Caution: Please read the instruction manual carefully before using the lens.

Management on Quality and Environment
Tamron is certified with international standards ISO 9001 for quality and ISO14001 for environmental management at its headquarters, domestic sales offices, China plant as well as three production facilities in Aomori, Japan and commits to introducing and maintaining sustainable environmental all levels and boards of its business operations.

Specifications subject to change without notice 2017, 02

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Tel: +81-48-684-9129 Fax: +81-48-683-8594

IP/CCTV LENSES
Mega-Pixel Varifocal Lenses
Varifocal Lenses
Fixed-Focal Lenses
Mega-Pixel Fixed-Focal Lens (for ITS)
Zoom Lenses
Mega-Pixel Machine Vision Lenses
Machine Vision Lenses
Accessories / Terminology Explanations

Specifications subject to change without notice 2017, 02
Vari-Focal lenses are constantly evolving together with Tamron, the optical equipment specialist

Tamron has consistently developed innovative Vari-Focal lenses compatible with the needs of a market that is accelerating towards increasingly sophisticated, ever more compact IP networks.

Images are all about “resolution”. High-quality products that refuse to compromise are the result of an unrelenting commitment to high resolution coupled with unsurpassed technological capabilities.

Offering high-resolution that is both durable and versatile, Tamron’s products enjoy worldwide success.
Products and Features

Mega-Pixel Vari-Focal Lenses

Ultra-high-resolution vari-focal lenses deliver maximum performance for mega-pixel cameras. Innovative optical technology provides high-resolution and high-contrast performance.

Fixed-Focal Lenses

A complete series of 1/3" format Fixed-Focal Lenses from 2.2mm super wide angle (118.6’) to 8mm (34.5’).

Mega-Pixel Machine Vision Lenses

Tamron’s high-resolution line-up of lenses are most suitable for such applications as FA (Factory Automation), Machine Vision, etc., where high image quality is essential. Tamron has a complete line-up of lenses that are perfectly compatible with cameras featuring mega-pixel imagers.

Mega-Pixel Vari-Focal Lenses

Ultra-high-resolution vari-focal lenses deliver maximum performance for mega-pixel cameras. Innovative optical technology provides high-resolution and high-contrast performance.

Flat-Field Mega-Pixel Lenses

Delivering uniformly ultra-high-resolution image from corner to periphery

Tamron’s motorized zoom lenses are designed with durability and reliability in mind.

Vari-Focal Lenses

Through the beneficial employment of aspherical elements, Tamron manufactured a superior line of Vari-Focal lenses featuring fast maximum apertures, high magnification ratios compactness and uncompromised optical quality.

Wide Dynamic Range

The standard 1.0-4.0mm Vari-Focal lens for the 1/3" format, which meets the needs of the most frequent job applications, offers an impressive maximum-open aperture of F 1.0 and F 1.06 maximum aperture. This wide dynamic range increases the versatility of this lens since it can be used in situations where light conditions are extreme or ever-changing.

Compatible NIR (Near-IR) – Only supported by NIR Lenses

The Tamron NIR lens series is designed to minimize focus shift in the NIR range by expanding chromatic aberration compensation to include both daylight and the NIR ranges. The lens therefore unfolds its powers in 24-hour around-the-clock surveillance, when combined with a day/night camera.

Compatible NIR (Near-IR)

Tamron’s 1/3" format 2.2mm, 2.8mm, 4mm, 6mm and 8mm lenses are precisely compatible with day/night cameras since their chromatic aberration compensation is expanded to the NIR range.

Zoom Lenses

Tamron’s motorized zoom lenses are designed with durability and reliability in mind.

Minimized Distortion

Distortion, the most formidable enemy in image processing, is thoroughly compensated for, thereby reducing distortion in images to the absolute minimum. As a result, Tamron’s High-Resolution Lenses provide stabilized high-performance in the field of precise measuring.

High-Resolution Extending to the Periphery

Various optical aberrations are compensated for to the absolute minimum in order to maintain high-resolution not only in the center of an image but also to its periphery.

Solid and Robust Mechanism

So as to endure the vibrations of FA and Machine Vision apparatus, where lenses are built in, Tamron’s High-Resolution Lenses all feature solid and robust mechanisms. This makes it possible to maintain their finest initial performances even after long periods of use.

Locking Mechanisms

Each of the lenses are available with locking mechanisms for the iris and focusing controls, making their use ideal in environment suffering from significant vibrations.

Compact Design

In consideration of using the lenses with FA and Machine Vision, all of the lenses in each series provide compact chassis and the external dimensions and filter sizes are unified.
Focal Length List

| Model          | Page | 2.2mm | 2.4mm | 2.6mm | 2.8mm | 3.0mm | 3.2mm | 3.4mm | 3.6mm | 3.8mm | 4.0mm | 4.2mm | 4.4mm | 4.6mm | 4.8mm | 5.0mm | 5.2mm |
|----------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 13VG2421   | 17   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13VG2412   | 18   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13VM5412   | 15   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13VCH5412   | 16   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13VMD4412   | 13   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13VMD3412   | 14   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13VM2112   | 15   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13VCH5112   | 16   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG4172   | 17   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG4282   | 18   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG5172   | 17   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG5282   | 18   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG6172   | 17   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG6282   | 18   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG7172   | 17   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG7282   | 18   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG8172   | 17   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG8282   | 18   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG9172   | 17   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG9282   | 18   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG1017   | 17   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13FG1082   | 18   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |

**Model Explanation**

Tamron IP / CCTV lens model numbers are very simple. Please see the following explanation of model number nomenclature.

1. **F** = Fixed-Focal Lens
2. **V** = Vari-Focal Lens
3. **M** = Manual Iris
4. **P** = P-Iris
5. **G** = Auto Iris w/o Amplifier
6. **5.86/uni03BCm** Supports 5.86/uni03BCm Sensor
7. **3.1/uni03BCm** Supports 3.1/uni03BCm Sensor
8. **2.5/uni03BCm** Supports 2.5/uni03BCm Sensor
9. **2.2mm 2.4mm 2.8mm 5mm 8mm 12mm 50mm 100mm**

**Terminology Explanation**

1. **Vari-Focal Lenses**
2. **Mega-Pixel Vari-Focal Lenses**
3. **Fixed-Focal Lenses**
4. **Accessories / Machine Vision Lenses**
5. **Zoom Lenses**
6. **Mega-Pixel Machine Vision Lenses**
7. **Machine Vision Lenses**
8. **P-Iris**
9. **Auto Iris w/o Amplifier**
10. **Manual Iris**
11. **P-Iris**
12. **Auto Iris w/o Amplifier**
The Double Vari-Focal solution. Cover all focal lengths from wide to tele with 3-Mega-Pixel resolution using just 2 lenses.

The new IR-corrected Mega-Pixel lens series from Tamron features a focal length range of 2.8 to 50mm in just two lenses covering 124.3° to 6.7° horizontal field of view with use of a 1/2.7” camera. A new optical design uses glass mold aspherical lens elements and a special optical coating that ensures 3MP high resolution even under IR light and a clear image.
Mega-Pixel Vari-Focal Lenses

### DC Auto Iris

#### M118VG413IR
- **Image Size**: 1/2.7
- **Mount Type**: CS
- **Focal Length**: 4.0 - 13mm
- **Aperture Range**: F/1.4 - 3.2
- **Focus Range**: 5.0 - 40.0
- **Field of View**: 21.8° × 16.3°
- **Remarks**: FFMP Manual with Lock

#### M13VG850IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 6.0 - 36mm
- **Aperture Range**: F/1.6 - 2.8
- **Focus Range**: 4.0 - 40.0
- **Field of View**: 26.4° × 19.8°
- **Remarks**: FFMP Manual with Lock

### P-Iris

#### M118VP1250IR
- **Image Size**: 1/2.7
- **Mount Type**: CS
- **Focal Length**: 10.0 - 50mm
- **Aperture Range**: F/1.6 - 3.6
- **Focus Range**: 5.0 - 100.0
- **Field of View**: 30.6° × 22.6°
- **Remarks**: FFMP Manual with Lock

#### M13VP288IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 7.0 - 20mm
- **Aperture Range**: F/1.6 - 3.6
- **Focus Range**: 4.0 - 40.0
- **Field of View**: 18.0° × 13.5°
- **Remarks**: FFMP Manual with Lock

### Machine Vision Lenses

#### M13VP880IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 7.0 - 20mm
- **Aperture Range**: F/1.6 - 3.6
- **Focus Range**: 4.0 - 40.0
- **Field of View**: 18.0° × 13.5°
- **Remarks**: FFMP Manual with Lock

---

**Remarks**:
- Connecting the lens to a camera that does not support P-Iris may cause a malfunction. The lens cannot be connected to cameras that use DC auto iris or video auto iris lenses.
Mega-Pixel Vari-Focal Lenses

### Manual Iris

**M13VM246**

- **Imager Size:** 1/2
- **Mount Type:** C
- **Focal Length:** 4 - 12mm
- **Aperture Range:** F1.4 - F16
- **Zoom Ratio:** 3.0x
- **Weight:** 64g
- **Remarks:** Field of View 111.3°×83.5°

**M13VM308**

- **Imager Size:** 1/3
- **Mount Type:** CS
- **Focal Length:** 3.5 - 8mm
- **Aperture Range:** F1.4 - F16
- **Zoom Ratio:** 3.0x
- **Weight:** 58g
- **Remarks:** Field of View 111.3°×83.5°

**M13VM550**

- **Imager Size:** 2/3
- **Mount Type:** CS
- **Focal Length:** 6 - 20mm
- **Aperture Range:** F1.4 - F16
- **Zoom Ratio:** 30x
- **Weight:** 65g
- **Remarks:** Field of View 111.3°×83.5°

**M12VM412**

- **Imager Size:** 1/2
- **Mount Type:** C
- **Focal Length:** 4.5 - 12mm
- **Aperture Range:** F1.4 - F16
- **Zoom Ratio:** 3.0x
- **Weight:** 64g
- **Remarks:** Field of View 111.3°×83.5°

### DC Auto Iris

**M13VG246**

- **Imager Size:** 1/2
- **Mount Type:** C
- **Focal Length:** 4.0 - 12mm
- **Aperture Range:** F1.4 - F16
- **Zoom Ratio:** 3.0x
- **Weight:** 64g
- **Remarks:** Field of View 111.3°×83.5°

**M13VG308**

- **Imager Size:** 1/3
- **Mount Type:** CS
- **Focal Length:** 3.5 - 8mm
- **Aperture Range:** F1.4 - F16
- **Zoom Ratio:** 3.0x
- **Weight:** 58g
- **Remarks:** Field of View 111.3°×83.5°

**M13VG550**

- **Imager Size:** 2/3
- **Mount Type:** CS
- **Focal Length:** 6 - 20mm
- **Aperture Range:** F1.4 - F16
- **Zoom Ratio:** 30x
- **Weight:** 65g
- **Remarks:** Field of View 111.3°×83.5°

**M12VG412**

- **Imager Size:** 1/2
- **Mount Type:** C
- **Focal Length:** 4.0 - 12mm
- **Aperture Range:** F1.4 - F16
- **Zoom Ratio:** 3.0x
- **Weight:** 64g
- **Remarks:** Field of View 111.3°×83.5°
Vari-Focal Lenses

**Manual Iris**

13VM308AS

<table>
<thead>
<tr>
<th>Image Size</th>
<th>US</th>
<th>Operation</th>
<th>Zoom</th>
<th>Focal Length</th>
<th>Aperture Range</th>
<th>Overall Length</th>
<th>F/1.4 - Close</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 T</td>
<td></td>
<td>Manual with Lock</td>
<td>3.0 - 8mm</td>
<td>F/1.6 - 360</td>
<td>2.8°×2.1°</td>
<td>114mm</td>
<td>156g</td>
</tr>
<tr>
<td>1/4 W</td>
<td></td>
<td>Manual with Lock</td>
<td>10.2°×7.6°</td>
<td>F/1.4 - 360</td>
<td>4.2°×3.1°</td>
<td>84g</td>
<td>71g</td>
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13VM550ASII

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13VM20100AS

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<th>Aperture Range</th>
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<tr>
<td>1/4 T</td>
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<td>10.2°×7.6°</td>
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**DC Auto Iris**

13VG2812ASII

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<th>F/1.0 - Close</th>
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<tr>
<td>1/4 T</td>
<td></td>
<td>DC Auto Iris</td>
<td>3.0 - 8mm</td>
<td>F/1.6 - 360</td>
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<td>64mm</td>
<td>71g</td>
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13VG308AS

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<th>Aperture Range</th>
<th>Overall Length</th>
<th>F/1.0 - Close</th>
</tr>
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<tbody>
<tr>
<td>1/4 T</td>
<td></td>
<td>Manual with Lock</td>
<td>3.0 - 8mm</td>
<td>F/1.6 - 360</td>
<td>2.1°×1.6°</td>
<td>64mm</td>
<td>71g</td>
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13VG550ASII

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<th>F/1.0 - Close</th>
</tr>
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<tbody>
<tr>
<td>1/4 T</td>
<td></td>
<td>Manual with Lock</td>
<td>3.0 - 8mm</td>
<td>F/1.6 - 360</td>
<td>2.1°×1.6°</td>
<td>64mm</td>
<td>71g</td>
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13VG20100AS

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<th>Aperture Range</th>
<th>Overall Length</th>
<th>F/1.0 - Close</th>
</tr>
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<tbody>
<tr>
<td>1/4 T</td>
<td></td>
<td>Manual with Lock</td>
<td>3.0 - 8mm</td>
<td>F/1.6 - 360</td>
<td>2.1°×1.6°</td>
<td>64mm</td>
<td>71g</td>
</tr>
</tbody>
</table>
### Fixed-Focal Lenses

#### 13FM22IR
- **Image Size**: 2/3
- **Mount Type**: CS
- **Focal Length**: 2.2mm
- **Overall Length**: 32.5mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 34g

#### 13FM28IR
- **Image Size**: 1/4
- **Mount Type**: CS
- **Focal Length**: 2.8mm
- **Overall Length**: 25.7mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 25g

#### 13FM04IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 4mm
- **Overall Length**: 34.5mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 34g

#### 13FM06IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 6mm
- **Overall Length**: 34.5mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 34g

#### 13FM08IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 8mm
- **Overall Length**: 35.7mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 36g

#### DC-Auto Iris

### Vari-Focal Lenses

#### 13FG22IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 2.2mm
- **Overall Length**: 32.5mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 34g

#### 13FG28IR
- **Image Size**: 1/4
- **Mount Type**: CS
- **Focal Length**: 2.8mm
- **Overall Length**: 25.7mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 25g

#### 13FG04IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 4mm
- **Overall Length**: 34.5mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 34g

#### 13FG06IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 6mm
- **Overall Length**: 34.5mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 34g

#### 13FG08IR
- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 8mm
- **Overall Length**: 35.7mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 36g

#### Fixed-Focal Lenses

- **Image Size**: 2/3
- **Mount Type**: CS
- **Focal Length**: 2.2mm
- **Overall Length**: 32.5mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 34g

### DC-Auto Iris

- **Image Size**: 1/3
- **Mount Type**: CS
- **Focal Length**: 2.2mm
- **Overall Length**: 32.5mm
- **Aperture Range**: F/1.2 - 360
- **Focus Range**: 0.2m - ∞
- **Weight**: 34g

---

**Note**: This page provides specifications for TAMRON IP/CCTV lenses for security purposes, including details on image size, mount type, focal length, overall length, aperture range, focus range, and weight. Each model is designed for specific applications, ensuring compatibility and performance in various surveillance scenarios.
**Mega-Pixel Fixed-Focal Lens (for ITS)***

### M118FM35-II

**Image Size**: 1/3

<table>
<thead>
<tr>
<th>Field</th>
<th>Focal Length</th>
<th>F/NO.</th>
<th>Weight</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>1/3</td>
<td>15 - 510mm</td>
<td>F/3.0 - 6.4</td>
<td>3.5kg</td>
<td>205mm (in AIR)</td>
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</table>

**Aperture Range**: F/3.0 - 6.4

**Zoom Ratio**: 1/1

**Mount Type**: C

**Imager Size**: 1/3

**Remarks**: Full High Definition

### Zoom Lenses

**DC Auto Iris**

#### M118ZG36X10IRP

**Image Size**: 1/3

<table>
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<th>Field</th>
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<th>Weight</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/3</td>
<td>10 - 360mm</td>
<td>F/1.6 - 16</td>
<td>0.7kg</td>
<td>125mm (in AIR)</td>
</tr>
</tbody>
</table>

**Aperture Range**: F/1.6 - 16

**Zoom Ratio**: 1/1

**Mount Type**: C

**Imager Size**: 1/3

**Remarks**: DC Auto Iris

#### M118ZG36X10IRPF

**Image Size**: 1/3

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<th>Focal Length</th>
<th>F/NO.</th>
<th>Weight</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/3</td>
<td>10 - 360mm</td>
<td>F/1.6 - 16</td>
<td>0.7kg</td>
<td>125mm (in AIR)</td>
</tr>
</tbody>
</table>

**Aperture Range**: F/1.6 - 16

**Zoom Ratio**: 1/1

**Mount Type**: C

**Imager Size**: 1/3

**Remarks**: DC Auto Iris

### M12ZG34X15IRPF

**Image Size**: 1/3

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<tbody>
<tr>
<td>1/3</td>
<td>10 - 360mm</td>
<td>F/1.6 - 16</td>
<td>0.7kg</td>
<td>125mm (in AIR)</td>
</tr>
</tbody>
</table>

**Aperture Range**: F/1.6 - 16

**Zoom Ratio**: 1/1

**Mount Type**: C

**Imager Size**: 1/3

**Remarks**: DC Auto Iris

---

**New**

Full 5-mega-pixel resolution for 1/1.2” large imagers

Industry’s most compact solution employing a largest-diameter 29mm lens

Full 5-mega-pixel resolution optimized for both 1/1.2” and 2/3” imagers

Industry’s most compact* body and leading-edge optical performance employing a largest diameter 29mm lens.

Newly released are three models to address the requirement of short-distance high-resolution for machine vision; an unrivaled advantage of choice to empower production and inspection equipment. The product portfolio will consist of a total of 7 models, of which four additional models will be announced shortly.

*In machine-vision lenses that are compatible with a 1/1.2” imager and 5-mega-pixel resolution (survey by Tamron, effective as of November, 2016)

**Compatible with**

IMX174/IMX249 (1/1.2” 2.4-mega-pixel), IMX250/IMX264 (2/3” 5-mega-pixel)
# Mega-Pixel Machine Vision Lenses

## M111FM08
- **Image Size:** 1/1.2
- **Operation:** Manual with Lock
- **Focal Type:** C
- **Mount Type:** C
- **Focus Range:** 0.3m - ∞
- **Field of View Angle:** 29° x 21°
- **Aperture Range:** F/2 - 16
- **Overall Length:** 46mm
- **Weight:** 36g

## M111FM16
- **Image Size:** 1/2.8
- **Operation:** Manual with Lock
- **Focal Type:** C
- **Mount Type:** C
- **Focus Range:** 0.3m - ∞
- **Field of View Angle:** 55° x 41°
- **Aperture Range:** F/2.8 - 16
- **Overall Length:** 62mm
- **Weight:** 45g

## M111FM25
- **Image Size:** 1/2.8
- **Operation:** Manual with Lock
- **Focal Type:** C
- **Mount Type:** C
- **Focus Range:** 0.3m - ∞
- **Field of View Angle:** 24° x 18°
- **Aperture Range:** F/2.8 - 16
- **Overall Length:** 62mm
- **Weight:** 45g

## M111FM50
- **Image Size:** 1/2.8
- **Operation:** Manual with Lock
- **Focal Type:** C
- **Mount Type:** C
- **Focus Range:** 0.4m - ∞
- **Field of View Angle:** 20° x 15°
- **Aperture Range:** F/2.8 - 16
- **Overall Length:** 62mm
- **Weight:** 45g

## TAMRON IP / CCTV LENSES

**21 Mega-Pixel Machine Vision Lenses**

**M111FM12**
- **Image Size:** 1/1.2
- **Operation:** Manual with Lock
- **Focal Type:** C
- **Mount Type:** C
- **Focus Range:** 0.5m - ∞
- **Field of View Angle:** 40° x 30°
- **Aperture Range:** F/2.8 - 16
- **Overall Length:** 76mm
- **Weight:** 64g

**M112FM16**
- **Image Size:** 1/1.2
- **Operation:** Manual with Lock
- **Focal Type:** C
- **Mount Type:** C
- **Focus Range:** 0.5m - ∞
- **Field of View Angle:** 31° x 23°
- **Aperture Range:** F/3.5 - 22
- **Overall Length:** 76mm
- **Weight:** 54g

**M112FM25**
- **Image Size:** 1/1.2
- **Operation:** Manual with Lock
- **Focal Type:** C
- **Mount Type:** C
- **Focus Range:** 0.5m - ∞
- **Field of View Angle:** 24° x 18°
- **Aperture Range:** F/2.8 - 16
- **Overall Length:** 76mm
- **Weight:** 54g

**M112FM50**
- **Image Size:** 1/1.2
- **Operation:** Manual with Lock
- **Focal Type:** C
- **Mount Type:** C
- **Focus Range:** 0.4m - ∞
- **Field of View Angle:** 20° x 15°
- **Aperture Range:** F/2.8 - 16
- **Overall Length:** 76mm
- **Weight:** 54g
Mega-Pixel Machine Vision Lenses

M23FM06

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### Mega-Pixel Machine Vision Lenses

#### M118FM06
- **Imager Size**: 1/2.8
- **Orientation**: Vertical
- **Focus**: Manual with Lock
- **Field of View**: 36.9° × 28.4°
- **Mount Type**: C
- **Overall Length**: 57.0 mm
- **Weight**: 60 g
- **Remarks**: None

#### M118FM08
- **Imager Size**: 1/2.8
- **Orientation**: Vertical
- **Focus**: Manual with Lock
- **Field of View**: 34.2° × 25.5°
- **Mount Type**: C
- **Overall Length**: 49.0 mm
- **Weight**: 40 g
- **Remarks**: None

#### M118FM12
- **Imager Size**: 1/2.8
- **Orientation**: Vertical
- **Focus**: Manual with Lock
- **Field of View**: 22.4° × 16.6°
- **Mount Type**: C
- **Overall Length**: 46.5 mm
- **Weight**: 40 g
- **Remarks**: None

#### M118FM16
- **Imager Size**: 1/2.8
- **Orientation**: Vertical
- **Focus**: Manual with Lock
- **Field of View**: 22.7° × 17.1°
- **Mount Type**: C
- **Overall Length**: 44.1 mm
- **Weight**: 40 g
- **Remarks**: None

#### M118FM25
- **Imager Size**: 1/2.8
- **Orientation**: Vertical
- **Focus**: Manual with Lock
- **Field of View**: 18.9° × 14.3°
- **Mount Type**: C
- **Overall Length**: 38.3 mm
- **Weight**: 60 g
- **Remarks**: None

#### M118FM50
- **Imager Size**: 1/2.8
- **Orientation**: Vertical
- **Focus**: Manual with Lock
- **Field of View**: 14.6° × 11.0°
- **Mount Type**: C
- **Overall Length**: 34.0 mm
- **Weight**: 86 g
- **Remarks**: None

### Machine Vision Lenses

#### 22HA
- **Imager Size**: 1/3
- **Orientation**: Horizontal
- **Focus**: Manual with Lock
- **Field of View**: 44.9° × 34.0°
- **Mount Type**: C
- **Overall Length**: 50.8 mm
- **Weight**: 40 g
- **Remarks**: None

#### 219HB
- **Imager Size**: 1/2
- **Orientation**: Horizontal
- **Focus**: Manual with Lock
- **Field of View**: 53.9° × 41.0°
- **Mount Type**: C
- **Overall Length**: 66.1 mm
- **Weight**: 40 g
- **Remarks**: None

#### 25HA
- **Imager Size**: 1/2
- **Orientation**: Horizontal
- **Focus**: Manual with Lock
- **Field of View**: 55.5° × 43.6°
- **Mount Type**: C
- **Overall Length**: 71.6 mm
- **Weight**: 40 g
- **Remarks**: None

#### 25HB
- **Imager Size**: 1/2
- **Orientation**: Horizontal
- **Focus**: Manual with Lock
- **Field of View**: 58.9° × 44.9°
- **Mount Type**: C
- **Overall Length**: 86.1 mm
- **Weight**: 40 g
- **Remarks**: None
### Machine Vision Lenses

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#### 20HC

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<th>Manual</th>
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<tbody>
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<td>Motor</td>
<td>Lens</td>
</tr>
<tr>
<td>Aperture Range</td>
<td>1/2.8 - 16</td>
<td>Overall Length</td>
<td>31mm</td>
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<tr>
<td>Field of View</td>
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#### 3SHB

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<td>Field of View</td>
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#### 21HA

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<td>Lens</td>
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<tr>
<td>Aperture Range</td>
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<td>Overall Length</td>
<td>50mm</td>
<td></td>
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<tr>
<td>Field of View</td>
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<td>Weight</td>
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#### 21HC

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<td>Lens</td>
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<td>Overall Length</td>
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#### 1A1HB

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## Accessories

### Special Accessories for Machine Vision Lenses

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<thead>
<tr>
<th>Accessories</th>
<th>规格（mm）</th>
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<tbody>
<tr>
<td>Extension Ring</td>
<td>7 Sets (0.5mm, 1mm, 2mm, 5mm, 10mm, 20mm, 40mm)</td>
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<tr>
<td>Filter for Protection</td>
<td>25.5-NO 025.5mm</td>
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<tr>
<td></td>
<td>30.5-NO 030.5mm</td>
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<tr>
<td></td>
<td>35.5-NO 035.5mm</td>
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<tr>
<td>Polarizer Filter</td>
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<td>30.5-PL 030.5mm</td>
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### Special Accessories for Security Lenses

<table>
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<tr>
<td>C-CS Adapter</td>
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</tbody>
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### Remarks

- 1.1” lenses can also be used with 1.1”, 1/1.2”, 2/3”, 1/1.8”, 1/2”, 1/2.5”, 1/2.7”, 1/2.8”, 1/3” & 1/4” Imager cameras. 1/1.2” lenses can also be used with 2/3”, 1/1.8”, 1/2”, 1/2.5”, 1/2.7”, 1/2.8”, 1/3” & 1/4” Imager cameras. 2/3” lenses can also be used with 1/1.8”, 1/2”, 1/2.5”, 1/2.7”, 1/2.8”, 1/3” & 1/4” Imager cameras. 1/2” lenses can also be used with 1/2.5”, 1/2.7”, 1/2.8”, 1/3” & 1/4” Imager cameras. 1/3” lenses can also be used with 1/4” Imager cameras.

- When you fit C-Mount lenses with CS-Mount cameras, please use the C-CS adapter.

- The “Field of View Angle” in the data sheets shows the data when the lens is used with a camera with the indicated imager size. When other cameras with different imager sizes are used, please refer to the following datum: