



- Versatile IEEE 1394b camera
- Advanced feature set
- Many variants
- High frame rates

High-end FireWire

Fast 1394b cameras with high frame rates and powerful features

Pike F-421 with ON Semi KAI-04022 runs 16 frames per second at 4.2 MP resolution.

The Pike is a fast IEEE 1394b camera for demanding applications (e.g. industrial and medical imaging). Numerous pre-processing functions produce an outstanding image quality. Pike cameras operate with very high frame rates.

Pike cameras include extraordinary image pre-processing functions like the High SNR mode (up to 24 dB better signal-to-noise ratio).

Pike cameras are available both with two copper ports (for daisy-chaining) and with copper/GOF (glass optical fiber) ports.

- Sony and OnSemi CCD sensors (1/3, 1/2, 2/3, 1, 1.2, 35 mm)
- 8 models (VGA to 16 Megapixel)
- Options
 - 1394b connectors: daisy chain copper or copper and GOF
 - Various IR cut/pass filters
 - F/M39-Mount (F-032 only: CS/M12-Mount)
 - Pike F-1100/F-1600: M42/M58-Mount
 - Hirose power: out
 - Angled head
 - White medical housing
 - Sensor variants: Taped cover glass w/o microlenses, fixed quartz cover glass w/o microlenses available for some models

Specifications

Interface	IEEE 1394b - 800 Mb/s, 2 ports, daisy chain, fiber optic (GOF) optional
Resolution	2048 (H) × 2048 (V)
Sensor	ON Semi KAI-04022
Sensor type	CCD Progressive
Sensor size	Type 1.2
Pixel size	7.4 μm × 7.4 μm
Lens mount (default)	C-Mount
Max. frame rate at full resolution	16 fps
ADC	14 Bit
Image buffer (RAM)	64 MByte

Output

Bit depth	8-bit to 14-bit
Monochrome pixel formats	Mono8, Mono12, Mono16
RGB color pixel formats	RGB8
Raw color pixel formats (Bayer)	Raw8, Raw12, Raw16

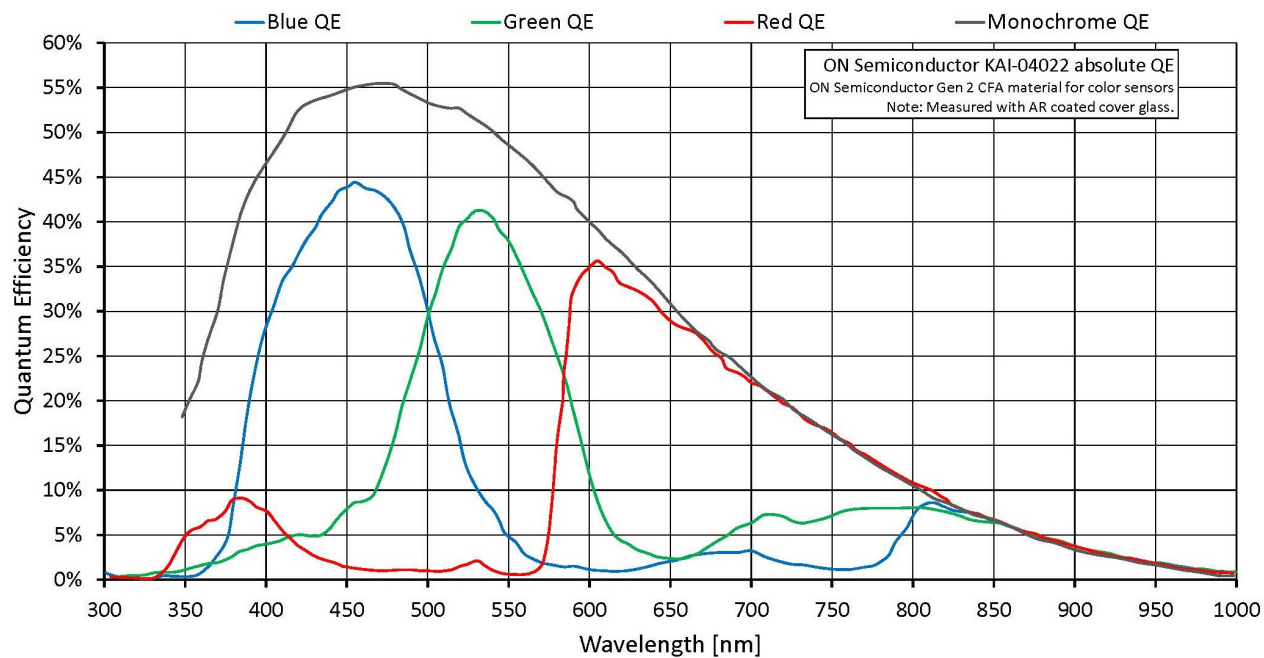
General purpose inputs/outputs (GPIOs)

Opto-isolated I/Os	2 inputs, 4 outputs
RS232	1

Operating conditions/dimensions

Operating temperature	+5 °C to +50 °C
Power requirements (DC)	8 V to 36 V
Power consumption	4 W (@ 12 VDC)
Mass	250 g
Body dimensions (L × W × H in mm)	96.8 × 44 × 44 (including connectors)

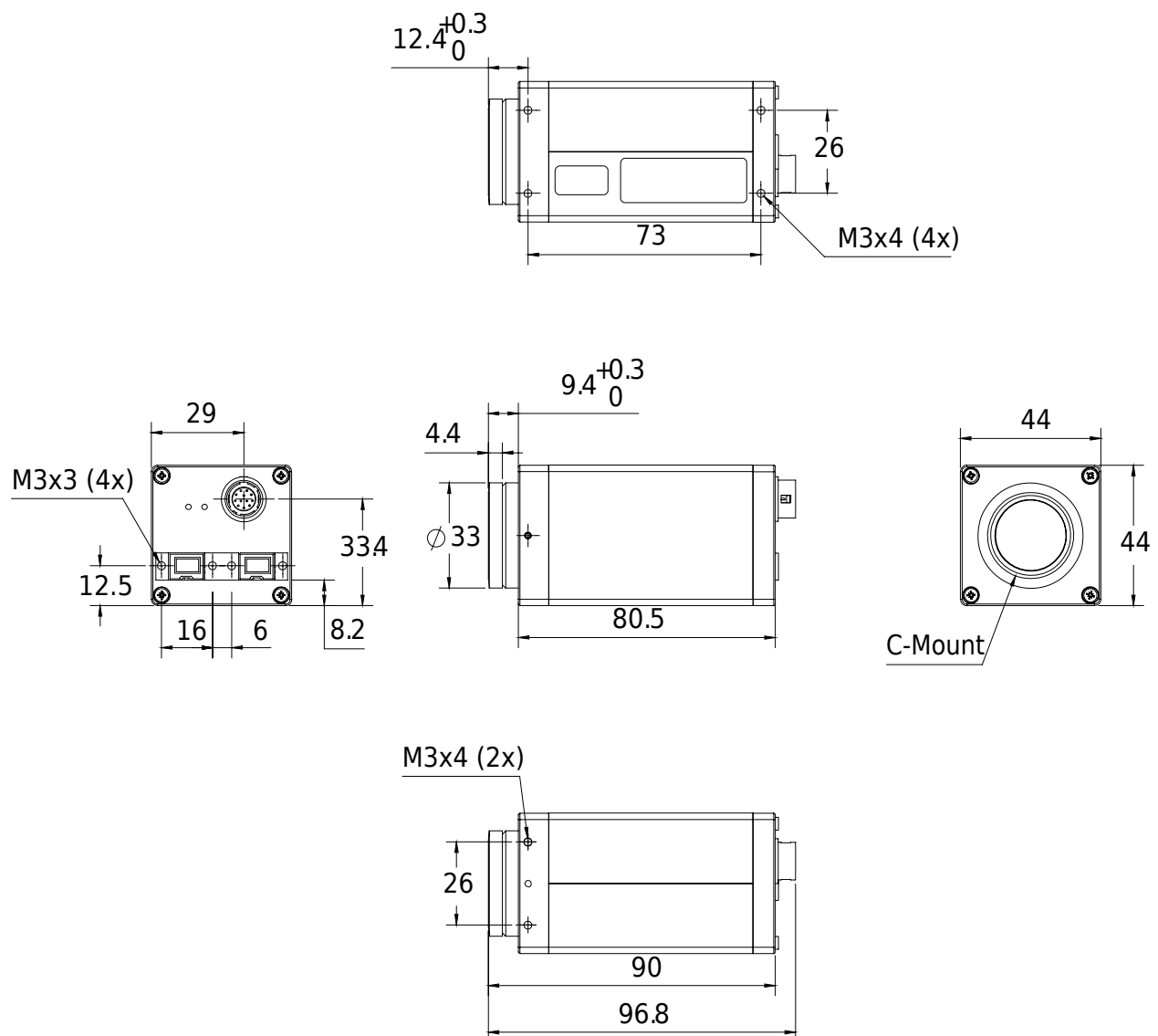
Quantum efficiency



Features

- High SNR mode (up to 24 dB better signal-to-noise ratio)
- Low-noise binning mode
- Smear reduction
- Shading correction
- Area of interest (AOI), separate AOI for auto features
- Binning
- Decimation
- Auto gain (manual gain control: 0 to 22 dB)
- Auto exposure (70 μ s to 67 s)
- Auto white balance
- Look-up table (LUT)
- Hue, saturation, color correction
- Reverse X
- Deferred image transport
- Trigger programmable, level, single, bulk, programmable delay
- Sequence mode (changes the camera settings on the fly)
- SIS (secure image signature, time stamp for trigger, frame count)
- Storable user sets

Technical drawing



Applications

Equipped with a large sensor format (type 1.2), the Pike F-421B/F-421C is the perfect fit for low-light applications. It is distinguished by high-resolution images and an extraordinary image quality with very low noise. The smart pre-processing features of the Pike even enhance the image quality.

This Pike camera is especially suited for:

- Applications which require the highest image quality even with low light
- OEM applications (modular concept)
- Microscopy
- Science and research
- Intelligent traffic solutions (ITS)
- Long cable lengths, 400 meters and more (fiber version)