

PERSPEC-1 : Industrial Vision AI Solution



IMB-JM1005

Developed by JMO in collaboration with CODICO, PERSPEC-1— is powered by a powerful Qualcomm Dragonwing SoC, and is fully compatible with the end to end AI development platform from EDGE IMPULSE, It enables concurrent support for three high resolution cameras with support in our compute and AI module for advanced concurrent AI processing, delivering a total of 12 TOPS of AI processing power in a cost-effective and rugged package.

Our solution has been developed to run multi-camera, multi-modal AI workloads in industrial settings such as automated product inspection, quality control, process monitoring and other use cases

PERSPEC-1 Specification

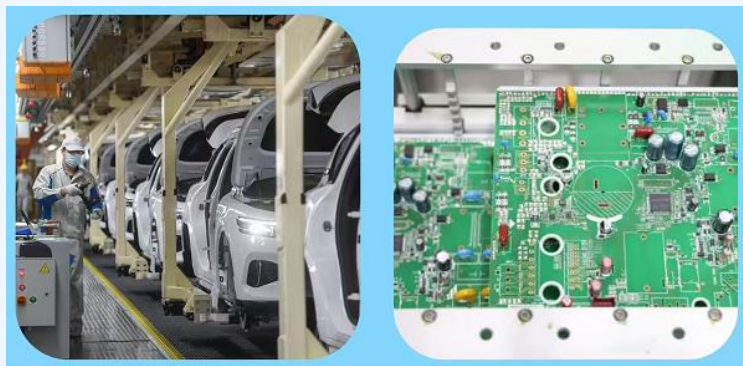
Computing platform	Qualcomm® Dragonwing QCS6490
Resolution	12MP
Max capture frame rate	@60FPS
Camera	Concurrent support for three cameras with AI processing capabilities
Pixel	1.55um
Lens Interface	C/CS, 12mm focal length, F2.8-F16 aperture
OS	Ubuntu 20.4 / Android with Embedded Linux (Yocto) coming soon
Memory/storage	8 GB /128 GB
Interface	1*RJ45 Ethernet
	1*USB3.1 TYPE-C
	3*DP (CAM1.2.3)
	1*HDMI
	3* IO input, 3* IO output
	1* GPIO
	1*DC
Voltage	9~36V DC
Main control box size	123.8*109.8*49mm
Operating temperature	-35°C~75°C

PERSPEC Series - Typical use cases

Sample Applications



Textile fabric defect detection Drug packaging testing



Auto parts inspection

PCBA solder inspection

Our PERSPEC series can be applied to general industrial inspection, quality control, barcode recognition, intelligent detection, defect identification, classification, and many more AI applications.

Packing list



Main unit *1

Camera *3

Adapter *1

DP cable *3

Note: The accessories and pictures are for reference only, please refer to the actual production documentation.

Picture			
Brand		Advantech	JMO
Model		ICAM-540-30W	IMB-JM1005
Size		79.5mm (W) x 121mm (H) x 62.9 mm(D)	123.8 mm (L) x 109.8mm (W) x 49mm (H)
Design		Integrated AI Industrial Camera	Discrete three-camera AI Industrial camera
		/	Concurrent support for 3 cameras with AI processing capabilities
Image Sensor	Sensor	SONY IMX334, 8MP@30fps	SONY IMX577, 12MP@60fps
	Size, Shutter	1/1.8", Color	1/2.3", Color
Processor system	CPU/GPU	NVIDIA Orin NX CPU: 6-core Cortex A78AE ARM® v8.2 (64-bit) 2x clusters (4x 256KB L2 +2MB L3) + 4MB LLC L3 Cache: 4 MB Max. 2 GHz GPU: 1024 cores 32 Tensor	CPU: QCS6490, 8-core 5G SoC 1 × Gold Plus @ 2.7 GHz + 3 × Gold @ 2.4 GHz + 4 × Silver @ 1.9 GHz GPU: FP1: A642L@315MHz (MH3.0 45-48fps) FP2.5: A642L@550MHz (MH3.0 65-70fps) AI(NSP): 12.15INT8 TOPS
	Memory/ Storage	8 GB 128-bit LPDDR5 / 256GB NVMe	8 GB /128 GB
Optical	Lens	12mm variable focus lens	12mm variable focus lens
	LED illumination	8x PWM white LEDs, programmable	/
I/O	Peripheral	1 x USB 3.0 Type C, 1 x USB 3.0 Type A	1x USB3.1 Type C, 1*RJ45, 3*DP (CAM 1,2,3)
	Digital I/O	1x trigger in, 2 x Inputs, 1 x Outputs	3 x Inputs, 3 x Outputs, 1 x GPIO, 1 x DC
	Display	1 x HDMI 2.0	1*HDMI 2.0
LAN		1 x 10/100/1000 Base-T	1 x 10/100/1000 Base-T
OS		Ubuntu 20.04, JetPack 5.1.1 or above	Ubuntu Linux/Android/Yocto Linux soon
Voltage		19~24VDC	9-36VDC
Operation temperature		0°C~45°C	-35°C~75°C
IP rating		IP54	IP66
Cost performance		Suitable for small and medium-sized enterprises	Suitable for small and medium-sized enterprises High flexibility, cost-effective

We offer complete industrialized computer vision and Edge AI solutions, we are committed to working closely with our clients to deliver customized automation solutions that enhance efficiency and drive growth.

Contact us

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