

D3RCM-OV10640+OV490 RUGGED CAMERA MODULE



**Rugged camera module
with internal ISP for
performance-critical
embedded vision.**

Ruggedized, fully-enclosed assembly suits automotive, industrial applications

This Rugged Camera Module is designed for automotive and performance-critical industrial applications. It has superior thermal characteristics and was designed to withstand harsh environmental conditions.

The digital video stream, control data, and power are carried by coaxial cable between the camera module and vehicle/system electronic control unit (ECU). The lens and electronic components are housed in a rugged enclosure with integrated FAKRA connector for connection to the ECU wire harness.

FEATURES

OmniVision OV10640 image sensor with OV490 ISP

FPD-Link III serializer

Very small size
(20.5 x 20.5 x 21.5 mm)

Ultra-lightweight
(<10 g excluding lens)

Excellent thermal management

Perfect camera axis alignment

Power over coax (PoC) with
multiplexed video stream and
control channel

Internal MCU for camera
initialization

APPLICATIONS

Automotive Advanced Driver
Assistance Systems (ADAS)

Mirror replacement

Industrial autonomous
vehicles

Unattended surveillance

Process automation

Machine vision

SPECIFICATIONS

Sensor	OmniVision® OV10640
Optical Format	1/2.56 inch
Resolution	1280 x 1080
Pixel Size	4.2 x 4.2 µm
Data Output Format	12b RAW, 12b YUV, 10b YUV
Maximum Readout	12b RAW – 1280x1080 – 44fps – 72MHz 12b YUV – 1280x1080 – 22fps – 72MHz 12b YUV – 1280x800 – 30fps – 72MHz 10b YUV – 1280x1080 – 30fps – 96MHz (default)
Imager ISP	OV490
Serializer	FPD-Link III DS90UB913A
Device Comms Addresses	Serializer (DS90UB913A): 0xB4 ISP (OV490): 0x48
Connector	FAKRA Straight Plug Connector Interface Code – Z
Operating Voltage	+5V to +12 V (+5V typical)
Power consumption	<1.5 W at maximum data rate
Operating temperature	-40°C to 85°C
Storage temperature	-40°C to 105°C
Additional Features	External frame synchronization External reset

LENS SPECIFICATIONS

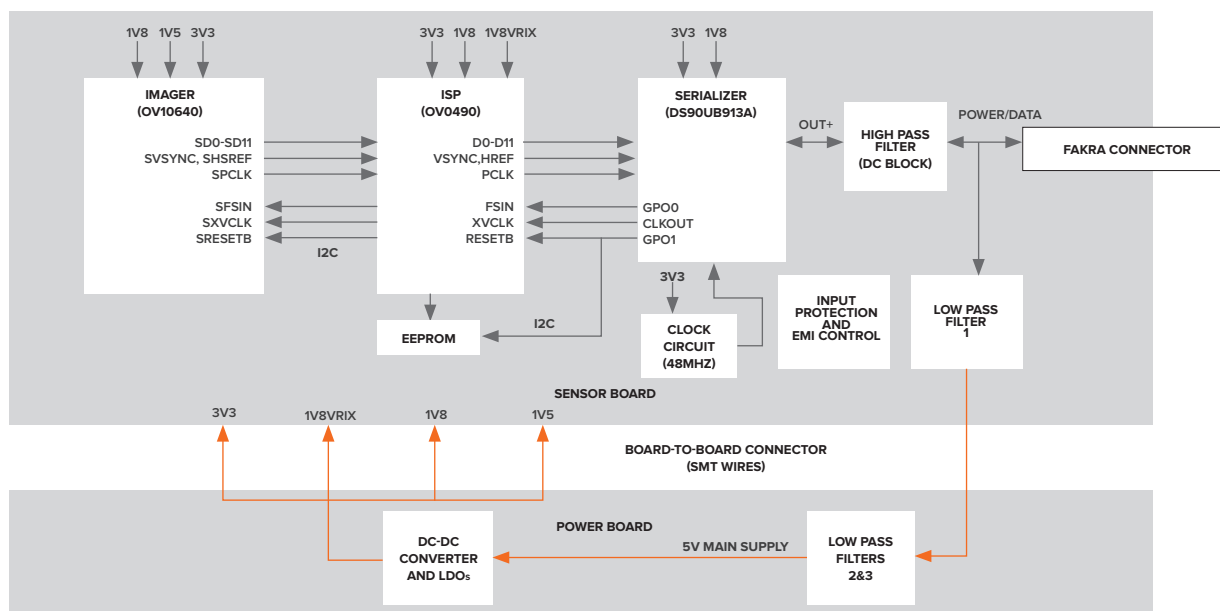
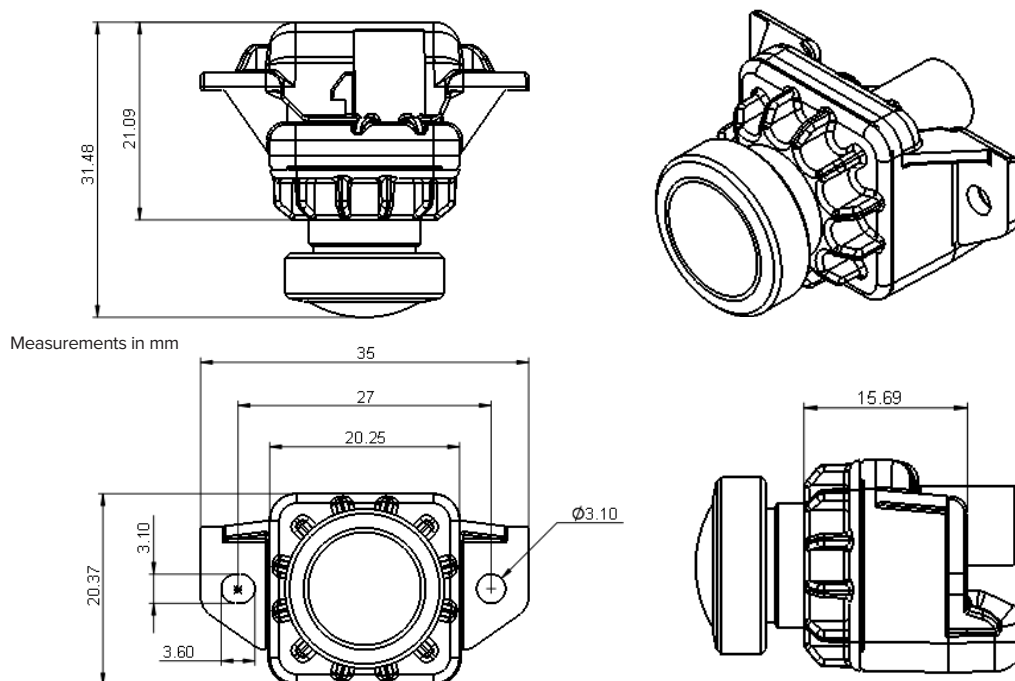
Lens	Sunex DSL267	Sunny 4083
Field of View (FOV)	194.6° horizontal	52° horizontal
Lens Aperture (F#)	2.2	1.6
Focal Length	1.39 mm	6.14 mm

DesignCore™ Platforms supported:

RVP-TDA2x Development Kit

RVP-TDA3x Development Kit

5-Channel FPD-Link III HSMC (w/Intel Cyclone V SoC Kit)



NEXT STEPS

After evaluation, D3 Engineering can customize Camera Modules to meet your OEM/ODM requirements. We develop custom ISP and software drivers, add local power or autofocus, design to your environmental specifications or standards, and more. We support your product with advanced manufacturing in the USA or offshore, in volumes from 10 to 10 million.

ACCELERATE TIME TO MARKET

D3 Engineering speeds embedded system development with our proven DesignCore™ camera modules and full-cycle embedded product development services. Our expertise in imaging system design will help you get to market faster, while reducing the risks and costs of new product development.

ORDERING INFORMATION

SKU 1000498 | 194.6° FOV (wide angle)

SKU 1000592 | 52° FOV (narrow angle)

Buy online at <https://d3engineering.com/store>

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VISIT: D3Engineering.com