

DESIGNCORE® VELOCITY SERIES

FEATURING THE AR0234 SENSOR



Pre-configured 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 AR0234.

Featuring the next generation of 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
- ✓ Designed For Multi-Camera Systems

Upgrade to Pro for uncompromised image quality and ingress protection (IP67 rated).

APPLICATIONS

AUTONOMOUS VEHICLE AND ROBOTICS

| | |
|-----------------------|---|
| SAFETY | Wide 180° HFOV camera to cover blind spots. |
| NAVIGATION | Medium 97° HFOV cameras for surround view. |
| IDENTIFICATION | Narrow 55° HFOV camera to read QR codes or AprilTags. |
| ORIENTATION | 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

| | |
|-----------------------|---|
| SAFETY | Wide 180° HFOV camera to direct foot traffic. |
| NAVIGATION | Medium 97° HFOV cameras for gesture recognition. |
| IDENTIFICATION | Narrow 55° HFOV camera to classify items on a checkout or assembly line. |
| ORIENTATION | Combine any camera with a D3 radar sensor, or use a pre-configured fusion module, to access full 3D resolution. |

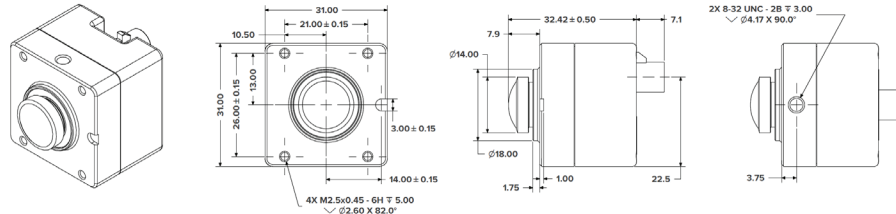
SPECIFICATIONS

| | |
|--|--|
| Series | DesignCore® Velocity |
| 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 | Unsealed |
| 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 |

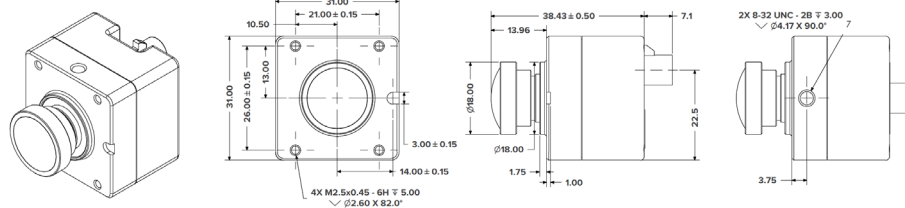
LENS SPECIFICATIONS

| | Wide | Medium | Narrow |
|---------------------------------|--------------|--------------|--------------|
| Focal Length | 1.83mm | 2.80mm | 6.00mm |
| Aperture | F/2.3 | F/2.6 | F/2.8 |
| Horizontal Field of View (HFOV) | 180° | 97° | 55° |
| Vertical Field of View (VFOV) | 101° | 64° | 31° |
| Diagonal Field of View (DFOV) | 207° | 105° | 62° |
| Operating Focal Range [cm] | 14 - ∞ cm | 27 - ∞ cm | 115 - ∞ cm |
| Operating Focal Range [in] | 6 - ∞ in | 11 - ∞ in | 45 - ∞ in |
| IR Cut Edge | 650nm | 650nm | 650nm |
| Full Fill | Yes | Yes | Yes |
| Mounting | Integral M12 | Integral M12 | Integral M12 |

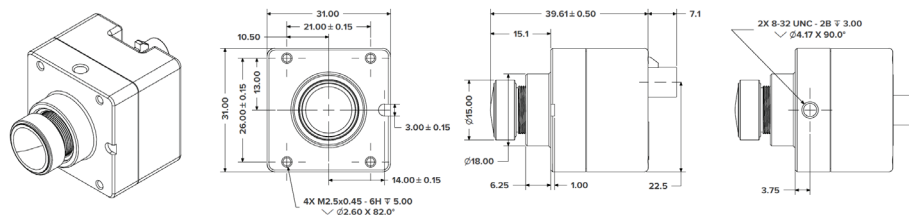
AR0234 Wide FOV



AR0234 Medium FOV



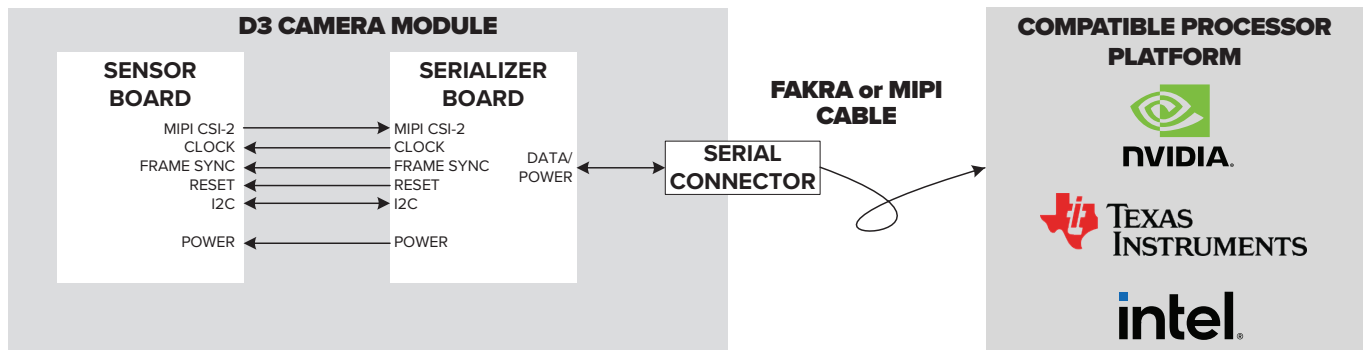
AR0234 Narrow FOV



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:



ORDERING INFORMATION

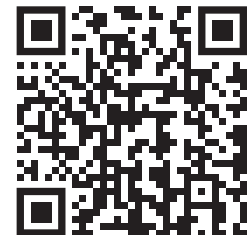
DesignCore® Velocity Series

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

D3Engineering.com/product-category/camera-modules

SKUs

- D3CMC70N-089-085
- D3CMC68N-089-085
- D3CMC69N-089-085
- D3CMC70N-089-084
- D3CMC68N-089-084
- D3CMC69N-089-084
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