



# CAMERA AI MODULE

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Model: TW-AMCAM01



## MAIN FEATURES



- 4 TOPS of processing power (1.4 TOPS for AI - RVC2 NN Performance)
- Active stereo: IR dot projector improves depth perception, especially for low-visual-interest surfaces by projecting thousands of IR dots to the scene.
- Night vision: IR illumination LED enables running your AI and CV algorithms in low-light or no-light environments
- Run any AI model, even custom-architected/built ones (models need to be converted)
- Encoding: H.264, H.265, MJPEG - 4K/30FPS, 1080P/60FPS
- Computer vision: warp (undistortion), resize, crop via ImageManip node, edge detection, feature tracking. You can also run custom CV functions
- Stereo depth perception with filtering, post-processing, RGB-depth alignment, and high configurability
- BNO086 IMU single chip 9-axis sensor with embedded sensor fusion
- Object tracking: 2D and 3D tracking with ObjectTracker node



# SPECIFICATIONS

Camera Specs	Color camera	Stereo pair
DFOV / HFOV / VFOV	120°/95°/70°	150°/128°/80°
Rectified Depth FOV	N/A	106°/97°/70°
Resolution	12MP (4056x3040)	1MP (1280x800)
Focus	FF: 60cm - ∞	FF: 18cm - ∞
Max Framerate	60 FPS	120 FPS
F-number	2.8 ±5%	2 ±5%
Lens size	1/2.3 inch	1/4 inch
Effective Focal Length	2.75mm	1.69mm
Distortion	< -14.6%	< 38%
Pixel size	1.55µm x 1.55µm	3µm x 3µm
Projector Specs	Value	
Dot projector	Ams Belago1.1 Dot-Pattern Infrared Illuminator	
Number of dots	4700	
HFOI* 50%	78 ± 7%	
VFOI* 50%	61° ± 7%	
VSCEL wavelength	940nm	
Operating temperature	10°C to ~60°C	
Temperature absolute limits	0°C to ~80°C	

