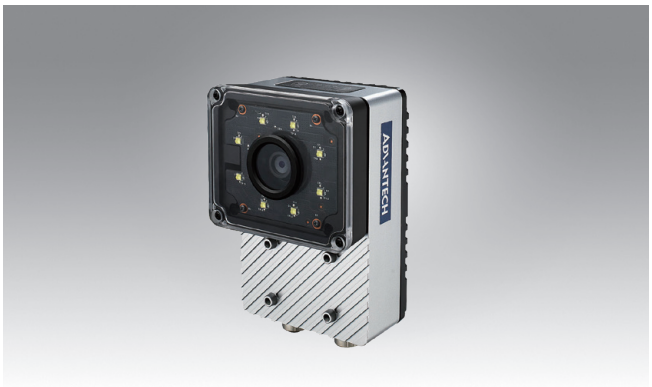
ICAM-520/500 Series Industrial AI Camera



Features

- 1.6MP 60 FPS, SONY industrial grade sensor
- Programmable variable focus lens
- Advanced LEDs illumination
- NVIDIA Jetson AI system on module
- HW ISP no GPU/CPU workload

Description

Advantech ICAM-520/500 series is a highly integrated Industrial AI Camera equipped with programmable variable focus lenses, LED illumination, SONY industrial grade image sensor, multiple core ARM processors and NVIDIA AI system on module. Equipped with varifocal lens and LED illumination, Advantech ICAM-520/500 reduces installation and maintenance effort significantly. Featuring CAMNavi SDK, HTML5 web based utility andNVIDIA Deepstream SDK, ICAM-520/500 series accelerates the development and deployment of cloud-to-edge vision AI applications. The CAMNavi SDK uses Python language by default and is better adapted to image acquisition and AI algorithm integration. Meanwhile the HTML 5 web based utility can be used to setup the cameras and network configuration to lower the installation effort. The preloaded, optimized Jetpack board support package V4L2 and RTSP interface seamlessly connect to AI cloud services. Advantech ICAM-520/500 series is an all-in-one, compact and rugged industrial AI camera, and is ideal for a variety of Edge AI vision applications.

Specifications

Model		ICAM-520-10/12W	ICAM-500-10/12W	ICAM-500-10/12R
Image Sensor	Sensor	SONY MX296, 1.6MP@60fps,	SONY IMX296 , 1.6MP@60fps	SONY IMX296 , 1.6MP@60fps
	Size, Shutter	1/2.9", global Shutter, Color	1/2.9", global shutter, color	1/2.9", global shutter, mono
Processor system	CPU/GPU	NVIDIA Xavier NX 6-core NVIDA Camel ARM® v8.2 64-bit CPU 6MB L2 + 4MB l3 (Max. operating frequency: 1.9GHz GPU: 384-core NVIDIA Volta GPU with 48 Tensor	NVIDIA Jetson Nano CPU: Quad Core ARM Cortex A57 (Max. operating frequency: 1.43GHz) GPU: Maxwell GPU, 128 CUDA core, performance up to 512 GFLOPS (FP16)	
	Memory/ Storage	8 GB 128-bit LPDDR4 / 16G eMMC	4GB LPDDR4 /16G eMMC	
Optical	Lens	12 mm variable focal length: FOV 40 x 29.3 mm @ 100 mm working distance FOV 364.5 x 263.7 @ 900 mm working distance 16mm variable focal length: FOV 33.9 x 25.3 mm @ 100 mm working distance FOV 305.4 x 228.2 @ 900 mm working distance		
	LED illumination	8 x PWM white LEDs, programmable		8 x PWM Red LEDs, programmable
Synchronization		Hardware trigger / software trigger / free-run		
HW ISP		Color debayering, sharpness, white balance, CCM correction, dark noise correction and brightness		
I/O	Peripheral	1 x USB 3.0 Type C, 1 x RS485		
	Digital I/O	1x trigger in, 2 x Inputs, 2 x Outputs		
	Display	1 x HDMI 2.0		
LAN		1 x 10/100/1000 Base-T		
Power Requirements		19~24V_{DC} Max: 18W, typical 15W	19~24V_{DC} Max: 17W, typical 15W	
Dimensions		82mm (W) x 121mm (H) x 63 mm(D)	82mm (W) x 121mm (H) x 60 mm(D)	
Environment		0-45° C, 5Grms,		
Certification		CE/FCC , IP54		
Software support	OS	Ubuntu 18.04, Jetpack 4.6.2	Ubuntu 18.04, Jetpack 4.5.1	
	Software	NVIDIA Deepstream SDK		
	SDK/Utiltiy	CAMNavi SDK, Web based camera utility, IP configure tool, NVIDIA DeepStream SDK & example		

Ordering Information

P/N	Description
ICAM-520-10W	Xavier NX, 1.6MP@60fps, color, 12mm Variable Focal length, White LEDs
ICAM-520-12W	Xavier NX, 1.6MP@60fps, color, 16mm Variable Focal length, White LEDs
ICAM-500-10W	Jetson Nano, 1.6MP@60fps, color, 12mm Variable Focal length, White LEDs
ICAM-500-12W	Jetson Nano, 1.6MP@60fps, color, 16mm Variable Focal length, White LEDs
ICAM-500-10R	Jetson Nano, 1.6MP@60fps, mono, 12mm Variable Focal length, Red LEDs
ICAM-500-12R	Jetson Nano, 1.6MP@60fps, mono, 16mm Variable Focal length, Red LEDs

Accessories

P/N	Description
96PSA-A65W19P2-1	Power supply A/D 100-240V 65W 19V
96FMSD-32G-CM-TR	Transcend 32GB microSDHC MLC
1700033418-01	3 m Power & DI/O cable with M12 male connector
1700032302-01	2 m Ethernet cable with M12 male connector

All product specifications are subject to change without notice.

Last updated: 1-Nov-2022

Mouser Electronics

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ICAM-520-D10W ICAM-520-10W ICAM-520-12W