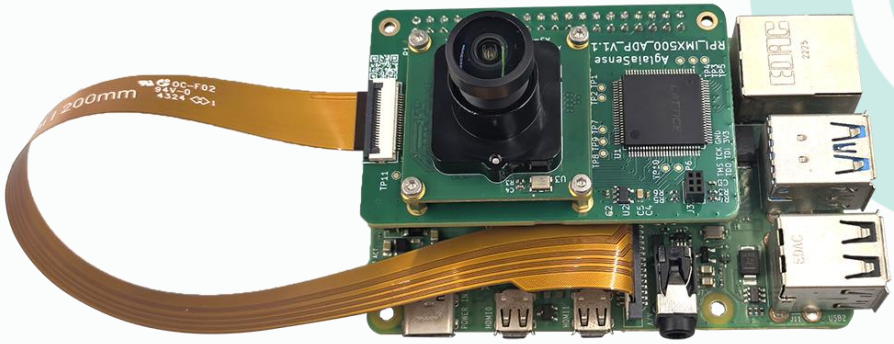
AglaiaSense

DK500-HXXX-RPI4 System



Website: aglaiasense.com

Phone: +1 (408) 263-0988

Support: support@aglaiasense.com

Sales: sales@aglaiasense.com

Address: 910 Auburn Ct, Fremont, CA 94538, USA

DK500-HXXX-RPI4 Series

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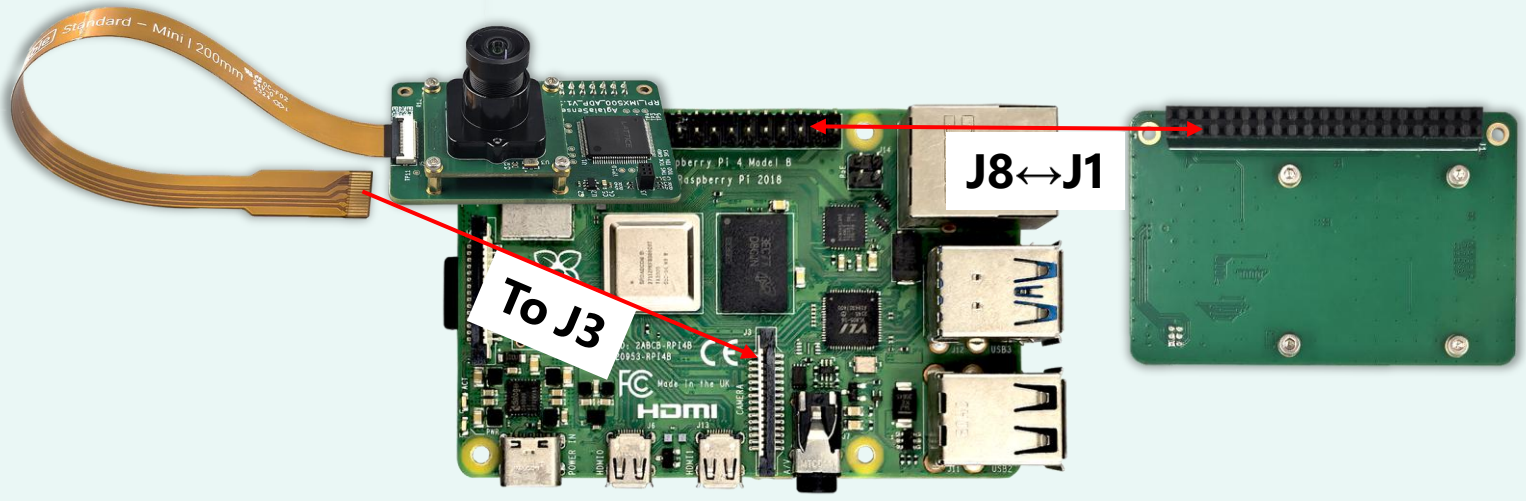
The DK500-HXXX-RPI4 series, compatible with the Raspberry Pi 4 platform, delivers a highly cost-effective and technologically advanced AI solution. Equipped with Sony's industry-leading 4K intelligent vision sensor IMX501, these devices feature a compact design that integrates seamlessly with the Raspberry Pi 4. In addition, the series includes a web server, enabling convenient access from mobile devices.

Features

- **4K Visual Intelligence:** enhanced image clarity, detection accuracy, and analytics performance
- **Embedded Edge AI:** faster, more secure real-time processing
- **Low energy consumption**: cost-efficient and eco-friendly
- **Webserver:** seamless mobile device access
- **Easy use:** plug-and-play for instant setup

Connect to Raspberry Pi 4



System Specifications

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Key Spec

Sensor	Sony Diagonal 7.857 mm (Type 1/2.3) 12.3MP CMOS Intelligent Vision Sensor IMX501 with AI Processing Functionality
Optical Format	1/2.3"
Pixel Size	1.55 x 1.55 µm
Output Format	RGB888, RAW (optional)
Resolution & Frame Rate	RAW image: 2016 x 1520 @ 30 fps (Binning mode) Webserver: 416*416 @ 30 fps
ISP + AI Processing	Supported
AI Function	Traffic counting, regional alarm, asset protection, object detection and parking
Lens FOV (H)	42˚ / 90˚/ 120˚
Region Of Interest (ROI) of Senor	Configurable
Color / Mono	Color sensor
Power Consumption	TBD
Operating Temp	-20℃ ~ +65℃
Storage Temp	-20℃ ~ +80℃
Weight	~ 100 g
Dimensions (mm)	65.1 (L) x 42.1 (W) x 50 (H)

Components

Sensor Board	AS-MS500_SENSOR
Adapter Board	RPI_IMX500_ADP
Camera Cable	Standard – Mini, 200 mm
Lens Mount	M12 / M16
Lens Field of View, Horizonal	42˚ / 90˚ / 120˚...

Application Areas

- Smart City / Building
- Traffic Management
- Parking Management
- Dynamic Lighting
- Crowd Management
- Smart Logistic
- Smart Store
- Industrial Automation

Part#	Lens Specification	
DK500-H120-RPI4	Focal Length	3.2 ± 5% mm
	Aperture, F/No	2 ± 5%
	FOV (Field of View)	120˚ horizontal
	TV Distortion	< -13%
	Relative Illumination	> 79%
	IR Filter	650nm IR Cut filter
	Lens Mount	M12 * P0.5
DK500-H090-RPI4	Effective Focal Length	4.0 ± 5% mm
	Aperture, F/No	2.8 ± 5%
	FOV (Field of View)	90˚ horizontal
	Distortion (SMIA-TV)	< -19%
	Relative Illumination	> 82%
	IR Filter	650nm IR cut filter
	Lens Mount	M12 * P0.5
DK500-H042-RPI4	Focal Length	10.44 ± 5% mm
	Aperture, F/No	1.0 ± 10%
	FOV (Field of View)	42˚ horizontal
	TV Distortion	-1.4%
	Relative Illumination	52%
	IR Filter	650nm IR Cut filter
	Lens Mount	M16 * P0.5

Reach out to us if you have questions

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