

DESIGNCORE™

D3RCM-IMX290-953 RUGGED CAMERA MODULE



IMX290 camera module
for performance-critical
embedded vision

Ruggedized, fully-enclosed 2.1MP 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

SONY® IMX290 image sensor

DS90UB953 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

APPLICATIONS

Automotive Driver Assistance Systems (ADAS)

Mirror replacement

Industrial autonomous vehicles

Unattended surveillance

Process automation

Machine vision

SPECIFICATIONS

Sensor	SONY® IMX290
Optical Format	1/2.8 inch
Resolution	1920 × 1080
Pixel Size	2.9 × 2.9 μm
Data Output Format	10/12-bit RAW Multi-exposure WDR 2 and 3 frame DOL WDR
Maximum Readout	10b – 1920 × 1080 – 120 fps 12b – 1920 × 1080 – 60 fps 10b – 1920 × 1080 – 60 fps – 2 frame DOL 10b – 1920 × 1080 – 30 fps – 3 frame DOL
Imager ISP	External
Serializer	FPD-Link™ III DS90UB953A
Device Comms Addresses	Serializer (DS90UB953): 0x18 (7b) Sensor (IMX290): 0x1A (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

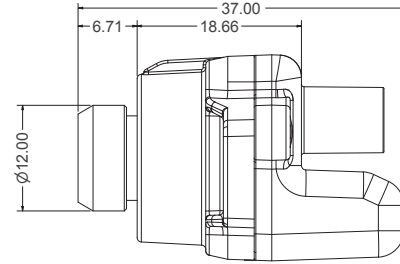
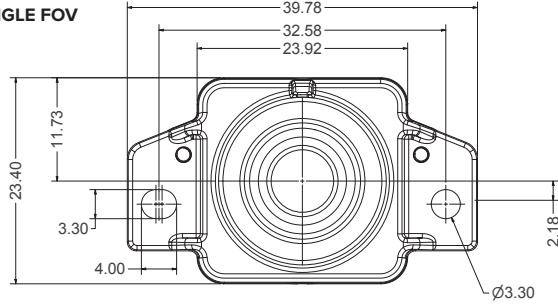
LENS SPECIFICATIONS

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

DesignCore™ Platforms supported:

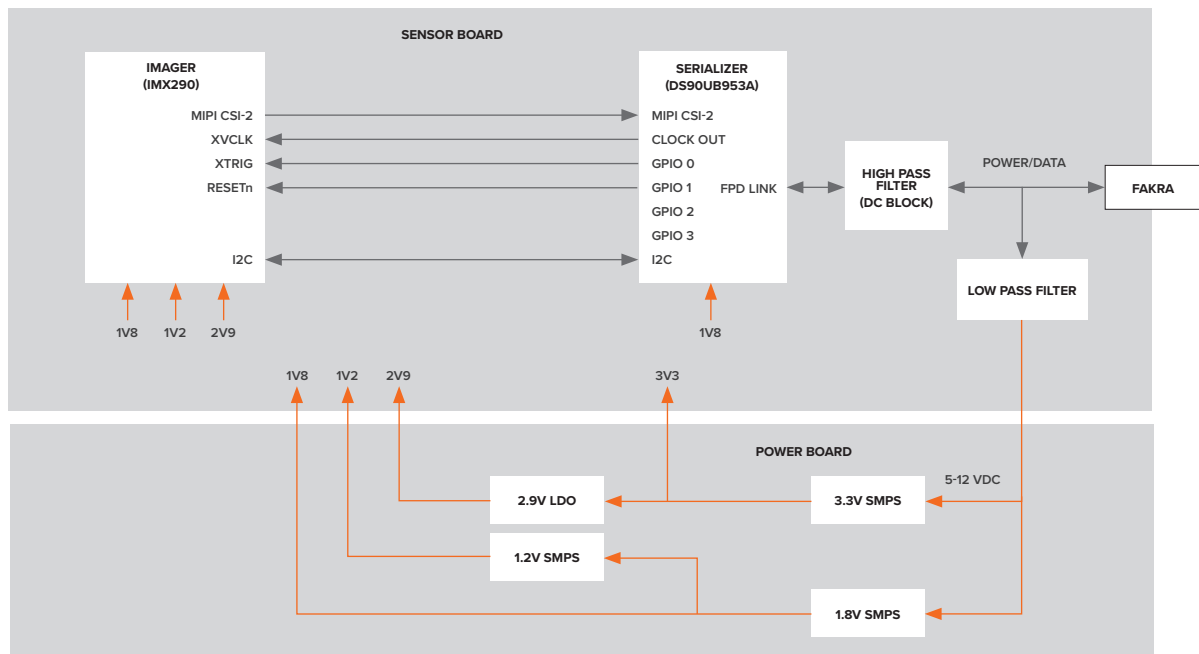
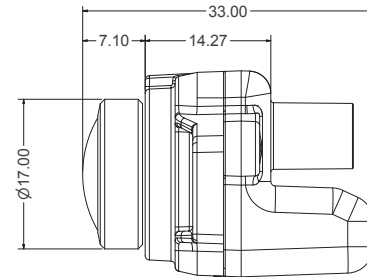
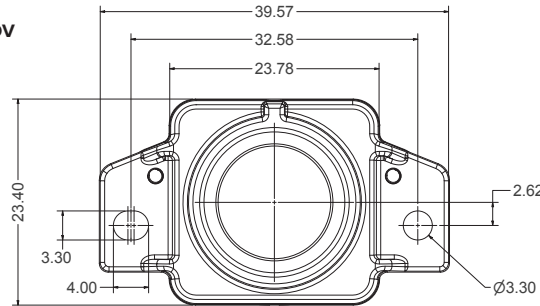
DesignCore™ platforms with Intel®, NVIDIA®, and Texas Instruments® processors and SoCs. Visit d3engineering.com/store for a complete list of supported platforms for this camera module. Customized processor solutions available.

NARROW ANGLE FOV



Measurements in mm

WIDE ANGLE FOV



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 1000664 | 194.6° FOV (wide angle)
 SKU 1000665 | 52° FOV (narrow angle)
 Buy online at <https://d3engineering.com/store>

CALL: 585-429-1550

EMAIL: sales@D3Engineering.com

VISIT: D3Engineering.com