can be queried from program code for their settings in order to build customized dialog boxes.

Among others, the following image settings are supported: brightness, contrast, hue, saturation, gain and exposure. All changes in settings are immediately visible on the live video stream.

IC Imaging Control provides a dialog that allows you to manipulate all properties of a video capture device. If supported by the video capture device, its serial number can be retrieved with IC Imaging Control and can be used as a dongle. IC Imaging Control can flip the live video stream horizontally or vertically. It can rotate the live video stream 90°, 180° or 270°. In addition to processing the full video stream, IC Imaging Control allows you to define a region of interest (ROI), upon which, all of IC Imaging Control's functions can be applied.

End-User-Software & SDK: IC Barcode

- Reads multiple barcodes at any orientation
- Easy to use SDK with sample application
- Comes free with all The Imaging Source cameras

IC Barcode is a highly accurate and powerful developer library, which recognizes 1D and 2D barcodes from digital images. Using this SDK, you can integrate barcode recognition functionality into your document processing systems and Windows applications. The unique and fast barcode recognition algorithm searches for barcodes in any position and orientation in your images.

Key features:

- Read multiple 1D and 2D barcodes at any orientation.
- Report comprehensive information with 100% confidence for all detected barcodes, such as the barcode type, data string, location, check digit, etc.
- High-speed barcode recognition. All barcodes in an image are located and reported back in a fraction of a second.
- Speed up the whole process of barcode detection and decoding, by configuring the options to read only barcodes of a certain type or orientation, or limit processing to a region of interest.

Supported 1D Barcodes:	Supported 2D Barcodes:
- EAN8	- AZTEC
- EAN13	- DATA_MATRIX
- CODE39	- QR CODE
- CODE93	- MAXICODE
- CODE128	- PDF417
- UPC_A	
- APC_E	
- INTERLEAVED_2_OF_5	

End-User-Software: IC Capture

- acquire images from any video device
- set all properties of video devices
- Comes free with all The Imaging Source cameras

IC Capture is an end-user application to acquire images from any video device, manufactured by The Imaging Source, including industrial cameras, frame grabbers and video converters. All the properties of video devices, such as video formats, exposure times and many more can be set. All video devices connected to the computer are recognized automatically and multiple video sources can be opened in IC Capture simultaneously.

Three ways to capture images:

- Single images can be saved manually
- Image sequences can be saved manually
- Image sequences can be saved via a timer.
- For example: Save 1 image per second for 24 hours

Single image frames can be captured from a live video stream and can be saved to a BMP, TIFF or JPEG file. A number of frames can be acquired and saved to a sequence of image files. This can be done by pressing the space key, pressing a foot switch, or automatically, using a timer. The timer allows the time interval to be defined between two images. The number of image frames, which are saved can be limited by either a specific number of by a time limit.

The name of the files written to disk can be created automatically. The filenames consist of a prefix, and an optional time stamp or sequence number.

If a camera is set to trigger mode, the camera waits for an external event to deliver a single image. IC Capture supports this camera feature and is able to save the images. An external trigger signal can also be used to synchronize several cameras.

IC Capture saves image streams directly to AVI files, either uncompressed, or by using software codecs for image compression. AVI capture also works with triggered cameras. All installed image compression codecs can be selected in IC Capture, and used to compress the video stream.

All settings made in IC Capture can be stored and used for future purposes.

All available camera properties can be adjusted in IC Capture. The software can flip the live video stream horizontally and vertically. Furthermore, it can rotate the live video stream 90°, 180° and 270°. 90° rotation is often used for body scans.

IC Capture allows a region of interest to be defined. All frame rates supported by the video capture device can be selected. Several cameras, manufactured by The Imaging Source, support long exposure times of up to one hour, or short exposure times of 1/100,000 second to capture fast moving objects.

IC Capture supports the gray world and color temperature models to adjust the white balance. If the color temperature of the light source is known, the color temperature model delivers best results. Under daylight conditions, where the color temperature constantly changes, the gray world model is recommended.

End-User-Software: IC Measure

- On-screen image measurement tools
- Easy-to-use image and AVI capture
- Comes free with all The Imaging Source cameras

IC Measure is a powerful end-user application for microscopy measurement and image acquisition using any video device, manufactured by The Imaging Source, including industrial cameras, frame grabbers and video converters. All the properties of video devices, such as video formats, exposure times and many more can be set. It has been specially developed for microscopy applications and is very easy to use.

Measurement:

IC Measure provides multiple tools for manual measurement (circles, lines, polygons and angles). Using the intuitive interface, it is easy to measure lengths, angles, areas and perimeters directly on the live preview and export the measured data to any spreadsheet application via the CSV export function.

Annotations:

Using IC Measure's annotation tools, features of interest can marked and provided with text annotations. The annotations are fully customizable in font, size and color.

Filters:

IC Measure includes advanced image processing filters for optical distortions correction (Barrel and Pincushion distortion) and enhancement tools to discover details within your images (histogram equalization, sharpness, brightness and contrast).

On-screen Calibration:

IC Measure's on-screen calibration tools, allow you to easily calibrate the software using a stage micrometer, millimeter paper or virtually any object of known size. Therefore, the software can also be used for measuring tasks outside the field of microscopy. The scale of an image can be easily redefined, in order to express values of measure in inches, millimeters, micrometers, nanometers or almost any unit of measurement.

Save and Load Measurement Objects:

All measurement objects placed in IC Measure can be stored and used for future projects.

Acquisition of Single Images:

Single image frames can be captured from the live video stream and can be saved to a BMP, TIFF or JPEG file.

Acquisition of an Image Sequence:

A number of frames can be acquired and saved to a sequence of image files. This can be done by pressing the space key, pressing a foot switch or automatically, using a timer. The timer allows the time interval to be defined between two images. The number of image frames, which are saved can be limited by either a specific number of by a time limit.

46