



INTERNAL ISP

**OV10640 camera module
with internal OV490 ISP
for performance-critical
embedded vision**

Ruggedized, fully-enclosed 1.3 MP FPD-Link™ III camera suits automotive and 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

DS90UB913 FPD-Link™ III serializer

Very small size

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

DesignCore™ Platforms supported:

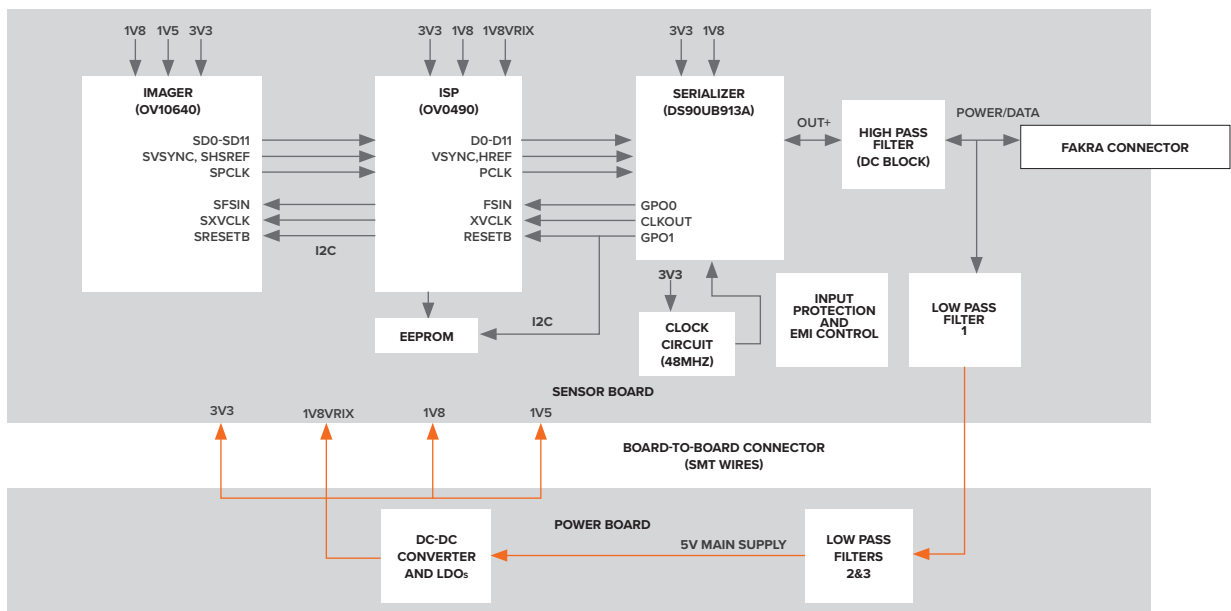
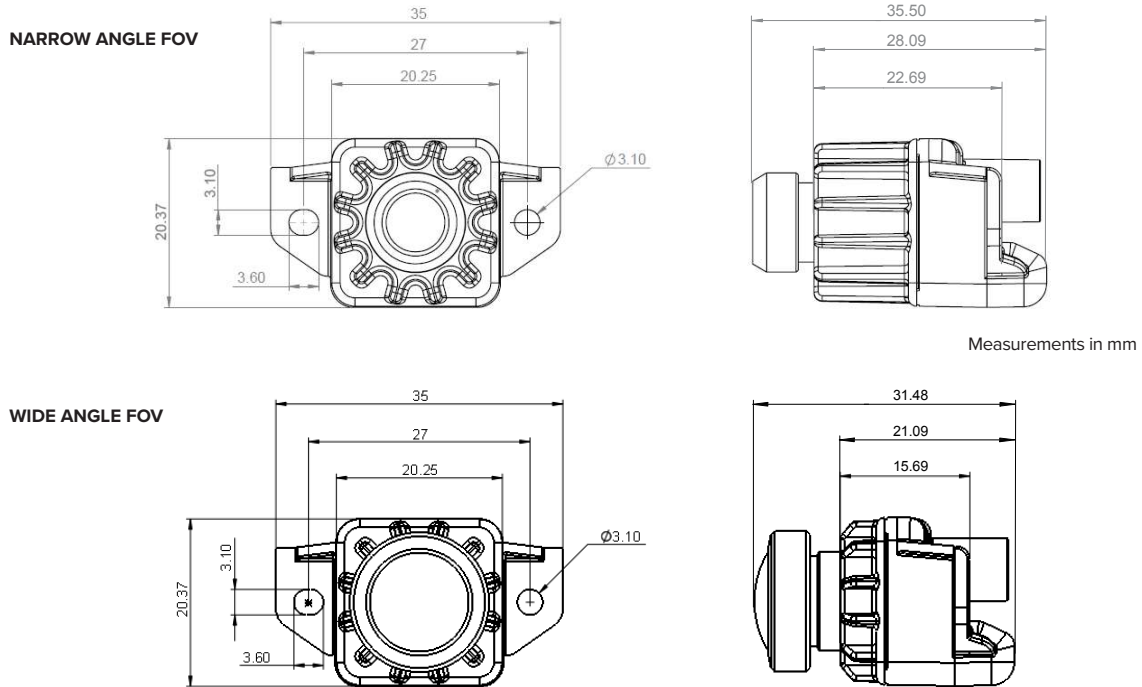
DesignCore™ platforms with Intel®, NVIDIA®, and Texas Instruments® processors and SoCs. Visit d3engineering.com/store for a complete list of supported platforms for this camera module. Customized processor solutions available.

SPECIFICATIONS

Sensor	OmniVision® OV10640
Optical Format	1/2.56 inch
Resolution	1280 × 1080
Pixel Size	4.2 × 4.2 μm
Data Output Format	12b RAW, 12b YUV, 10b YUV
Maximum Readout	12b RAW – 1280 × 1080 – 44 fps – 72 MHz 12b YUV – 1280 × 1080 – 22 fps – 72 MHz 12b YUV – 1280 × 800 – 30 fps – 72 MHz 10b YUV – 1280 × 1080 – 30 fps – 96 MHz (default)
Imager ISP	OmniVision® OV490
Serializer	FPD-Link™ III DS90UB913A
Device Comms Addresses	Serializer (DS90UB913A): 0x58 (7b) ISP (OV490): 0x24 (7b)
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

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



NEXT STEPS

Purchase samples online and contact us for volume pricing. We can support integration of D3 Camera Modules into your end product with services including custom ISP tuning, software drivers, and verification support. We can also help you speed embedded vision system development with our proven DesignCore™ vision processor platforms and full-cycle embedded product development services.

ACCELERATE TIME TO MARKET

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