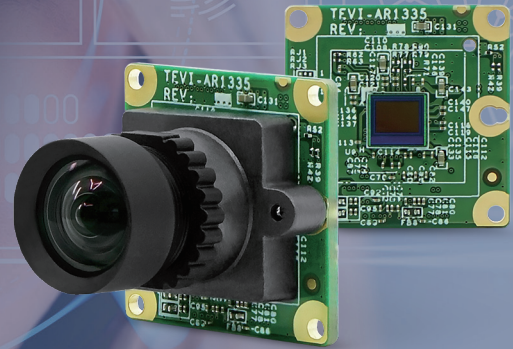


TEVI-AR1335

- onsemi AR1335 13MP rolling shutter camera sensor with ISP.
- Designed for low light and high dynamic range performance.
- Convenient S-Mount (M12) interchangeable lens.
- Driver integration support for :
 - NXP i.MX8 / i.MX9 Family
 - Nvidia Jetson Nano / Xavier NX / Orin
 - TI Sitara™ AM62x / Jacinto™ TDA4 Family
- Comes with VizionViewer™ SDK



Specifications

Camera Information

| | |
|---------------------------|---|
| CMOS Sensor | onsemi AR1335 |
| Active Pixels | 4208 (H) x 3120 (V) = 13MP |
| Pixel Size | 1.1 μm x 1.1 μm |
| Optical Format | 1/3.2" (Diagonal 5.8 mm) |
| Shutter Type | Rolling Shutter |
| Chromaticity | Mono / Color |
| Illuminated type | Back Side Illuminated (BSI) |
| Maximum Frame Rate (UYVY) | 4200 x 3120 @ 10 fps 3840 x 2160 @ 23 fps 2560 x 1440 @ 30 fps 1920 x 1080 @ 30 fps 1280 x 720 @ 30 fps 640 x 480 @ 30 fps |
| Maximum S/N Ratio | 37 dB |
| HDR Support | Yes |
| Input Clock Range | 48 MHz |
| Output Format | UYVY |

Camera Interface

| | |
|--------------------------|--------------------------------------|
| Module Data Transmission | MIPI CSI-2, up to 4 lanes |
| Communication Interface | I ² C |
| Connector | 70 Pin Standardized Camera Connector |

Power

| | |
|-------------------|--|
| Supply Voltage | I/O: 1.8V Analog: 2.8V Digital: 1.15V & 3.3V |
| Power Consumption | 4300 x 3120 @ 10 fps ≤ 622 mW |
| Standby Power | ≤ 33 mW Standby |



Software Support

| | |
|-------------------|--|
| Platform Support | NXP i.MX8M Nano / Mini / Plus NXP i.MX93 TI Sitara™ AM62x / AM62A TI Jacinto™ TDA4VM / TDA4VA / TDA4VH NVIDIA Jetson Nano NVIDIA Xavier NX NVIDIA Orin Nano/NX |
| Operation Systems | Linux Yocto Android |
| SDK | VizionViewer™ SDK |

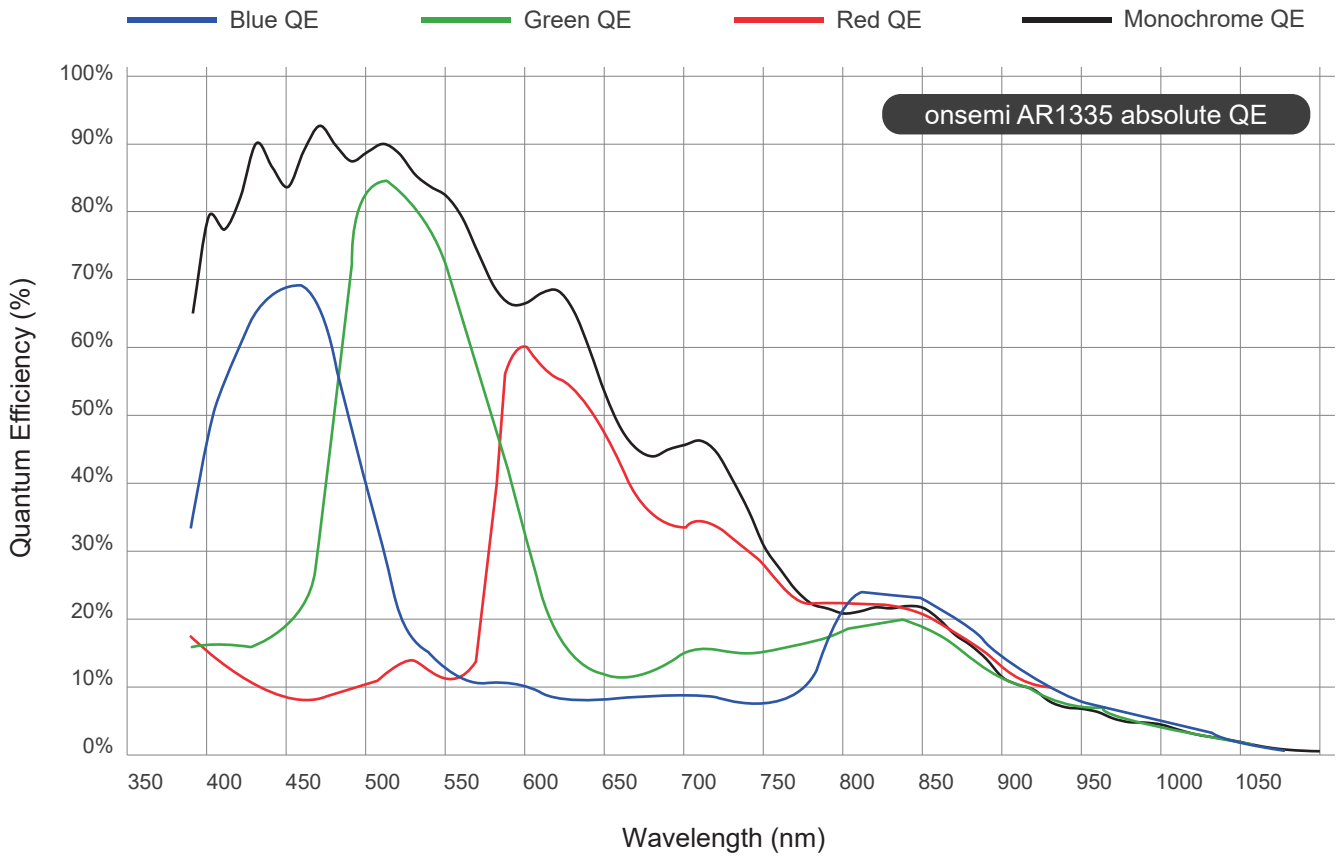
Environmental and Mechanical

| | |
|-----------------------|---------------------------------|
| Dimensions | 24.5(W) x 24.5(H) x 3.495(D) mm |
| Weight | ≤ 3 grams |
| Operating Temperature | -30°C to +70°C |

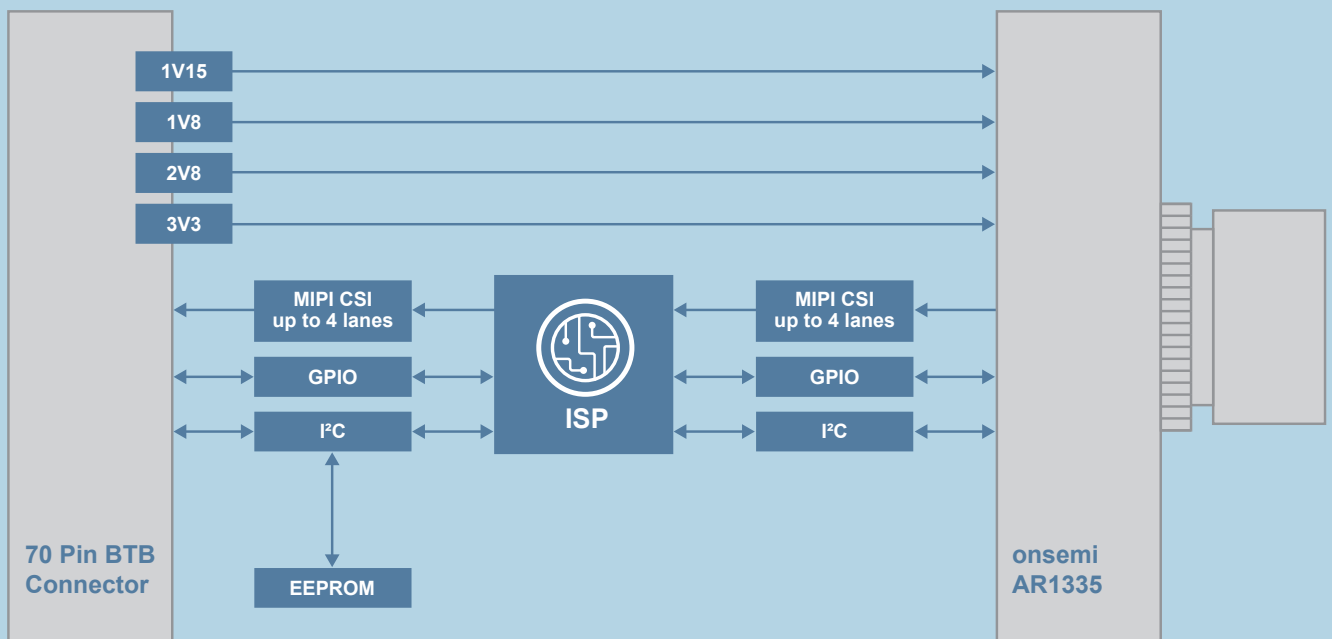
Certification and Compliance

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

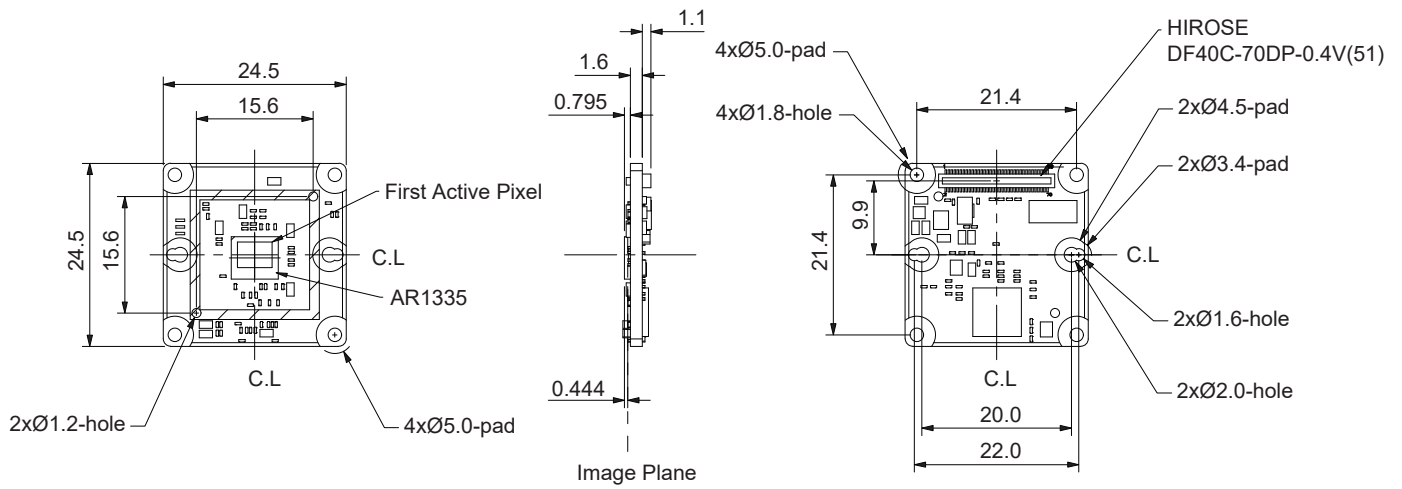
Spectral Characteristics



Block Diagram



Dimensions (units in mm)

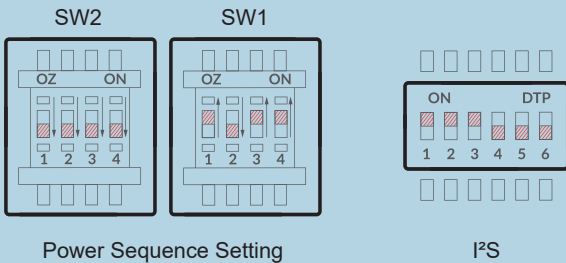


Switch Configuration

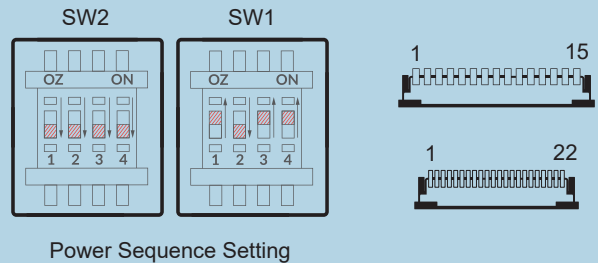
TechNexion EVK

RPI Adapter

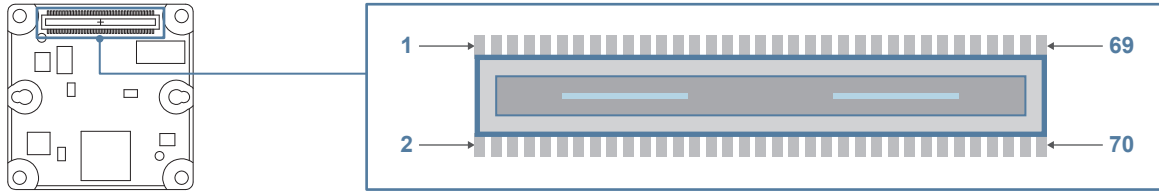
Switch



Switch



Connector Pin Definition



| No. | Pin Define | Level | No. | Pin Define | Level |
|-----|------------|-------|-----|----------------------|-------|
| 01 | 3V3D | 3.3V | 02 | 3V3D | 3.3V |
| 03 | 3V3D | 3.3V | 04 | 3V3D | 3.3V |
| 05 | GND | GND | 06 | GND | GND |
| 07 | NC | | 08 | NC | |
| 09 | GND | GND | 10 | GND | GND |
| 11 | 2V8A | 2.8V | 12 | 2V8A | 2.8V |
| 13 | GND | GND | 14 | GND | GND |
| 15 | 1V8D | 1.8V | 16 | 1V8D | 1.8V |
| 17 | GND | GND | 18 | GND | GND |
| 19 | 1V15D | 1.15V | 20 | 1V15D | 1.15V |
| 21 | GND | GND | 22 | GND | GND |
| 23 | NC | | 24 | NC | |
| 25 | NC | | 26 | NC | |
| 27 | NC | | 28 | NC | |
| 29 | NC | | 30 | NC | |
| 31 | NC | | 32 | NC | |
| 33 | NC | | 34 | NC | |
| 35 | GND | GND | 36 | GND | GND |
| 37 | H_CAM_DN0 | 1.8V | 38 | NC | |
| 39 | H_CAM_DP0 | 1.8V | 40 | CSI_nRST | 1.8V |
| 41 | GND | GND | 42 | GND | GND |
| 43 | H_CAM_DN1 | 1.8V | 44 | STANDBY | 1.8V |
| 45 | H_CAM_DP1 | 1.8V | 46 | NC | |
| 47 | GND | GND | 48 | GND | GND |
| 49 | H_CAM_DN2 | 1.8V | 50 | CAM_SHUTDOWN | 1.8V |
| 51 | H_CAM_DP2 | 1.8V | 52 | NC | |
| 53 | GND | GND | 54 | GND | GND |
| 55 | H_CAM_DN3 | 1.8V | 56 | I ² C_SCL | 1.8V |
| 57 | H_CAM_DP3 | 1.8V | 58 | I ² C_SDA | 1.8V |
| 59 | GND | GND | 60 | GND | GND |
| 61 | H_CAM_CKN | 1.8V | 62 | NC | |
| 63 | H_CAM_CKP | 1.8V | 64 | NC | |
| 65 | GND | GND | 66 | NC | |
| 67 | NC | | 68 | NC | |
| 69 | GND | GND | 70 | GND | GND |

Lenses

Lens Information

| | |
|----------------------------|------------------|
| Focus Type | Fixed Focus |
| Focal Length | 3.2 mm |
| Aperture | F2.4 |
| Lens D-FOV | 91.0° |
| Lens H-FOV | 82.0° |
| Lens V-FOV | 51.4° |
| Module D-FOV | 84.6° ± 5% |
| Module H-FOV | 70.3° ± 5% |
| Module V-FOV | 55.2° ± 5% |
| TTL | 22 mm |
| BFL | 3.4 mm |
| MOD | 0.3 m |
| Distortion | <3.9% |
| IR-Filter | 650 nm |
| Lens Operating Temperature | - 20°C to + 60°C |

Order Information

TEVI-AR1335-x-Sxx-xx-xxx

Part Number Rules

| Option | Code | Description |
|----------------|-------|---|
| Chromaticity | C | Color |
| | M | Monochrome |
| Lens | - | - |
| | S85 | S-Mount Module D-FOV 85° |
| Filter | - | - |
| | IR | IR Cut Filter 650nm |
| Evaluation Kit | - | 70 pin Standardized Camera Connector |
| | EVK | 70 pin Standardized Camera Connector with FPC cable |
| | RPI15 | 15 pin Standardized ZIF Connector with FFC cable |
| | RPI22 | 22 pin Standardized ZIF Connector with FFC cable |
| | NXP | Mini-SAS connection cable for NXP Evaluation Board |

For further customization or questions about orders, contact your TechNexion sales representative.

TEVI-AR1335-x-Sxx-IR-EVK

onsemi AR1335 13MP rolling shutter with ISP camera module + S-Mount (M12) lens with IR-cut filter + FPC connection cable for TechNexion SOM EVK



Package Content

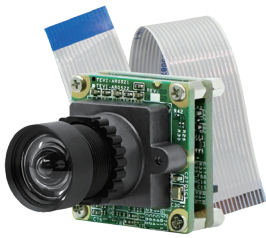
- TEVI-AR1335
- S-Mount lens
- 20cm flexible PCB for TechNexion EVK

TechNexion



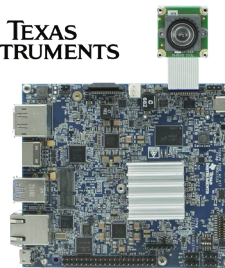
TEVI-AR1335-x-Sxx-IR-RPI15

onsemi AR1335 13MP rolling shutter with ISP camera module + S-Mount (M12) lens with IR-cut filter + RPI 15 Pin converter and FFC

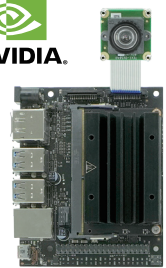


Package Content

- TEVI-AR1335
- S-Mount lens
- RPI 15 Pin compatible converter PCB
- 20cm 15 Pin FPC cable



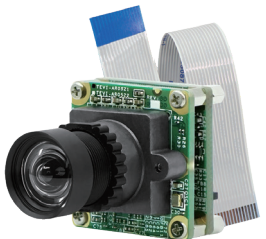
SK-TDA4VM



JETSON NANO
XAVIER NX

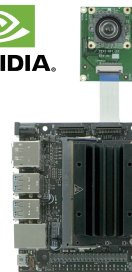
TEVI-AR1335-x-Sxx-IR-RPI22

onsemi AR1335 13MP rolling shutter with ISP camera module + S-Mount (M12) lens with IR-cut filter + RPI 22 Pin converter and FFC

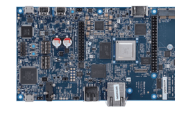


Package Content

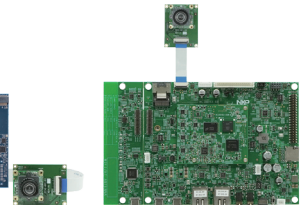
- TEVI-AR1335
- S-Mount lens
- RPI 22 Pin compatible converter PCB
- 10cm 22 Pin FPC cable



ORIN NANO
ORIN NX



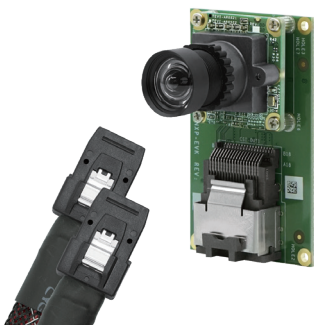
SK-AM62A



NXP i.MX93 EVK

TEVI-AR1335-x-Sxx-IR-NXP

onsemi AR1335 13MP rolling shutter with ISP camera module + S-Mount (M12) lens with IR-cut filter + Mini-SAS Connection Cable for NXP i.MX8 Evaluation Board



Package Content

- TEVI-AR1335
- S-Mount lens
- 20cm Mini-SAS cable for NXP i.MX8 Family EVK



- NXP i.MX8M NANO EVK
- NXP i.MX8M MINI EVK
- NXP i.MX8M PLUS EVK

