

AR0830

Image Sensor, 8.3 MP, Rolling Shutter, Hyperlux™ LP

Product Overview

For complete documentation, see the data sheet.

AR0830, belongs to **onsemi's** Hyperlux LP product family, is a 1/2.9inch Back-Side Illuminated (BSI) Stacked CMOS digital image sensor with a 3840 x 2160 activepixel array. This advanced sensor captures images in either linear or enhanced Dynamic Range (eDR) modes, with a rollingshutter readout. The AR0830 is architected & designed to deliver highquality performance consuming very low power. It is supported by a 1.4 μm BSI pixel from **onsemi** and delivers excellent performance in lowlight & NIR wavelengths. The features of the AR0830 provides a powerful data capturing device at the edge that can be programmed through several options to deliver optimal bandwidth at very low power.

Features

- Lowest Power Consumption among Comparable Offerings in the Industry
- Enhanced NIR Response in 850nm & 940nm Wavelength
- Wake on Motion (WOM)
- Multiple Subsampling Modes - Binning, summing, Skipping, Windowing
- Multiple Functional Modes - Global Reset Release (GRR), Trigger, Context Switching
- enhanced Dynamic Range (eDR) & Line Interleaved HDR (LI-HDR) Modes

Applications









- Videoconferencing
- Smart Access
- Virtual & Augmented Reality
- Machine Vision
- Retail Analytics


End Products

- VC Endpoints, Webcam
- Video Doorbells
- AR/VR/XR Headsets
- Machine Vision Cameras
- Retail In-store Cameras

Part Electrical Specifications

| Product | Status | Compliance | Type | Megapixels | Frame Rate (fps) | Optical Format | Shutter Type | Pixel Size (µm) | Output Interface | Color | Package Type | Case Outline | MSL Type | MSL Temp (°C) | Container Type | Container Qty. |
|------------------------|--------|------------|------|------------|------------------|----------------|---|-----------------|------------------|-------|----------------------------------|--------------|----------|---------------|----------------|----------------|
| AR0830CSSC11 SMD20 | Active | H Pb | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB | - | | NA | 0 | MTFRM | 1 |
| AR0830CSSC11 SMD20-RC1 | Active | Pb | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB | - | | NA | 0 | MTFRM | 1 |
| AR0830CSSC11 SMKA1-CP | Active | H Pb | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB | ODC SP59 6.41 x3.91x0.63, 0.50 P | 570 AY.PDF | 4 | 245 | CTR AY | 3000 |
| AR0830CSSC11 SMKA1-CP2 | Active | H Pb | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB | ODC SP59 6.41 x3.91x0.63, 0.50 P | 570 AY.PDF | 4 | 245 | CTR AY | 50 |
| AR0830CSSC3 5SMD20 | Active | H Pb | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB | - | | NA | 0 | MTFRM | 1 |
| AR0830CSSC3 5SMD20-RC1 | Active | H Pb | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB | - | | NA | 0 | MTFRM | 1 |
| AR0830CSSC3 5SMKA1-CP | Active | H Pb | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB | ODC SP59 6.41 x3.91x0.63, 0.50 P | 570 AY.PDF | 4 | 245 | CTR AY | 3000 |

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|-----------------------|-------------|---|------|-----|----|----------|---|-----------|------|--------|----------------------------------|-------------|----|-----|--------|------|
| AR0830CSSC35SMKA1-CP2 | Active |  | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB | ODC SP59 6.41 x3.91x0.63, 0.50 P | 570 AY.P DF | 4 | 245 | CTR AY | 50 |
| AR0830CSSH11SMD20 | Active, New |  | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB-IR | - | | NA | 0 | MTF RM | 1 |
| AR0830CSSH11SMD20-RC1 | Active, New |  | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB-IR | - | | NA | 0 | MTF RM | 1 |
| AR0830CSSH11SMKA1-CP | Active, New |  | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB-IR | ODC SP59 6.41 x3.91x0.63, 0.50 P | 570 AY.P DF | 4 | 245 | CTR AY | 3000 |
| AR0830CSSH11SMKA1-CP2 | Active, New |  | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB-IR | ODC SP59 6.41 x3.91x0.63, 0.50 P | 570 AY.P DF | 4 | 245 | CTR AY | 50 |
| AR0830CSSH35SMKA1-CP | Active, New |  | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB-IR | ODC SP59 6.41 x3.91x0.63, 0.50 P | 570 AY.P DF | 4 | 245 | CTR AY | 3000 |
| AR0830CSSH35SMKA1-CP2 | Active, New |  | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | RGB-IR | ODC SP59 6.41 x3.91x0.63, 0.50 P | 570 AY.P DF | 4 | 245 | CTR AY | 50 |
| AR0830CSSM11SMKA1-CP | Active |  | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | Mono | ODC SP59 6.41 x3.91x0.63, 0.50 P | 570 AY.P DF | 4 | 245 | CTR AY | 3000 |

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|---------------------------|--------|---|------|-----|----|----------|---|-----------|------|------|--|-------------|---|-----|-------|----|
| AR0830CSSM11 SMKA1-CP2 | Active |  | CMOS | 8.3 | 60 | 1/3 inch | Electronic Rolling and Global Reset Release | 1.4 x 1.4 | MIPI | Mono | ODC SP59 6.41 x 3.91 x 0.63, 0.50 P | 570 AY.P DF | 4 | 245 | CTRAY | 50 |
|---------------------------|--------|---|------|-----|----|----------|---|-----------|------|------|--|-------------|---|-----|-------|----|