

## VLS3-AR0144-CB

- onsemi AR0144 1MP Global Shutter Sensor
- Captures high-speed dynamic targets clearly within an ultra-short exposure time.
- C-Mount for Interchangeable Lenses
- FAKRA Automotive Connector
- Plug & Play with Linux OS & Yocto
- Comes with VizionViewer™ Configuration Utility and VizionSDK



Distributed by:



### Specifications

#### Camera Information

|                           |  |
|---------------------------|--|
| CMOS Sensor               | onsemi AR0144  |
| Active Pixels             | 1280 (H) x 800 (V) = 1.0MP                                       |
| Pixel Size                | 3.0 μm x 3.0 μm  |
| Optical Format            | 1/4" (Diagonal 4.5 mm)   |
| Shutter Type              | Global Shutter   |
| Chromaticity              | Color  |
| Illuminated type          | Front Side Illuminated (FSI)                                     |
| Maximum Frame Rate (UYVY) | 1280 x 800 @ 60 fps<br>1280 x 720 @ 60 fps<br>640 x 480 @ 60 fps |
| Maximum S/N Ratio         | 38 dB  |
| Output Format             | UYVY   |

#### Camera Interface

|             |                       |
|-------------|-----------------------|
| Connector   | FAKRA SMB Jack Z-Code |
| Serial Link | FPD-Link III          |

#### Power

|                   |                                 |
|-------------------|---------------------------------|
| Supply Voltage    | 12V ± 5%                        |
| Power Consumption | UYVY 1280 x 800 @ 60 fps ≤ 0.9W |
| Standby Power     | ≤ 0.1W Standby                  |

#### Software Support

|                  |  |
|------------------|--|
| Platform Support | x86 Intel / AMD<br>NXP i.MX8M Mini / Plus<br>NXP i.MX93<br>TI Sitara™ AM62x / AM62A<br>TI Jacinto™ TDA4VM / TDA4VA / TDA4VH<br>NVIDIA Jetson Nano<br>NVIDIA Xavier NX<br>NVIDIA Orin Nano/NX |
| Operation System | Linux<br>Yocto   |
| Software         | VizionViewer™  |
| Development SDK  | VizionSDK  |

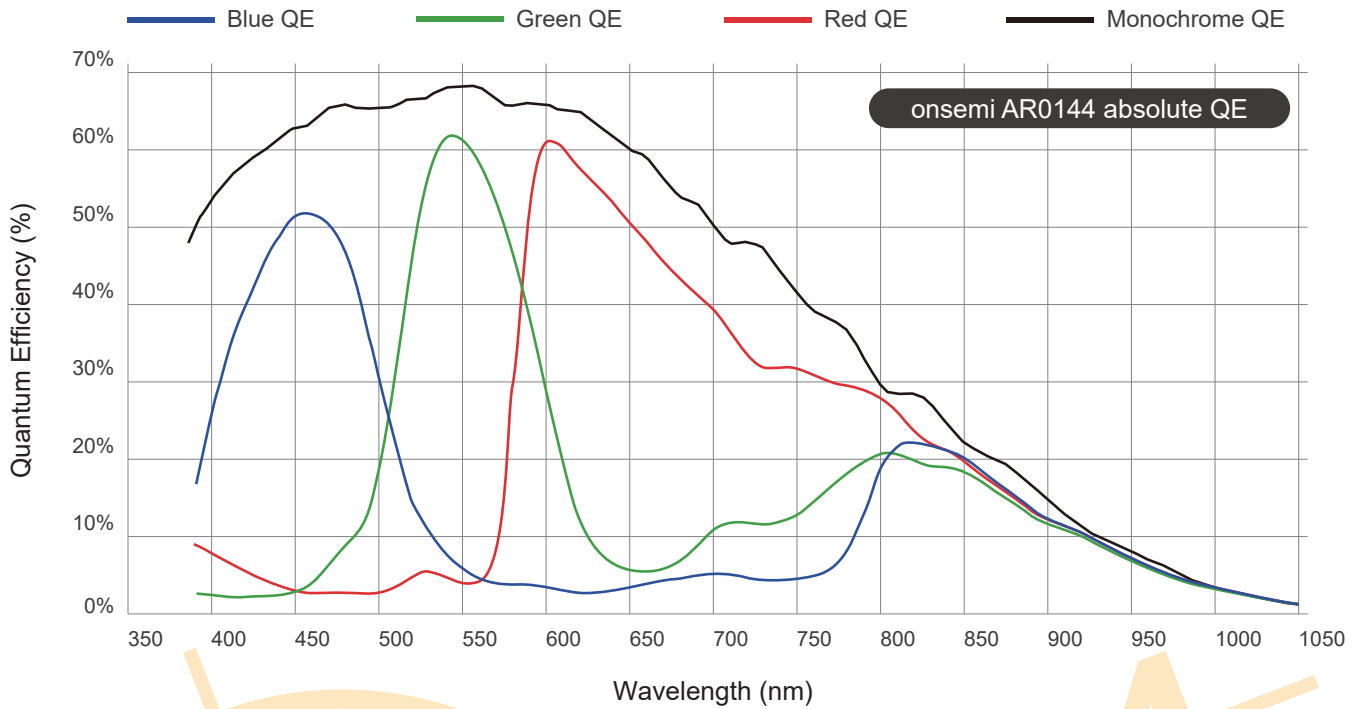
#### Environmental and Mechanical

|                       |                                |
|-----------------------|--------------------------------|
| Dimensions            | 29.5(W) x 29.5(H) x 37.5(D) mm |
| Weight                | 40 grams                       |
| Relative Humidity     | 10 to 90 %                     |
| MTBF                  | 50,000 Hours                   |
| Shock                 | 15G half-sine 11 ms duration   |
| Operating Temperature | -30°C to +70°C                 |
| Vibration             | 1 Grms random 5-500Hz hr/axis  |

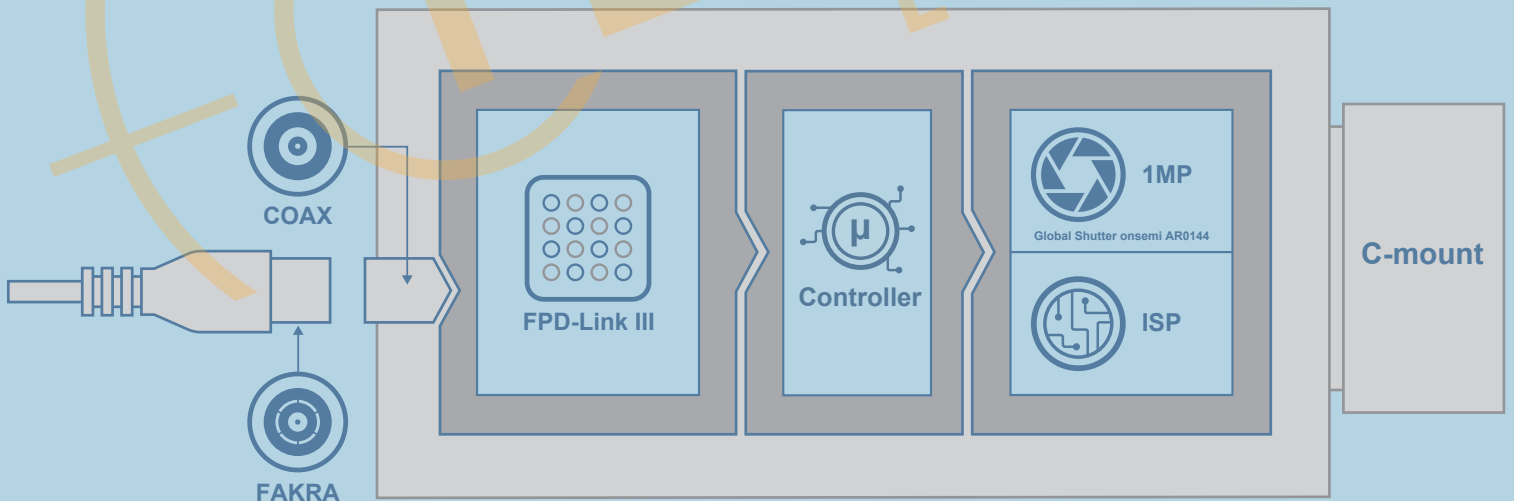
#### Certification and Compliance

|               |   |
|---------------|---|
| Certification | Compliant with CE / FCC / RoHS / REACH directives |
|---------------|---|

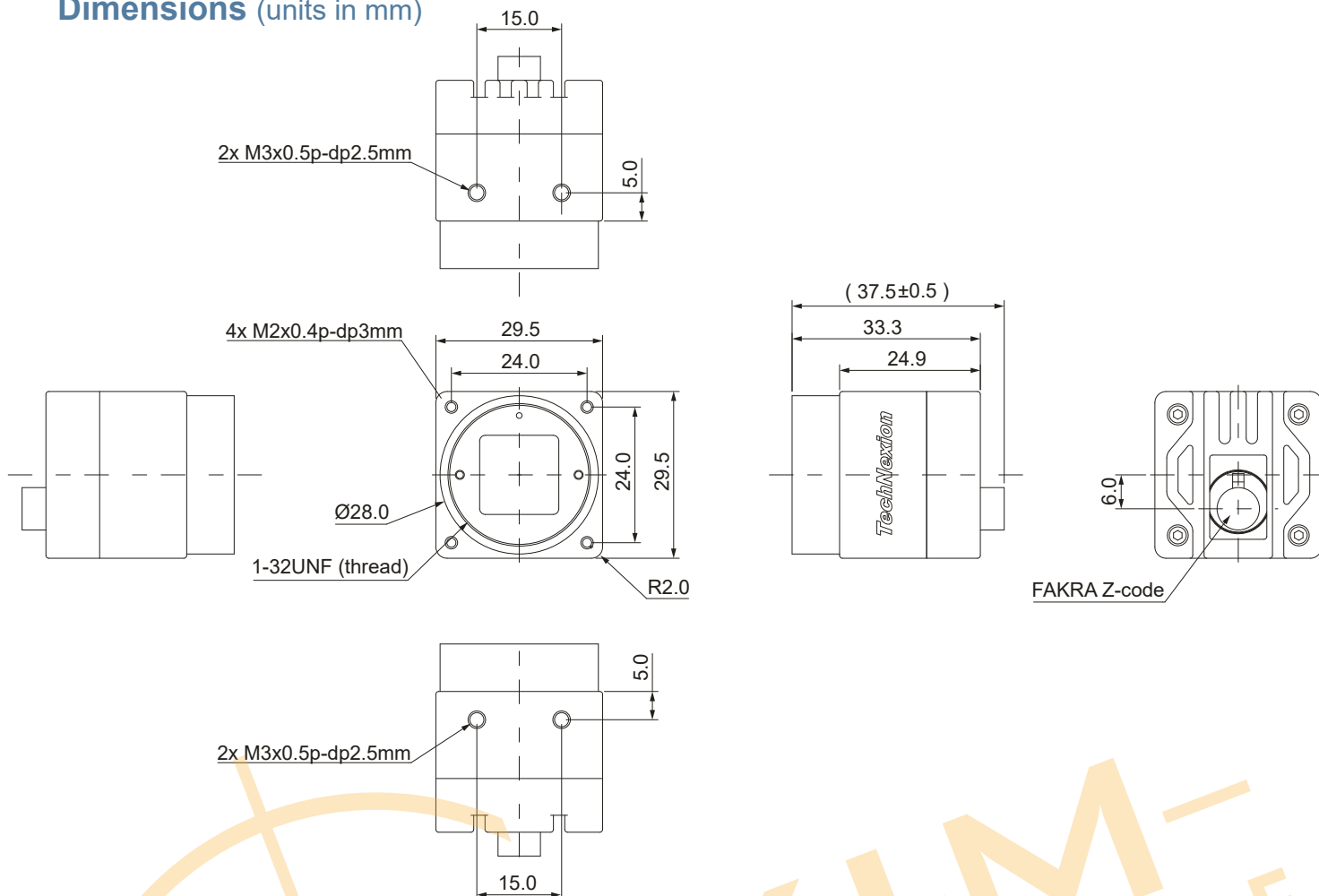
## Spectral Characteristics



## Block Diagram



## Dimensions (units in mm)



## Order Information

VLS3-AR0144-x-CB-xx

### Part Number Rules

| Option       | Code | Description         |
|--------------|------|---------------------|
| Chromaticity | C    | Color               |
| Filter       | -    | -                   |
|              | IR   | IR Cut Filter 650nm |

For customization, please contact your TechNexion sales representative.

## Optional Accessories

### 300-MOUNT-BRACKET

An easy to attach A-Mount bracket for TechNexion 30mm enclosed cameras.



300-MOUNT-BRACKET



300-MOUNT-BRACKET on tripod  
(tripod not included)

## Custom Lens Solutions



Our C-mount cameras can be paired with a variety of off-the-shelf lenses. Customers are welcome to choose their own, or alternatively our engineers are on standby to assist with selecting the right camera lens for different applications.



Please contact your TechNexion sales representative to start a discussion on how we can help you.

## FPD-Link III Frame Grabbers

Adding TechNexion FPD-Link III cameras to an existing x86 Intel or AMD based system couldn't be easier by using our full range frame grabber cards.

- Available in 1 / 2 / 4 / 8 port FPD-Link III camera frame grabber configuration
- Fits in a standard PCI Express Gen 3 slot
- Plug-n-Play driver-less UVC based solution
- Complete Fanless design with brushed aluminium thermal solution
- Comes with TechNexion VizionSDK



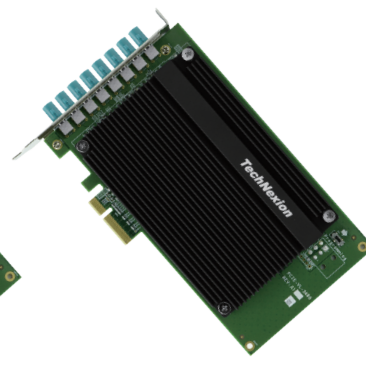
UVC-VL-3100



PCIE-VL-3120



PCIE-VL-3440



PCIE-VL-3480



## Nvidia Orin Fanless AI Computing



x8



- Nvidia Orin Nano / NX Systems
- Up-to 8 FPD-Link III cameras
- Nvidia Jetpack driver integration
- TechNexion VizionSDK

## TRAQ-4VM Robotic AMR Solutions



x8



- TI TDA4VM
- Up-to 8 FPD-Link III cameras
- FPD-Link III Display
- Single Pair Ethernet (SPE) sensor network extension
- Linux / Debian support
- TechNexion VizionSDK

## i.MX8M Plus HMI Solutions



x2



- NXP i.MX8M Plus
- Available as 15" / 15.6" / 21.5" Display solution
- Up-to 2 FPD-Link III cameras
- FPD-Link III remote Display
- Linux / Debian / Android support
- TechNexion VizionSDK

## i.MX8M Plus Edge Computing



x2



- NXP i.MX8M Plus
- Available with By-pass Ethernet solution
- Extensive low-speed I/O availability
  - GPIO / UART / CAN / USB
- Up-to 2 FPD-Link III cameras
- Linux / Debian / Android support
- TechNexion VizionSDK

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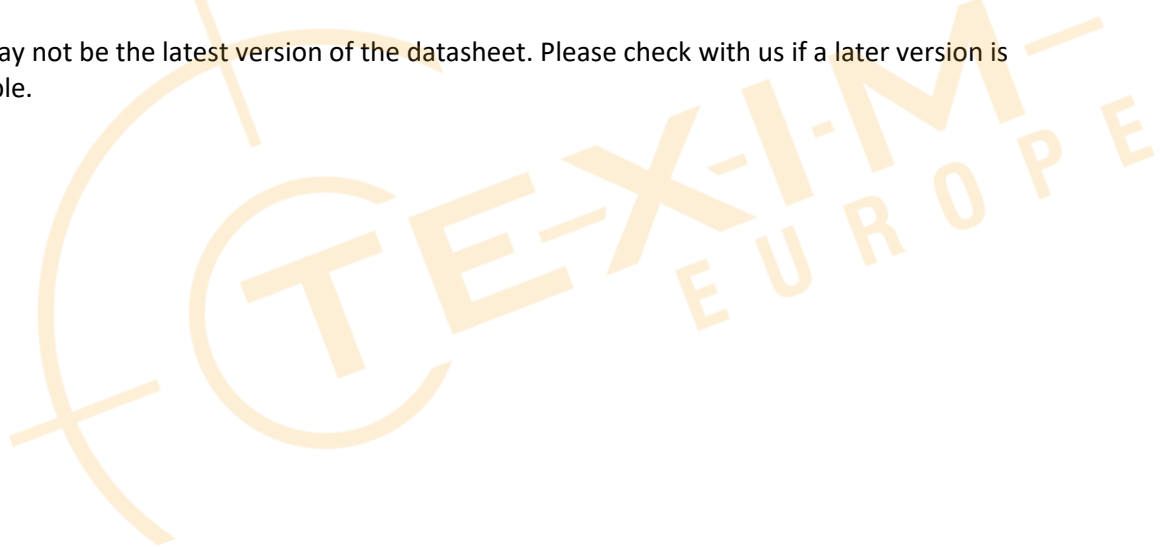
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Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.

Please contact us if you have any questions about the contents of the datasheet.

This may not be the latest version of the datasheet. Please check with us if a later version is available.





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