## Key Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
<td>ONSEMI 1.3MP AR0143 RGGB</td>
</tr>
<tr>
<td>ISP</td>
<td>ONSEMI AP0101</td>
</tr>
<tr>
<td>Image Size</td>
<td>1/4 inch CMOS</td>
</tr>
<tr>
<td>Output Pixels</td>
<td>1280H * 720V</td>
</tr>
<tr>
<td>Pixel Size</td>
<td>3um*3um</td>
</tr>
<tr>
<td></td>
<td>Back Side Illuminated (BSI)</td>
</tr>
<tr>
<td>Frame Rate</td>
<td>1280*720 / 30fps</td>
</tr>
<tr>
<td>HDR Range</td>
<td>&gt;120 dB</td>
</tr>
<tr>
<td>Output data</td>
<td>Parallel / YUV422-8bit</td>
</tr>
<tr>
<td>Output pixel clock</td>
<td>72MHz</td>
</tr>
<tr>
<td>Serializer</td>
<td>MAXIM MAX96705</td>
</tr>
<tr>
<td>Camera Interface</td>
<td>Coaxial</td>
</tr>
<tr>
<td>Power Supply</td>
<td>5~12V POC (Power Over Coaxial)</td>
</tr>
<tr>
<td>Current</td>
<td>&lt;200mA</td>
</tr>
<tr>
<td>Connector</td>
<td>Fakra Z Type</td>
</tr>
<tr>
<td>Operating temp. range</td>
<td>-40~+85°C</td>
</tr>
<tr>
<td>Waterproof</td>
<td>IP67</td>
</tr>
<tr>
<td>Dimensions</td>
<td>W: 30mm, L:30mm, H:22.5mm</td>
</tr>
<tr>
<td>Weight</td>
<td>&lt;50g</td>
</tr>
<tr>
<td>Lens</td>
<td>FOV 60 ~190°</td>
</tr>
</tbody>
</table>

## Application

- Automotive ADAS
- ADAS + Viewing Fusion

## Dimensions

![外形尺寸图](image-url)
### Model
SG1-AR0143RGB-0101-GMSL-Hxxx

#### Hardware & Software

<table>
<thead>
<tr>
<th>Maxim Max96705</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I2C Address</strong></td>
<td>0x80 (8bit address)</td>
<td></td>
</tr>
<tr>
<td>HIM</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>BWS</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>LCCEN</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>CONF0</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>CONF1</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Onsemi AP0101</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I2C Address</strong></td>
<td>0xBA (8bit address)</td>
<td></td>
</tr>
<tr>
<td>Frame Sync</td>
<td>Support</td>
<td></td>
</tr>
<tr>
<td>Reset</td>
<td>High &amp; Controlled by Max96705 GPIO1</td>
<td></td>
</tr>
<tr>
<td>Oscillator</td>
<td>27MHz</td>
<td></td>
</tr>
</tbody>
</table>

![MAX96705 Circuit](image)
# Model
SG1-AR0143RGB-0101-GMSL-Hxxx

## Bom

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>SPEC</th>
<th>QTY/SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lens</td>
<td>M12 Lens</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Shell 1</td>
<td>AL Black/M12</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>PCB1</td>
<td>Sensor board</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Copper Pilar</td>
<td>3*Copper</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>PCB2</td>
<td>GMSL or GMSL+ISP board</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>O ring</td>
<td>silicon rubber</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Shell 2</td>
<td>AL Black</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Screw</td>
<td>M2</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Fakra</td>
<td>Fakra Z Type</td>
<td>1</td>
</tr>
<tr>
<td>FOV 30度</td>
<td>型号: SG1-AR0143RGB-0101-GMSL-H30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOV 50~60度</td>
<td>型号: SG1-AR0143RGB-0101-GMSL-H60</td>
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<tr>
<td>FOV 115~120度</td>
<td>型号: SG1-AR0143RGB-0101-GMSL-H120</td>
<td></td>
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<tr>
<td>FOV 185~190度</td>
<td>型号: SG1-AR0143RGB-0101-GMSL-H190</td>
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</tbody>
</table>
Model
SG1-AR0143RGB-0101-GMSL-Hxxx

Camera and cable

Figure 1: Camera Module - Drawing

Figure 2: Camera Module + USB3.0 box