# VX-29MC-M/C 5

## Aerial Imaging / Surveillance Camera

The VX-29MC is a Camera Link version of VX series proving an extremely robust and powerful interface. It is ideal for aerial imaging and high-end surveillance applications which require highest attention to detail. The VX-29M camera incorporates a 29 million pixel interline transfer CCD with resolution of 6,576 × 4,384. Taking pictures with this camera is made easy with features such as; Automatic Exposure, Automatic Gain and Automatic Iris (optional lens control mount) control.

# VX-29MC-M/C 5

Aerial Imaging / Surveillance Camera

## Main Features

- Extended Operating Temperature: −40℃ ~ 85℃
- Auto Controls (Exposure, Gain, Aperture, Focus)
- Canon-EF Adapter Control
- Smear Correction
- Flexible Binning
- Internal Frame Buffer
- User Adjustable Back Focus
- Field Upgradable Firmware
- Pixel Defect Correction
- Excellent Anti-blooming and Anti-smear

## Applications

- Aerial Imaging
- Ground Surveillance
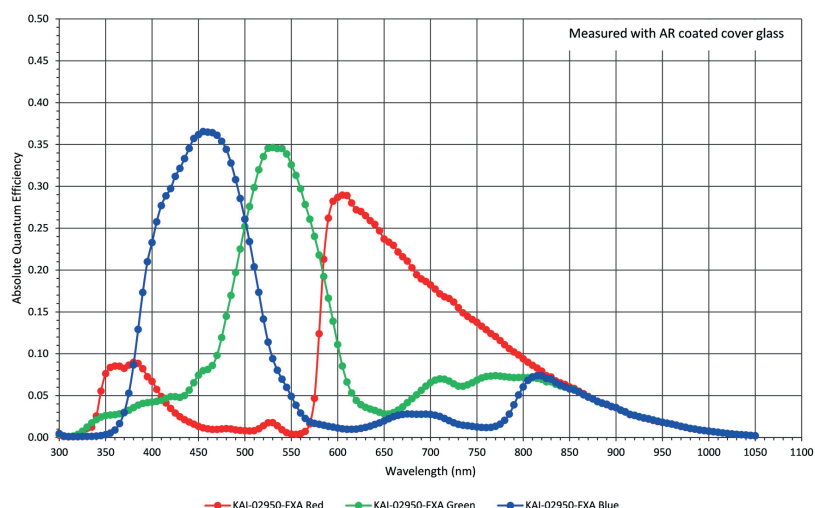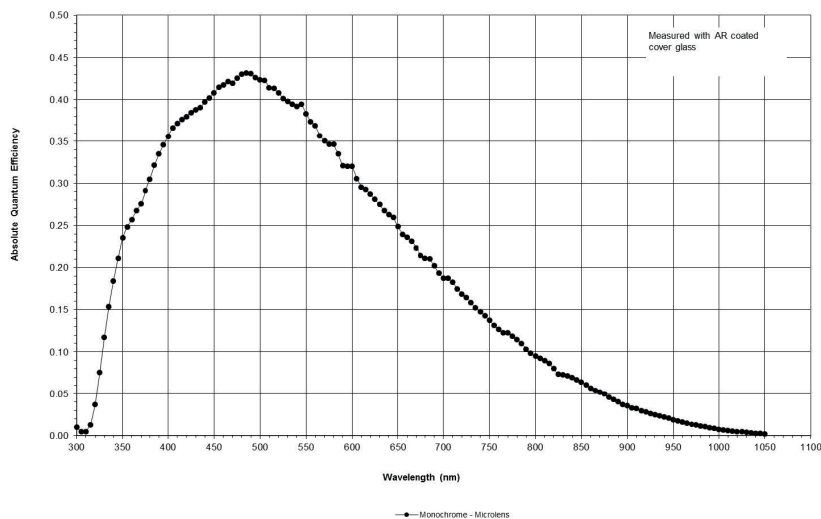- Research and Scientific Imaging

## Specifications

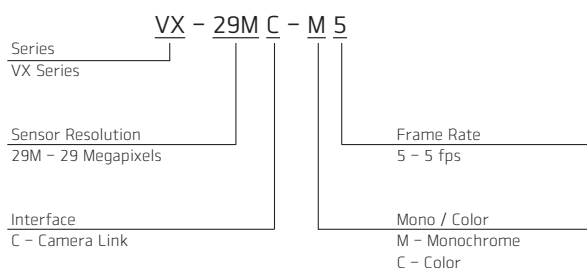| Model | VX-29MC-M/C 5 |
|---|---|
| Resolution (H × V) | 6576 × 4384, 28.8M |
| Sensor | ON Semiconductor KAI-29050 |
| Sensor Size (Optical Format) | 35 ㎜ |
| Sensor Type | Progressive Scan Interline Transfer CCD |
| Pixel Size | 5.5 $\mu m$ × 5.5 $\mu m$ |
| Sensor Output | 1, 2 or 4 Tap |
| Interface | Camera Link (SDR) |
| Max. Frame Rate (40 ㎒) | 4.6 fps (4 Tap) / 2.3 fps (2 Tap) / 1.2 fps (1 Tap) |
| Exposure Time | 14/1,000,000 – 7 s |
| Partial Scan (Max. Speed) | 17.3 fps at 500 Lines |
| Pixel Data Format | 8 / 10 / 12 bit |
| Electronic Shutter | Global Shutter |
| Data Output Pixel Clock | 30/40 ㎒ |
| Exposure Mode | Timed Exposure, Trigger Width Exposure, Double Exposure |
| Dynamic Range | 64 ㏈ |
| Binning | ×1, ×2, ×3, ×4, ×8 (Horizontal and Vertical Independent) |
| Smear | −100 ㏈ (Enhanced Correction Supported) |
| Lookup Table | G = 1.0, Knee Control – User Defined Lookup Table (LUT) |
| Black Level | Adjustable (0 ~ 127 LSB at 12 bit, 256 steps) |
| Analog Gain | ×1 ~ ×40 (0 ~ 32 ㏈) |
| Digital Gain | ×1 ~ ×64 (1/1024 step) |
| Dimension / Weight | 74 ㎜ × 65 ㎜ × 103 ㎜, 570 g (with F-mount) <br> 74 ㎜ × 65 ㎜ × 101 ㎜, 570 g (with Canon –EF Adapter) |
| Temperature | Operating: −40℃ ~ 85℃, Storage: −40℃ ~ 90℃ |
| Vibration / Shock | 10G (20 ~ 200 Hz) XYZ / 70G 10 ㎳ |
| Lens Mount | F-mount or Interface for Canon-EF Adapter |
| Power | 10~15 V DC, Typ. 9 W |
| Configuration Software | Configurator |

# Quantum Efficiency Curves

Measured with AR coated cover glass

— Monochrome - Microlens

Measured with AR coated cover glass

— KAI-02950-FXA Red   — KAI-02950-FXA Green   — KAI-02950-FXA Blue

# Ordering Scheme

VX – 29M C – M 5

Series
VX Series

Sensor Resolution
29M – 29 Megapixels

Interface
C – Camera Link

Frame Rate
5 – 5 fps

Mono / Color
M – Monochrome
C – Color
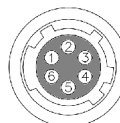
# Connector Specification

Power

1, 2, 3: +12V DC          4, 5, 6: GND
(HR10A-7R-6PB)

Control

1: Trigger IN+            2: Trigger IN−
3: Strobe OUT            4: DC Ground
5: RS-232 RX←           6: RS-232 TX→
(HR10A-7R-6SB)

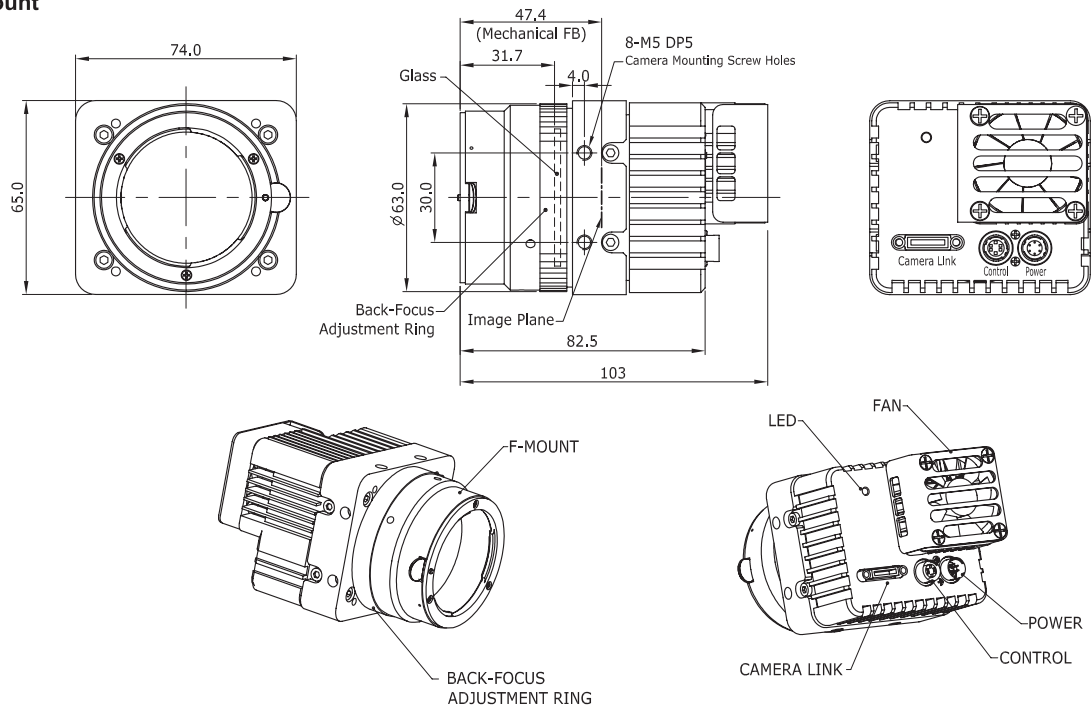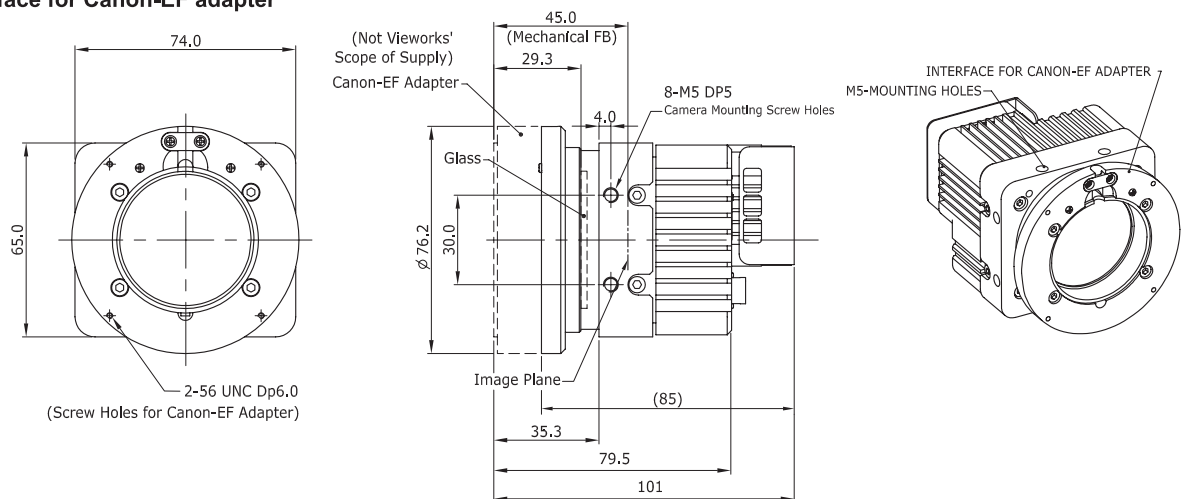Connectors on camera body

# Mechanical Dimensions

Unit: ㎜

**F-mount**



**Interface for Canon-EF adapter**

# VX-29MG-M/C 2

## Aerial Imaging / Surveillance Camera

The VX Series cameras are ideal for aerial imaging and ground surveillance applications which require Photographic Quality resolution and easy-to-use system integration. The VX-29M camera incorporates a 29 million pixel interline transfer CCD with resolution of 6,576 × 4,384. Taking pictures with this camera is made easy with features such as: auto exposure, auto gain, auto focus, lens aperture control, and several innovative features to manage network bandwidth when connecting multiple cameras together on a Gigabit Ethernet network.

# VX-29MG-M/C 2
Aerial Imaging / Surveillance Camera

## Main Features

- Extended Operating Temperature: −40℃ ~ 85℃
- Auto Controls (Exposure, Gain, Aperture, Focus)
- Canon-EF Adapter Control
- Smear Correction
- Flexible Binning
- Internal Frame Buffer
- IEEE 802.3 (Pause Frame Control) and Inter-packet delay
- User Adjustable Back Focus
- Excellent Anti-blooming and Anti-smear

## Applications

- Aerial Imaging
- Ground Surveillance
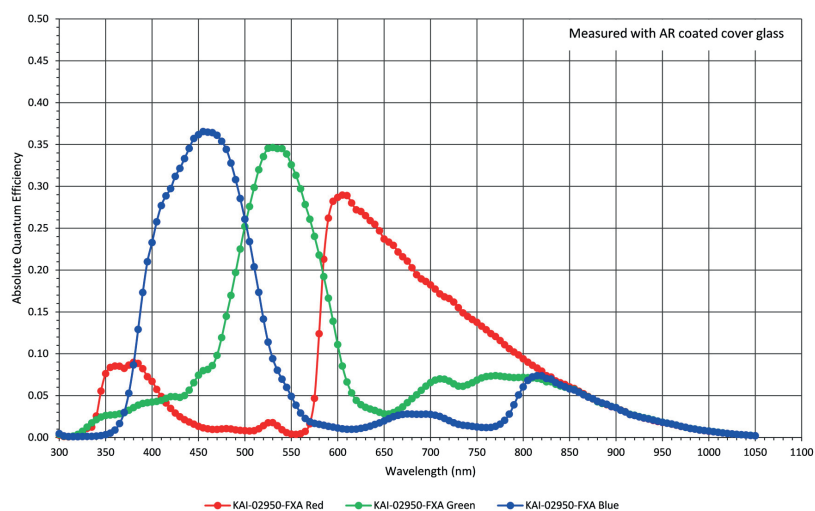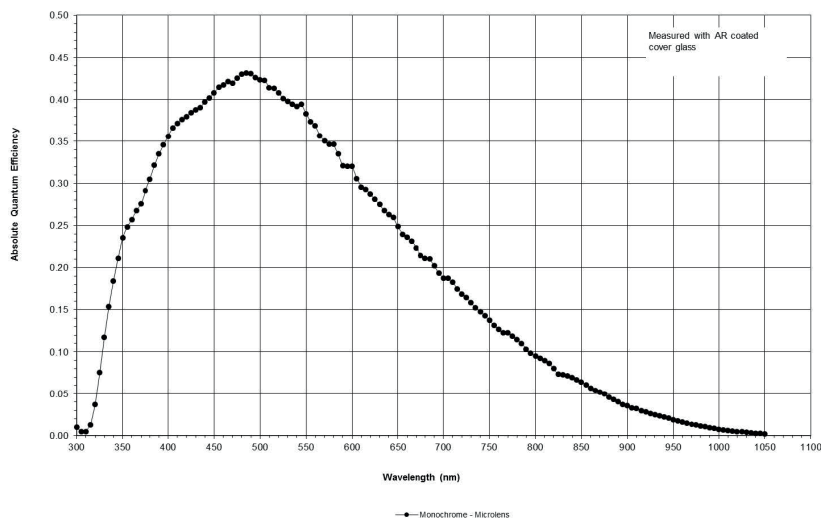- Research and Scientific Imaging

## Specifications

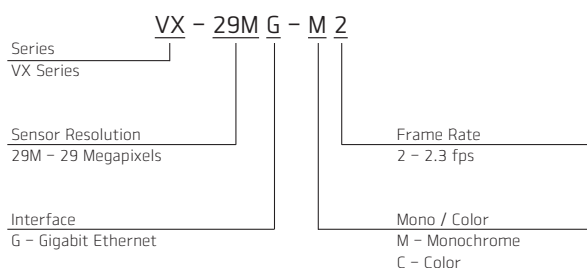| | | |
|---|---|---|
| Model | | VX-29MG-M/C 2 |
| Resolution (H × V) | | 6576 × 4384, 28.8M |
| Sensor | | ON Semiconductor KAI-29050 |
| Sensor Size (Optical Format) | | 35 ㎜ |
| Sensor Type | | Progressive Scan Interline Transfer CCD |
| Pixel Size | | 5.5 ㎛ × 5.5 ㎛ |
| Sensor Output | | 1 or 2 Tap |
| Interface | | Gigabit Ethernet |
| Max. Frame Rate (40 ㎒) | | 2.3 fps (2 Tap) / 1.2 fps (1 Tap) |
| Exposure Time | | 23/1,000,000 − 7 s |
| Partial Scan (Max. Speed) | | 8.8 fps at 500 Lines |
| Pixel Data Format | | 8 / 10 / 12 bit |
| Output Format | Mono | Mono8, Mono10, Mono10 packed, Mono12, Mono12 packed |
| | Color | Bayer8, Bayer10, Bayer10 packed, Bayer12, Bayer12 packed |
| Electronic Shutter | | Global Shutter |
| Data Output Pixel Clock | | 30/40 ㎒ |
| Exposure Mode | | Timed Exposure, Trigger Width Exposure, Double Exposure |
| Dynamic Range | | 64 ㏈ |
| Binning | | ×1, ×2, ×3, ×4, ×8 (Horizontal and Vertical Independent) |
| Smear | | −100 ㏈ (Enhanced Correction Supported) |
| Lookup Table | | G = 1.0, Knee Control − User Defined Lookup Table (LUT) |
| Black Level | | Adjustable (0 ~ 127 LSB at 12 bit, 256 steps) |
| Analog Gain | | ×1 ~ ×40 (0 ~ 32 ㏈) |
| Digital Gain | | ×1 ~ ×64 (1/1024 step) |
| Dimension / Weight | | 74 ㎜ × 65 ㎜ × 103 ㎜, 550 g (with F-mount) <br> 74 ㎜ × 65 ㎜ × 101 ㎜, 550 g (with Canon −EF Adapter) |
| Temperature | | Operating: −40℃ ~ 85℃, Storage: −40℃ ~ 90℃ |
| Vibration / Shock | | 10G (20 ~ 200 ㎐) XYZ / 70G 10 ㎳ |
| Lens Mount | | F-mount or Interface for Canon-EF Adapter |
| Power | | 10~15 V DC, Typ. 8 W |
| API SDK | | Vieworks Imaging Solution 6.X or above |

# Quantum Efficiency Curves



Measured with AR coated cover glass

—Monochrome - Microlens



Measured with AR coated cover glass

—KAI-02950-FXA Red  —KAI-02950-FXA Green  —KAI-02950-FXA Blue

# Ordering Scheme

VX – 29M G – M 2

Series
VX Series

Sensor Resolution
29M – 29 Megapixels

Interface
G – Gigabit Ethernet

Frame Rate
2 – 2.3 fps

Mono / Color
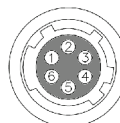M – Monochrome
C – Color

# Connector Specification

Power
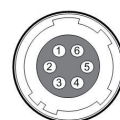


1, 2, 3: +12V DC        4, 5, 6: GND
(HR10A-7R-6PB)

Control



1: Trigger IN+          2: Trigger IN–
3: Strobe OUT           4: DC Ground
5: RS-232 RX←           6: RS-232 TX→
(HR10A-7R-6SB)

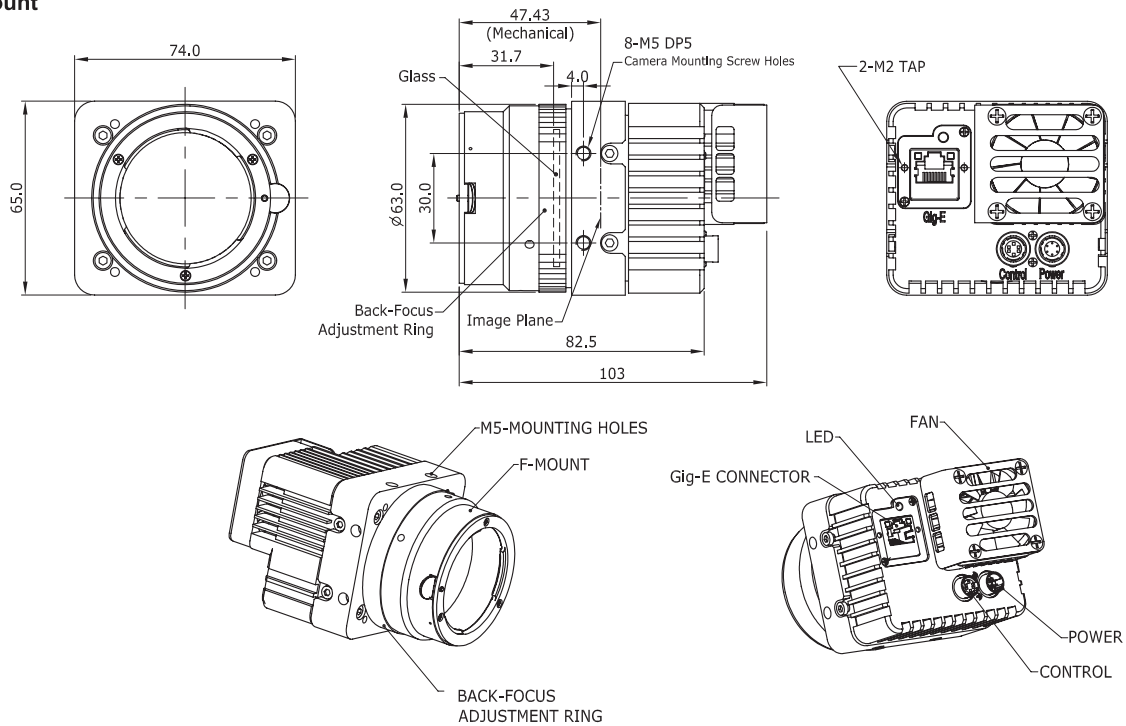Connectors on camera body

# Mechanical Dimensions

Unit: mm

**F-mount**



**Interface for Canon-EF adapter**

**vieworks**

RA11-125-002

# VX-25MG-M 5

## Aerial Imaging / Surveillance Camera



GiGE® VISION

The VX-25MG-5 camera is ideal for aerial imaging and ground surveillance applications which require Photographic Quality resolution and easy-to-use system integration. The VX-25MG-5, the new member of the VX series, uses the industrial proven CMOS image sensor technology and performs as fast as 5 fps with 25 million pixel resolution. Taking pictures with this camera is made easy with features such as; auto exposure, auto gain, auto focus, lens aperture control, and several innovative features to manage network bandwidth when connecting multiple cameras together on a gigabit Ethernet network.

# VX-25MG-M 5

Aerial Imaging / Surveillance Camera

## Main Features

- 25 Megapixel Resolution (ON Semiconductor)
- Extended Operating Temperature: −50℃ ~ 80℃
- Auto Controls (Exposure, Gain, Aperture, Focus)
- Canon−EF Adapter Control
- Pixel Defect Correction
- Non−uniformity Correction (DSNU and PRNU)
- IEEE 802.3 (Pause Frame Control) and Inter−packet Delay
- Internal Frame Buffer
- Stream Hold

## Applications

- Aerial Imaging
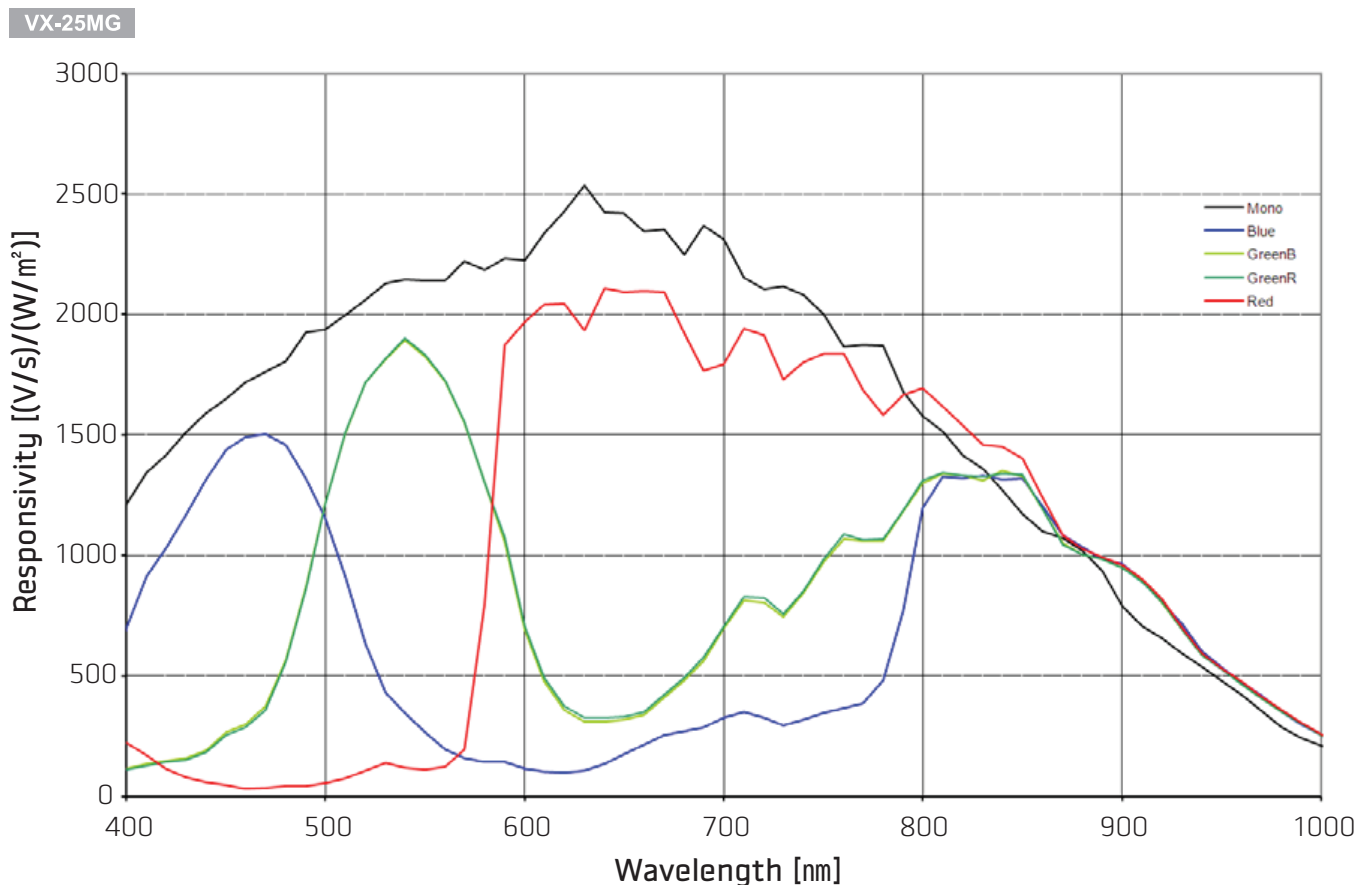- Ground Surveillance
- Research and Scientific Imaging

## Specifications

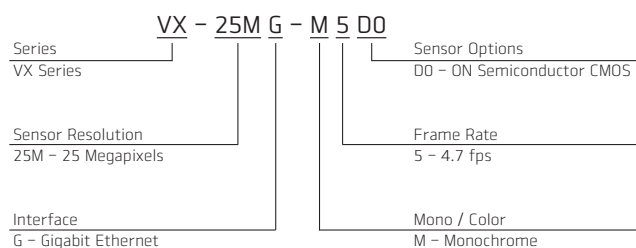| | | |
|---|---|---|
| Model | | VX−25MG−M 5 |
| Resolution (H × V) | | 5120 × 5120 |
| Sensor | | ON Semiconductor VITA−25K |
| Sensor Size (Optical Format) | | 23.04 ㎜ × 23.04 ㎜ (35 ㎜) |
| Sensor Type | | High Speed CMOS Image Sensor |
| Pixel Size | | 4.5 ㎛ × 4.5 ㎛ |
| Sensor Output | | 32 CH LVDS |
| Interface | | Gigabit Ethernet |
| Max. Frame Rate | | 4.7 fps / 25 fps (Burst Mode) |
| Exposure Time | | 1/1,000,000 − 60 s |
| Partial Scan (Max. Speed) | | 13,888 fps at 1 Line (H: 256) |
| Pixel Data Format | | 8 bit |
| Electronic Shutter | | Global Shutter |
| Trigger Synchronization | | Free−Run, Hardware Trigger or Software Trigger |
| Dynamic Range | | 54 ㏈ |
| Binning | | 1×, 2× (Horizontal and Vertical Independent) |
| Black Level Control | | 0 ~ 16 LSB (16 steps) |
| Gain Control | | Digital Gain: 1.0× ~ 4.0× (1/128 step) |
| Camera Image Memory | | 2 Gb |
| Dimension / Weight | | 68 ㎜ × 68 ㎜ × 80 ㎜ / 420 g (with F−mount)<br>68 ㎜ × 68 ㎜ × 77 ㎜ / 578 g (with Canon−EF Adapter) |
| Temperature | | Operating: −50℃ ~ 80℃, Storage: −50℃ ~ 90℃ |
| Vibration / Shock | | 10G (20 ~ 200 ㎐) XYZ / 70G 10 ㎳ |
| Lens Mount | | F−mount or Interface for Canon−EF Adapter |
| Power | External | 10 ~ 36 V DC |
| | Dissipation | Typ. 7.5 W |
| Compliance | | CE, FCC, KC |
| API SDK | | Vieworks Imaging Solution 7.X |

## Quantum Efficiency

VX-25MG



## Ordering Scheme

VX – 25M G – M 5 DO

Series
VX Series

Sensor Resolution
25M – 25 Megapixels

Interface
G – Gigabit Ethernet

Sensor Options
DO – ON Semiconductor CMOS

Frame Rate
5 – 4.7 fps

Mono / Color
M – Monochrome

## Connector Specification

Power



1, 2, 3:  +12 V DC
4, 5, 6:  GND
(HR10A–7R–6PB)

Control



1: Trigger IN+          2: Trigger IN–
3: Strobe Out           4: DC Ground
5: RS-232–RX←      6: RS-232–TX→
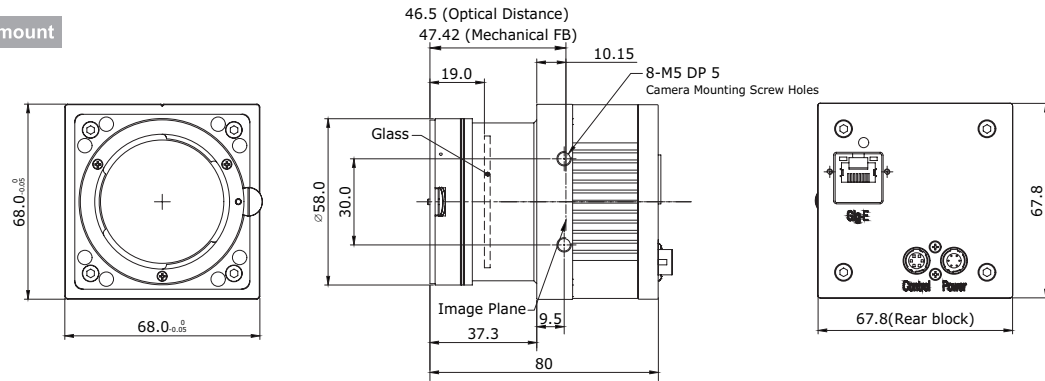(HR10A–7R–6SB)

Connectors on camera body
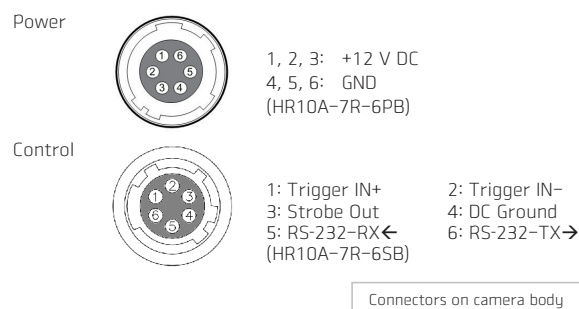
# VX-25MG-M 5

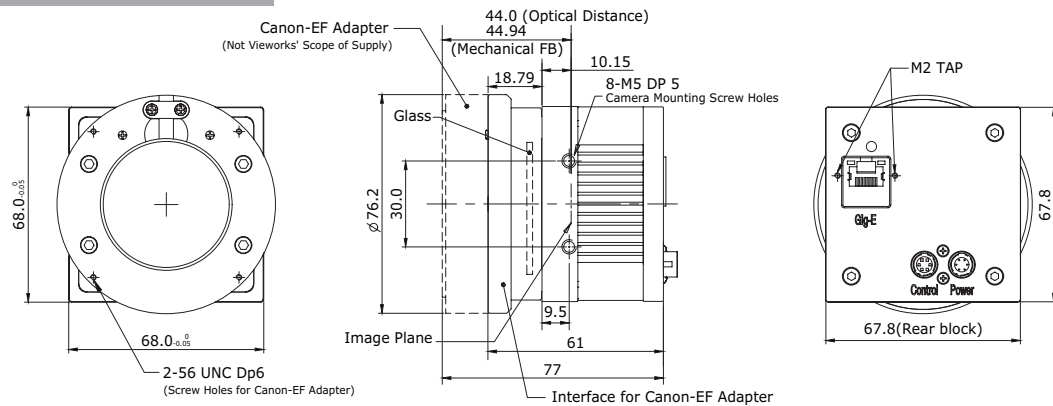Aerial Imaging / Surveillance Camera
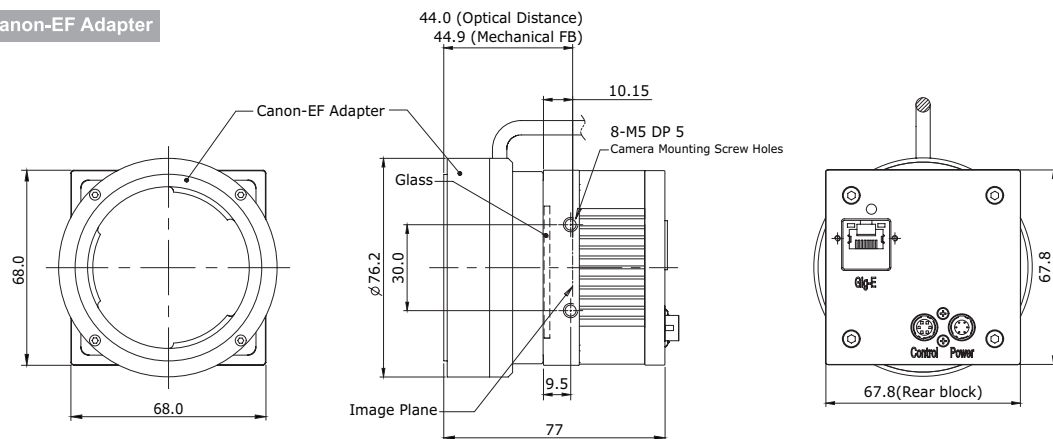
## Mechanical Dimensions

Unit: mm

**VX-25MG F-mount**



**VX-25MG Interface for Canon-EF Adapter**



**VX-25MG Canon-EF Adapter**



**∗. Vieworks does not provide a Canon-EF Adapter (Birger Mount).**

**Vieworks**

D-17-476