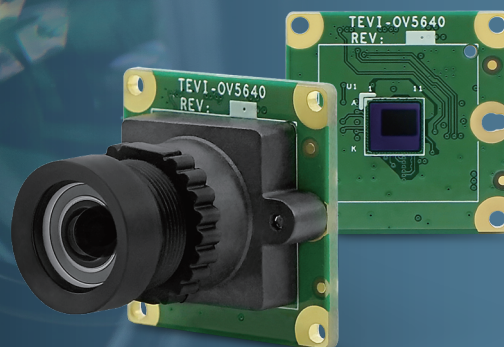


TEVI-OV5640

- OmniVision OV5640 5MP rolling shutter image sensor with ISP for advanced vision embedded applications.
- Convenient S-Mount (M12) interchangeable lens.
- Compatible with NXP i.MX8 family and Nvidia Jetson Nano/ Xavier NX/ Orin NX/Raspberry PI4, evaluation kits available.



Specifications

Camera Information

CMOS Sensor	OmniVision OV5640
Active Pixels	2592 (H) x 1944 (V) = 5 Mp
Pixel Size	1.4 μm x 1.4 μm
Optical Format	1/4" (Diagonal 4.6 mm)
Shutter Type	Rolling Shutter
Chromaticity	Color
Maximum Frame Rate (Sensor)*	5 Mp Full Resolution:15fps 1080p:30 fps 1280 x 960:45fps 720P:60 fps VGA:90 fps
Maximum S/N Ratio	36 dB
Dynamic Range	68 dB @ 8x gain
Input Clock Range	6 - 27 MHz (Default 24 MHz)
Output Format	YUV422, YUV420, 565RGB, 555RGB, 444RGB, RAW RGB and Compressin

* The number of the calculated FPS is according to the result of testing the sensor based on ISP from the Host. The actual measured value may vary from different types of data link.

Lens - S-Mount

Focus Type	Fixed Focus
Focal Length	3.2 mm
Aperture	F2.4
D-FOV	84°
H-FOV	75°
V-FOV	58°
TTL	20 mm
MOD	0.3 m
IR-Filter	650 nm

Camera Interface

Data Transmission	MIPI CSI-2, up to 2 lanes
Communication Interface	I ² C
Connector	70 Pin Standardized Camera Connector
Connector type	HRS DF40C-70DP-0.4V(51)

ISP

ISP Functions	Automatic 50/60 Hz Luminance Detection Automatic Band Filter (ABF) Automatic Black Level Calibration Auto Exposure Auto Gain Auto White Balance Color Calibration Gamma
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Power

Supply Voltage	Analog: 2.8V I/O: 1.8V Digital: 1.15V
Power Consumption	≈0.81 W

Support

Platform	NXP i.MX8 Series Technexion EDM/AXON i.MX8 Series Technexion TEK Jetson/i.MX8 Series NVIDIA Jetson Nano NVIDIA Jetson Xavier NX NVIDIA Jetson Orin NX Raspberry PI 4
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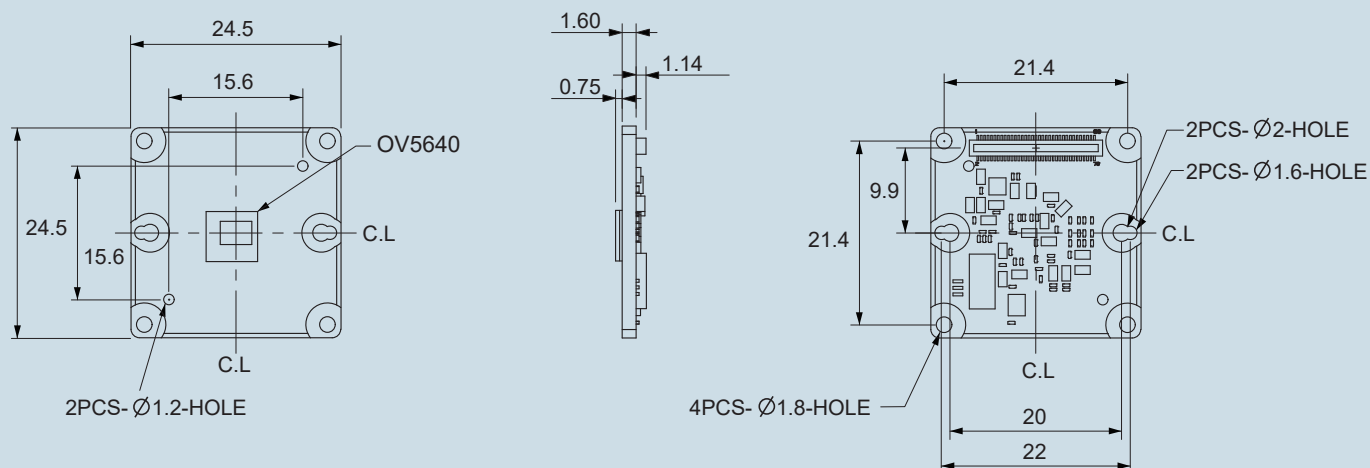
Other

L x W x H	24.5 (W) x 24.5 (H) x 3.49 (D) mm
Weight	≤ 3 grams
Operating Temperature	-30°C to +70°C (Module Ambient Temperature)

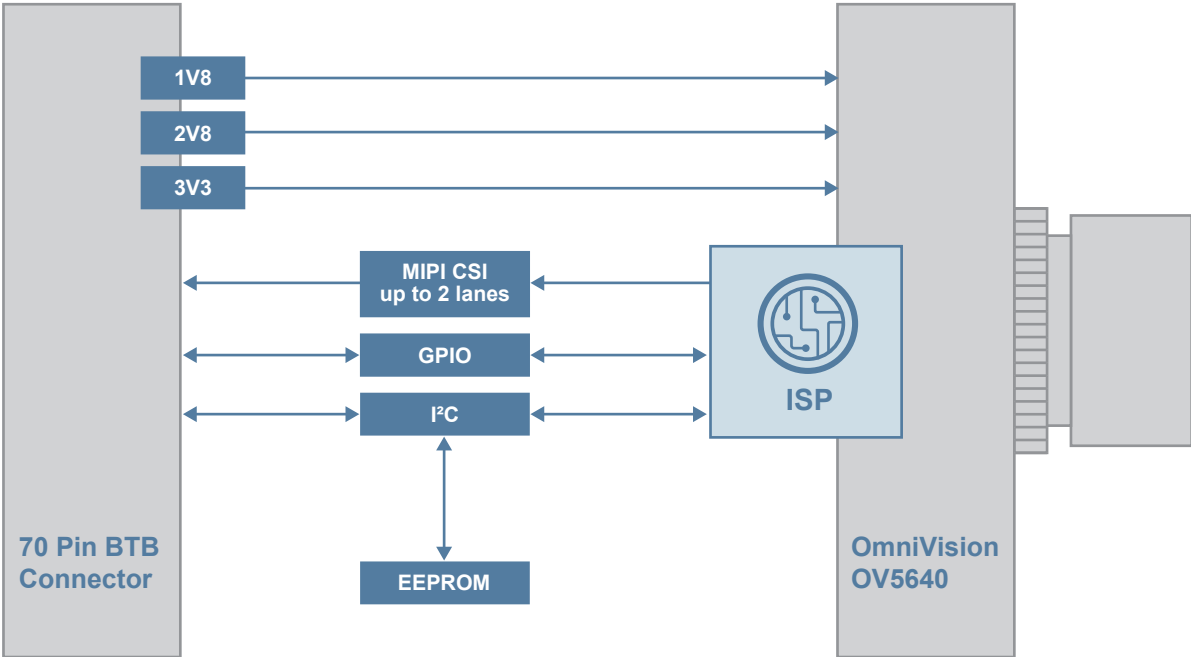
Certification and Compliance

Certification	Compliant with CE / FCC / RoHS / REACH directives
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Dimensions (units in mm)



Block Diagram

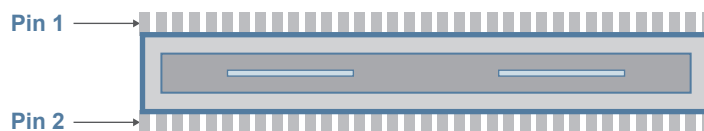


Order Information

TEVI-OV5640x-xxx-xx-xxx

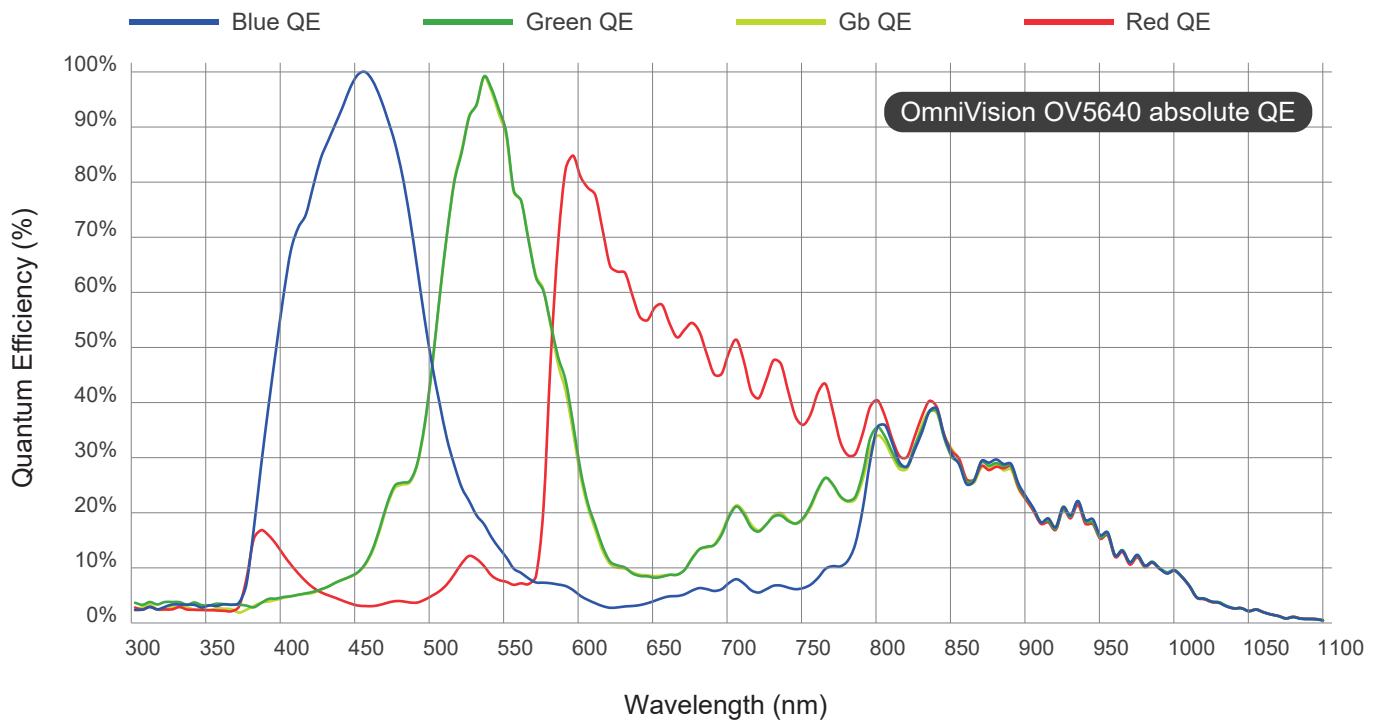
	Code	Description
Chromaticity	C	Color
	M	Mono
Lens	-	-
	S84	S-Mount D-FOV 84°
Filter	-	-
	IR	IR Cut 650 nm
Evaluation Kit	-	70 pin Standardized Camera Connector
	EVK	70 pin Standardized Camera Connector with FPC cable
	RPI	15 pin Standardized ZIF Connector with FFC cable
	NXP	Mini-SAS connection cable for NXP Evaluation Board

Connector Pin Definition



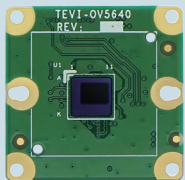
No.	Pin Define	Level	No.	Pin Define	Level
01	3V3D	3.3V	2	3V3D	3.3V
03	3V3D	3.3V	4	3V3D	3.3V
05	GND	GND	6	GND	GND
07	NC		8	NC	
09	GND	GND	10	GND	GND
11	2V8A	2.8V	12	2V8A	2.8V
13	GND	GND	14	GND	GND
15	1V8D	1.8V	16	1V8D	1.8V
17	GND	GND	18	GND	GND
19	NC		20	NC	
21	GND	GND	22	GND	GND
23	NC		24	NC	
25	NC		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	CSI_CAM_DN0	1.8V	38	NC	
39	CSI_CAM_DP0	1.8V	40	CSI_P1_nRST	1.8V
41	GND	GND	42	GND	GND
43	CSI_CAM_DN1	1.8V	44	EXPOSURE_TRIG_IN	1.8V
45	CSI_CAM_DP1	1.8V	46	NC	
47	GND	GND	48	GND	GND
49	NC		50	CAM PWDNB	1.8V
51	NC		52	NC	
53	GND	GND	54	GND	GND
55	NC		56	CAM_SCL	1.8V
57	NC		58	CAM_SDA	1.8V
59	GND	GND	60	GND	GND
61	CSI_CAM_CKN	1.8V	62	NC	
63	CSI_CAM_CKP	1.8V	64	NC	
65	GND	GND	66	NC	
67	NC		68	NC	
69	GND	GND	70	GND	GND

Spectral Characteristics



TEVI-OV5640

OmniVision OV5640 5MP rolling shutter with ISP camera module

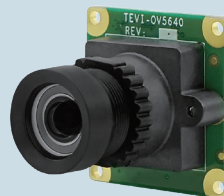


Package Content

- Camera sensor with OmniVision OV5640
- Integrated Image Signal Processor (ISP)

TEVI-OV5640-S84-IR

OmniVision OV5640 5MP rolling shutter with ISP camera module + 84° S-Mount (M12) lens with IR-cut filter

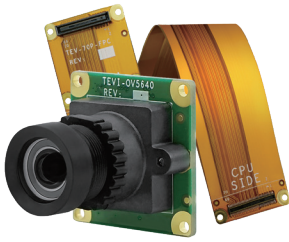


Package Content

- Camera sensor with OmniVision OV5640
- Integrated Image Signal Processor (ISP)
- S-Mount Holder with diagonal FOV 84° lens

TEVI-OV5640-S84-IR-EVK

OmniVision OV5640 5MP rolling shutter with ISP camera module + 84° S-Mount (M12) lens with IR-cut filter + FPC connection cable for TechNexion SOM EVK

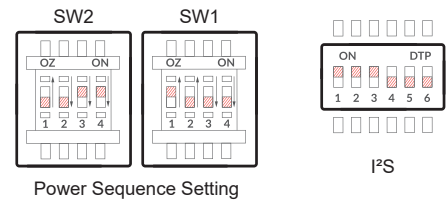


Package Content

- TEVI-OV5640
- S-Mount Holder with diagonal FOV 84° lens
- 20cm flexible PCB to connect to TechNexion Evaluation Kits

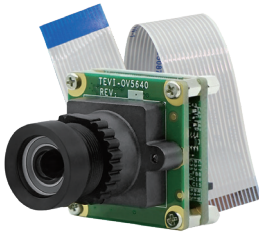
On TechNexion EVK Board

Switch



TEVI-OV5640-S84-IR-RPI

OmniVision OV5640 5MP rolling shutter with ISP camera module + 84° S-Mount (M12) lens with IR-cut filter + RPi 15 PIN converter and FFC

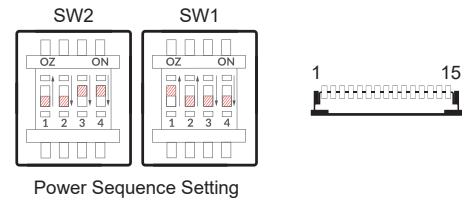


Package Content

- TEVI-OV5640
- S-Mount Holder with diagonal FOV 84° lens
- RPi 15 Pin compatible converter PCB
- 20cm 15 Pin FPC cable
- Hardware compatible with Nvidia Jetson Family

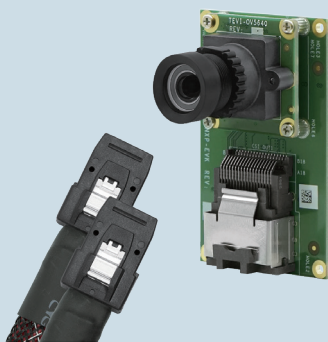
RPI Adapter

Switch



TEVI-OV5640-S84-IR-NXP

OmniVision OV5640 5MP rolling shutter with ISP camera module + 84° S-Mount (M12) lens with IR-cut filter + Mini-SAS Connection Cable for NXP I.MX8 Evaluation Board



Package Content

- TEVI-OV5640
- S-Mount Holder with diagonal FOV 84° lens
- 20cm Mini-SAS cable to connect to NXP I.MX8 Family Evaluation Board

For more details, check TechNexion Embedded Vision products.
www.technexion.com/products/embedded-vision/

