

## MV-SC6016M

### 1.6 MP Smart Camera

MV-SC6016M smart camera is developed based on high-performance embedded platform with strong calculation performance. It integrates VM functions and AI deep learning algorithm, and can use more than 140 algorithms. It adopts multiple interfaces for supporting external light source, display, mouse, etc.



### Key Features

- Adopts AI deep learning algorithm to achieve OCR, object recognition, defect detection, etc.
- Integrates VM functions, and supports more than 140 algorithms.
- Supports four-color light source (red/green/blue/white), and switching as needed.
- Adopts multiple I/O interfaces, such as multiple input/output signals.
- Supports multiple communication protocols.
- Supports indicators displaying device status for easy debugging and maintenance.
- Supports ingress protection IP67.

### Available Model

- 6 mm focal length: MV-SC6016M-06M-XBN
- 12 mm focal length: MV-SC6016M-12M-XBN
- 16 mm focal length: MV-SC6016M-16M-XBN

### Typical Application

- Consumer electronics
- Food and pharmaceutical
- Packaging
- Positioning and grabbing



## Specification

| Model                  | MV-SC6016M-06M-XBN                                                                                                                                                                                                                                                                                                                                                                                                                                                              | MV-SC6016M-12M-XBN | MV-SC6016M-16M-XBN |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|
| Tool                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |
| Function module        | Vision Master Platform (include deep learning module)                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                    |
| Communication protocol | TCP, UDP, MODBUS, Serial Port, PROFINET, EtherNet/IP, Fins, MC, FTP, etc.                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                    |
| Camera                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |
| Sensor type            | CMOS, global shutter                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                    |
| Pixel size             | 3.45 μm × 3.45 μm                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                    |
| Sensor size            | 1/2.9"                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    |
| Resolution             | 1408 × 1024                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |                    |
| Max. frame rate        | 120 fps                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                    |
| Gain                   | 0 dB to 15 dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                    |
| Exposure time          | 25 μs to 30000 μs                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                    |
| Pixel format           | Mono 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    |
| Mono/color             | Mono                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                    |
| Platform               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |
| Memory                 | 8 GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                    |
| Storage                | 64 GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                    |
| Electrical feature     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |
| Data interface         | Gigabit Ethernet (1000 Mbit/s)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                    |
| Digital I/O            | 17-pin M12 connector provides power and I/O, including opto-isolated input × 2 (Line 0/1), opto-isolated output × 2 (Line 4/5), configurable non-isolated input/output × 2 (Line 2/3), RS-232 × 1, and light source output (max. 30 W) × 1                                                                                                                                                                                                                                      |                    |                    |
| Extended interface     | VGA × 1, and USB host × 1                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                    |
| Power supply           | 24 VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    |
| Power consumption      | External light source and built-in light source cannot be used at the same time<br>Avg. 12 W @ 24 VDC (with no external light source and the built-in light source disabled)<br>Avg. 42 W @ 24 VDC (with external light source)<br>Avg. 16.6 W @ 24 VDC (built-in light source is enabled)<br>Max. 18 W @ 24 VDC (with no external light source and the built-in light source disabled)<br>Max. 48 W @ 24 VDC (with external light source or the built-in light source enabled) |                    |                    |
| Mechanical             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |
| Lens mount             | M12-mount, mechanical focus                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |                    |
| Focal length           | 6 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 12 mm              | 16 mm              |
| Light source           | Red light, green light, blue light, white light (switching by software)                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                    |
| Indicator              | Power indicator (PWR), network indicator (LNK), status indicator (STS), and user-defined indicator (U1/U2)                                                                                                                                                                                                                                                                                                                                                                      |                    |                    |

|                      |                                                                                                                                     |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Dimension            | 77 mm × 98 mm × 115.7 mm (3.0" × 3.9" × 4.6")                                                                                       |
| Weight               | Approx. 750 g (1.7 lb.)                                                                                                             |
| Ingress protection   | IP67 (under proper installation of waterproof lens cap)                                                                             |
| Temperature          | Working temperature: 0 °C to 50 °C (32 °F to 122 °F)<br>Storage temperature: -30 °C to 70 °C (-22 °F to 158 °F)                     |
| Humidity             | 20% RH to 95% RH (no condensation)                                                                                                  |
| Vibration resistance | Meets standard IEC 60068-2-6:2007. Bare device withstands 10 Hz to 55 Hz, 1.5 mm peak-to-peak amplitude, 2 hours per axis (X, Y, Z) |
| Shock resistance     | Meets standard IEC 60068-2-27:2008. Bare device withstands 30 g / 11 ms, half-sine wave, 500 shocks per axis (6 directions)         |
| <b>General</b>       |                                                                                                                                     |
| Certification        | CE, KC                                                                                                                              |

## Dimension

