

Iyeron™ – 12 Megapixel CMOS Monochrome Camera, 25 fps

Features

- 1.9-inch CMOS monochrome progressive scan sensor
- High resolution and high speed
- 12 megapixel imaging
- Highly shock resistant
- Captures full frame images at speeds up to 25 frames per second
- 4096 (H) x 3072 (V) pixels
- View up to 28 Windows of Interest (WOI) at one time
- Video Input: LVDS
- Video Output: Camera Link® (Medium)
- Large square pixels (6.0 μm x 6.0 μm)
- 4:3 aspect ratio
- High sensitivity of 2000 lx (F5.6)
- Electronic global shutter
- Random trigger shutter
- Camera Link® interface (10/8 bit selectable)
- Low noise
- Compact size – less than 3 inches wide

Applications

- High Speed Video Capture
- Machine Vision
- Factory Automation
- Robotics
- Military
- Medical/Scientific Imaging

High Speed, High Resolution 12 Megapixel CMOS Black and White Machine Vision Camera with Camera Link® Captures 4096 x 3072 Resolution Images in Unprecedented Detail, at 25 fps. Less than 3 Inches Wide. For Machine Vision, Parts Inspection, Robotics, Military, and Medical/ Science Applications.



Overview

Viewbits introduces Iyeron™, our compact 12 megapixel machine vision camera with a 1.9-inch CMOS monochrome progressive scan sensor. The camera offers HXGA 4096 (H) x 3072 (V) pixel resolution with a full frame speed of 25 frames per second. Iyeron combines high speed readout and ultra high resolution with sharp image quality, along with a signal-to-noise ratio that is close to a traditional CCD.

Faster frame speed is possible via the Window of Interest (WOI) programmable, partial scanning mode. WOI can be programmed to display a maximum of 28 square windows within one image and then allow the user to select only certain windows to be read out.

The 12 megapixel camera boasts high mechanical precision with ultra shock resistance for high shock and vibration environments with controls in place for high optical axis accuracy.

Other features include large square pixels (6.0 μm x 6.0 μm), an aspect ratio of 4:3, high sensitivity of 2000 lx (F5.6), a wide dynamic range (multi-slope), and random trigger shutter.

Specifications

Image Sensor: CMOS image sensor

Active Pixels: 4096 (H) x 3072 (V)

Active Area: 24.6 mm (H) x 18.5 mm (V) 1.9 type

Pixel Size: 6.0 μm x 6.0 μm (square grid)

Scan Method: Progressive

Aspect Ratio: 4:3

Video Output: Camera Link® (Data 10 / 8 bit switchable)

Frame Rates:

All Pixels Reading: 25 fps (4096 x 3072)

Binning: 43.5 fps (2048 x 1536)

Sub-sampling: 50 to 200 fps

Sensitivity: 2000 lx (F5.6), 3000k

Minimum Illumination: 30 Lux

Gain Control: From 0 to 18 dB

Gamma: 1.0

Input Signal: LVDS

Electronic Shutter: Global shutter, RDM shutter

Random Trigger Shutter: ON/OFF Charge

Fixed mode: Exposure depends on shutter speed

Pulse width mode: Exposure depends on pulse width

Shutter Speed:

All Pixels Reading: 1/20,000 to 2 seconds

Binning: 1/20,000 to 2 seconds

Sub-sampling: 1/20,000 to 2 seconds

Window of Interest: 1 to 28 windows

Set Position: H: Integral multiples of 4 pixels

V: Integral multiples of 1 row

Size of Window: H: Integral multiples of 4 pixels
(minimum of 16)

V: Integral multiples of 1 row

Power Consumption: Approx 5W (in DC12V)

Lens Mount: TFL-II mount

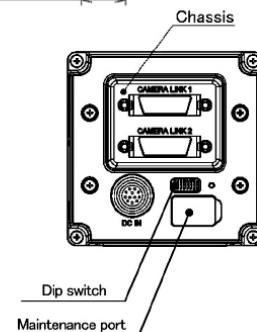
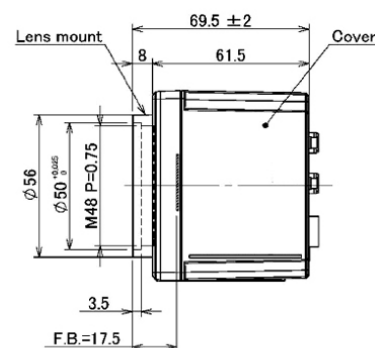
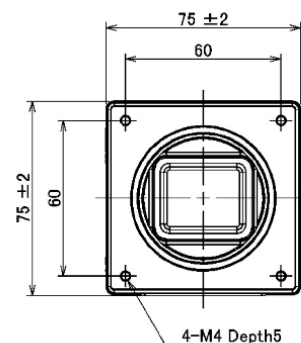
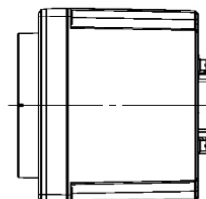
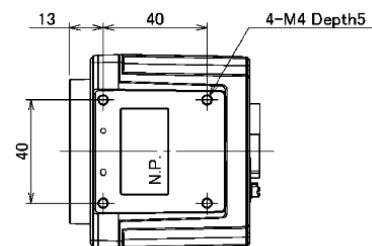
Flange Back: 17.5 mm

Dimensions: 75 (W) x 75 (H) x 69.5 (D) mm
2.95 (W) x 2.95 (H) x 2.74 (D) inches

Weight: Approximately 450 g (1 lb.)

Safety standards: CE, FCC

Camera Drawings



Ordering Information

Iyeron: 12 Megapixel Monochrome Camera

Optional Accessories: F-mount adapter,
Tripod mount, Frame grabber, Camera
Link® cables, and power supply