ICAM-300 Industrial AI Camera



Features

- High sensitivity, global shutter 5MP image sensor
- Fast Autofocus with Voice Coil Motor(VCM) lens and advanced LED Illumination
- High Performance, low power Qualcomm® QCS6490 AI Processor with longevity support
- Compatible with Qualcomm® Intelligent Multimedia SDK (QIM SDK), AI Hub and GStreamer
- Lightweight and IP66 compact housing for Mobility, On-Device AI in harsh environment

Description

The Advantech ICAM-300 Series is a lightweight, all-in-one Industrial AI Camera designed for manufacturing, robotics, warehouse automation, and workplace safety. Equipped with a 5MP global shutter sensor, fast autofocus, and integrated LED illumination, it enables real-time object detection, recognition, safety monitoring, risk avoidance, pick & place, guidance On-Device AI applications.

Powered by the Qualcomm® QCS6490 platform, ICAM-300 delivers robust AI performance with low power consumption. Its highly integrated hardware and software framework — including QIM SDK for multimedia and camera control, GStreamer for real-time video and AI pipelines, Qualcomm AI Hub for access to optimized AI models, and Advantech's CamNavi SDK — reduces the learning curve, accelerates time to value.

The ICAM-300 combines a compact form factor with a rugged IP66-rated enclosure, featuring exceptional anti shock, vibration and fog, equipped with large corner LED indicators and optional Wi-Fi dongle and more, offering maximum reliability for next-generation Vision AI applications in manufacturing sector.

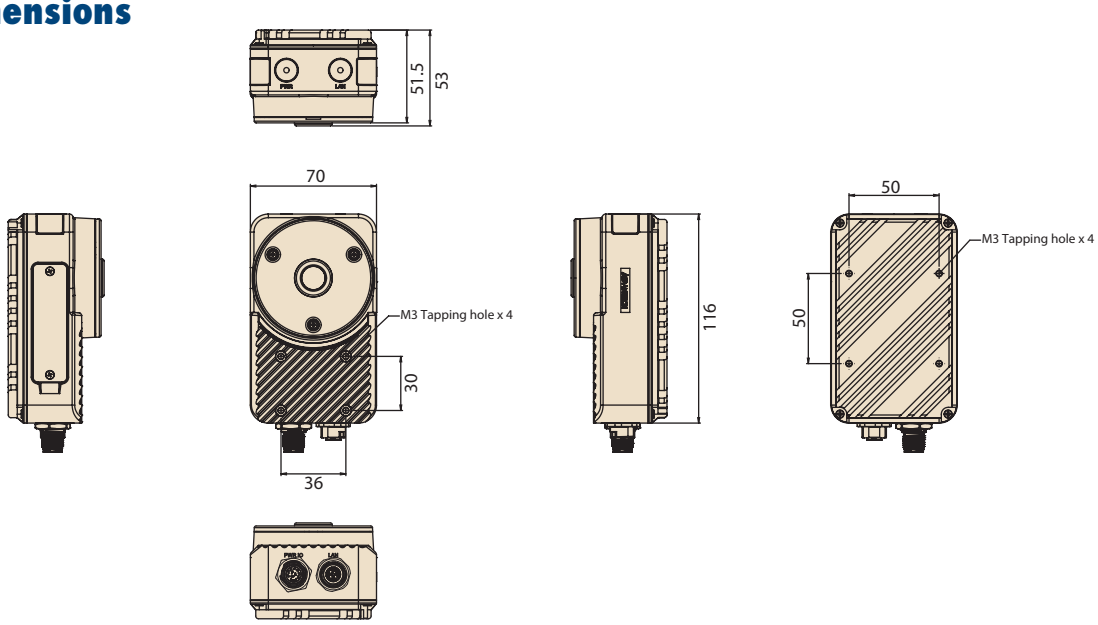
Specifications

Model		ICAM-300-21W
Image Sensor	Sensor	OV OG05B20, 5MP@30fps
	Size, Shutter	1/2.53", Global Shutter, Color
Processor system	CPU/GPU	Qualcomm QCS6490 AI Performance: Qualcomm 6th Gen AI Engine, up to 12 TOPS CPU: 8-core Kryo 670(64-bit), up to 2.1 GHz GPU: Adreno 643L, up to 812 MHz, supports OpenGL® ES 3.2, Vulkan®, OpenCL™ 2.0, DirectX® 12 DSP: Qualcomm® Hexagon™ Processor
	Memory/ Storage	8 GB LPDDR5 / 128GB UFS
Optical	Focal Length	6mm
	LED illumination	8 x PWM white LEDs, programmable
	Motor	Closed-loop VCM, support autofocus
Synchronization		Free-run / Software trigger
HW ISP		Qualcomm Spectra™ ISP 570L
I/O	Peripheral	1 x USB 3.0 Type A
	Digital I/O	2 x Inputs, 1 x Outputs, 1 x Strobe Out
LAN		1 x 10/100/1000 Base-T
Power Requirements		19~24VDC, Max 17W, typical 12W
Dimensions		70mm(W)x 116mm(H)x 53mm(D)
Environment		0-45° C, 5Grms,
Certification		CE/FCC IP 66
Software support	OS	Yocto based BSP (kernel 6.6)
	Development Software	QIM SDK, GStreamer/Python Application, QNN, SNPE, CAMNavi SDK, Qualcomm AI Hub

All product specifications are subject to change without notice.
Last updated: 8-Sep-2025

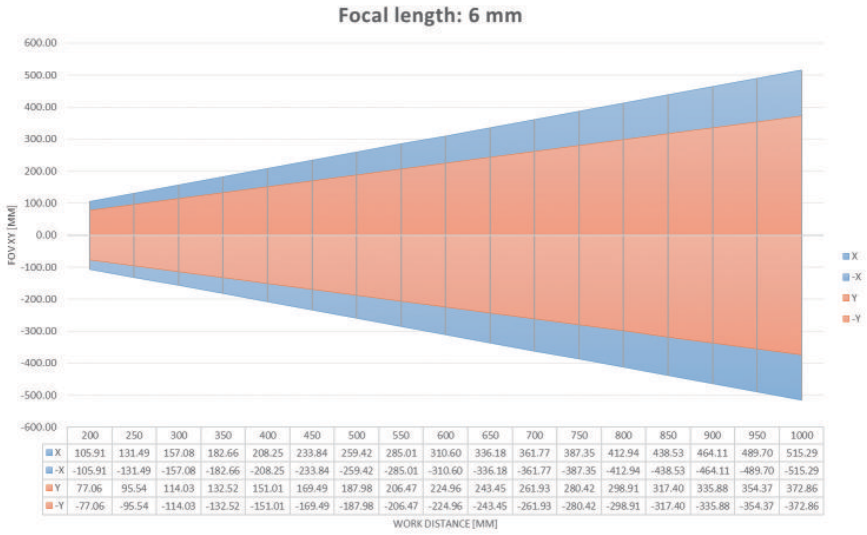
Dimensions

Unit: mm



Field of View

Focal length [mm]	FOV@Near HxV [deg]	FOV@Near HxV [mm]	FOV@Far HxV [deg]	FOV@Far HxV [mm]
6	54.2 x 40.6	211.8 x 154.1	54.2 x 40.6	1030.6 x 745.7
	WD@200 mm	WD@200 mm	WD@1000 mm	WD@1000 mm



	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X	105.91	131.49	157.08	182.66	208.25	233.84	259.42	285.01	310.60	336.18	361.77	387.35	412.94	438.53	464.11	489.70	515.29
-X	-105.91	-131.49	-157.08	-182.66	-208.25	-233.84	-259.42	-285.01	-310.60	-336.18	-361.77	-387.35	-412.94	-438.53	-464.11	-489.70	-515.29
Y	77.06	95.54	114.03	132.52	151.01	169.49	187.98	206.47	224.96	243.45	261.93	280.42	298.91	317.40	335.88	354.37	372.86
-Y	-77.06	-95.54	-114.03	-132.52	-151.01	-169.49	-187.98	-206.47	-224.96	-243.45	-261.93	-280.42	-298.91	-317.40	-335.88	-354.37	-372.86

Ordering Information

P/N	Description
ICAM-300-21W	QCS6490, 5MP@30fps, Global Shutter, Color, S-mount

Accessories

P/N	Description
96PSA-A60W24T2-3	Power supply A/D 100-240V 60W 24V
1700034995-01	3 m Power & DI/O cable with M12 female connector
1700034091-11	3 m Ethernet cable with M12 male connector
XICAM-EW-7822UAD	AC1200 Dual-Band Wi-Fi USB 3.0 Adapter with External Antennas x 2 (2T2R)