

# DESIGNCORE® VELOCITY PRO SERIES

## FEATURING THE AR0234 SENSOR



Pre-configured rugged camera modules for demanding embedded vision applications designed for rapid prototyping and scalable OEM/ODM customization

### Supported Processor Platforms:



## Stop motion dead in its tracks with the DesignCore® Velocity PRO AR0234.

Featuring the next generation of rugged camera modules from [D3](#):

Re**Defined** image science tuning optimized for AI out-of-the-box.

Re**Designed** optics that maximize your signal with higher resolving power and wider apertures.

Re**Deployed** on the industry's latest NVIDIA, Texas Instruments, and Intel platforms.

- ✓ Global Shutter
- ✓ High-Speed Frame Rates
- ✓ Proven Sensor Design
- ✓ IP67 Ingress Protection
- ✓ Premium Lenses
- ✓ Lens-Specific Image Science Tuning
- ✓ Designed For for Multi-Camera Systems

## APPLICATIONS

### AUTONOMOUS VEHICLE AND ROBOTICS

<b>SAFETY</b>	Wide 180° HFOV camera to cover blind spots.
<b>NAVIGATION</b>	Medium 100° HFOV cameras for surround view.
<b>IDENTIFICATION</b>	Narrow 60° HFOV camera to read QR codes or AprilTags.
<b>ORIENTATION</b>	Combine any camera with a D3 radar sensor, or use a pre-configured fusion module, to access full 3D resolution.

### INDUSTRIAL IOT AND MACHINE VISION

<b>SAFETY</b>	Wide 180° HFOV camera to direct foot traffic.
<b>NAVIGATION</b>	Medium 100° HFOV cameras for gesture control.
<b>IDENTIFICATION</b>	Narrow 60° HFOV camera to classify items on a checkout or assembly line.
<b>ORIENTATION</b>	Combine any camera with a D3 radar sensor, or use a pre-configured fusion module, to access full 3D resolution.

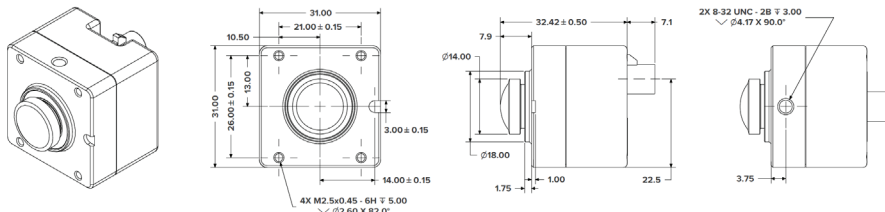
## SPECIFICATIONS

Series	DesignCore® Velocity PRO
Sensor	Onsemi AR0234
Maximum Resolution	1920 x 1080 (HD)
Pixel Pitch	3.0 x 3.0 μm
Bit Depth	10-bit
Shutter	Global
Maximum Frame Rates	1920x1080 (HD) @ 60 FPS 1280x720 (HD) @ 120 FPS
Spectrum	Color (RGB)
Nominal Operating Voltage	12V
Operating Temperature Range [Celsius]	-40 to 85 °C
Operating Temperature Range [Fahrenheit]	-40 to 185 °F
Seal Rating	IP67
Connector	FAKRA Straight Plug, Code – Z (Fits All) Intel MIPI CSI Flat-Flex Cable
Serial Interfaces	FPDLink™ III, GMSL2, MIPI CSI-2
Pre-Configured Software Drivers and Image Tuning	Download From D3 After Purchase

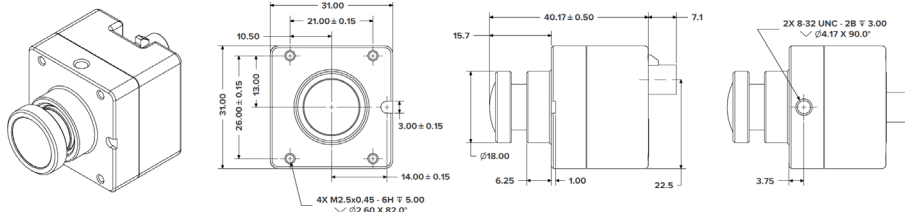
## LENS SPECIFICATIONS

	Wide	Medium	Narrow
Focal Length	1.83mm	2.80mm	5.05mm
Aperture	F/2.3	F/2.8	F/2.6
Horizontal Field of View (HFOV)	180°	98°	65°
Vertical Field of View (VFOV)	101°	62°	37°
Diagonal Field of View (DFOV)	207°	107°	75°
Operating Focal Range [cm]	14 - ∞ cm	27 - ∞ cm	115 - ∞ cm
Operating Focal Range [in]	6 - ∞ in	11 - ∞ in	45 - ∞ in
IR Cut Edge	650nm	660nm	650nm
Full Fill	Yes	Yes	Yes
Mounting	Integral M12	Integral M12	Integral M12

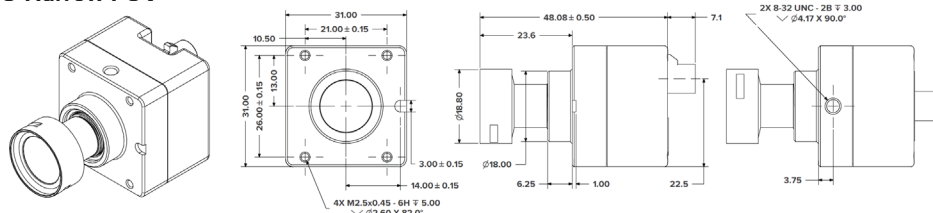
## AR0234 PRO Wide FOV



## AR0234 PRO Medium FOV



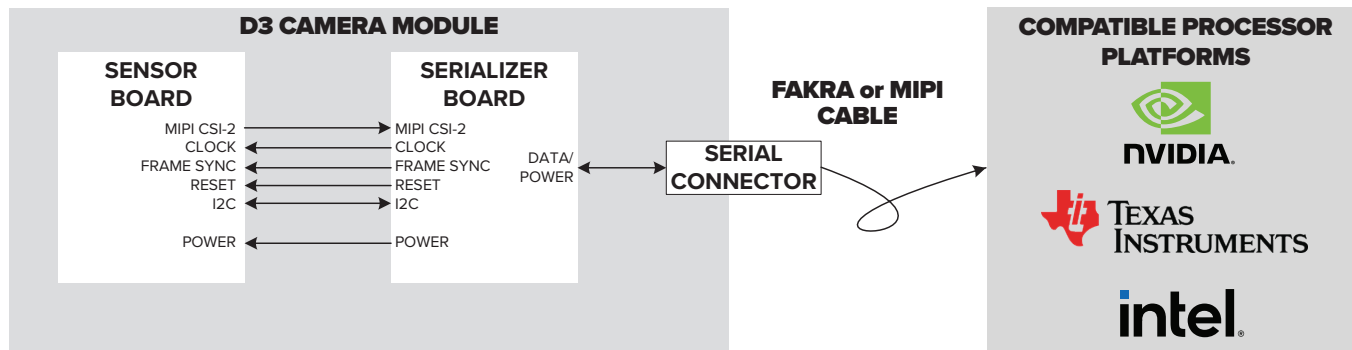
## AR0234 PRO Narrow FOV



3D models available upon request

Measurements in mm

## DEVELOP YOUR EMBEDDED VISION SYSTEM WITH D3 CAMERAS AND PLATFORMS



## ACCELERATE TIME TO MARKET WITH THE D3 PRODUCT DEVELOPMENT PROCESS

**DEFINE:** Enable off-the-shelf cameras with software pre-configured on D3's compatible NVIDIA, Texas Instruments, and Intel processor platforms to quickly find the vision system that best suits your application.

**DESIGN:** Work with our design services team to customize off-the-shelf cameras for your use case and volume production requirements.

**DEPLOY:** Leverage D3's dependable capabilities as an American original design manufacturer to deploy your product faster than the competition.

*When the possibilities are endless, D3 makes the best solution possible.*

Proud to Collaborate with Our Sensor Partner:



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## ORDERING INFORMATION

DesignCore® Velocity PRO Series

Buy online and request volume pricing through our camera selection tool:

[D3Engineering.com/product-category/camera-modules](https://D3Engineering.com/product-category/camera-modules)

## SKUs

- D3CMC70N-089-085-S
- D3CMC52N-089-085-S
- D3CMC67N-089-085-S
- D3CMC70N-089-084-S
- D3CMC52N-089-084-S
- D3CMC67N-089-084-S



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