TELEDYNE

ADEPT TURNKEY

SMARTER IMAGING FOR BETTER LIVES

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NEW BOA3 SMART CAMERA

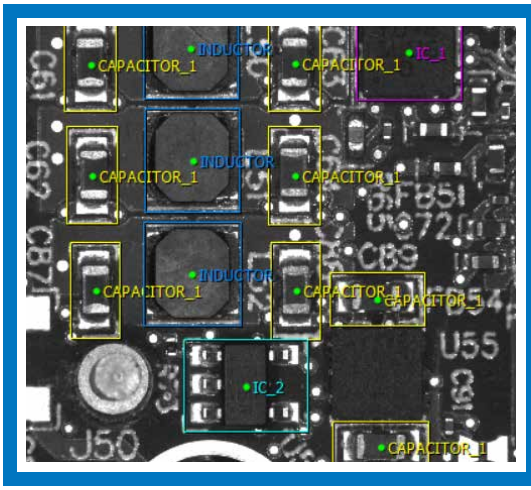
Flexible Machine Vision at the Edge

Introducing BOA3™

Teledyne DALSA's next generation AI-powered smart camera designed to meet the needs of the most complex, demanding machine vision applications.

CAPTURE, PROCESS, CONTROL AT THE EDGE

- Resolutions 1.2 to 12 megapixels
- Quad-core processor
- Broad range of onboard I/O
- Compact, rugged, IP67 enclosure
- Run AI inspection models on-camera
- No-code machine vision development



Software Included

- Support for AI Classification and AI Object Detection
- Includes full toolkit of inspection algorithms and preprocessors
- Practical, straightforward interface for new or experienced users

Achieve 100% Quality Inspection with a broad set of machine vision and automation tools.

BASIC GEOMETRY	ADVANCED GEOMETRY	FEATURE RECOGNITION	READING	IMAGE PROCESSING	MORE
Point/Edge	Contour	Match/Search	Barcode 1D/2D	Intensity Statistics	Copy and Paste
Distance	Bead	Count/Blobs	Barcode Grading	Preprocessors	Built-in Tolerances
Angle	Thread	Verify	Grayscale OCR	Graphics Overlays	Custom Scripting
Tip	Spring	AI Object Detection	Binary OCR	Color Meter	Math Functions
Arc	Caliper	AI Classification	OCV	Focus Meter	String Functions
Circle	Rake			Calibration	PLC Communication
	Concentric Circles			Origin Control	Image Logging

TECHNICAL SPECIFICATIONS		BOA3 SMART CAMERA FEATURES		
		CMOS Area Scan, Global Shutter		
		1.2M	5M	12M
Sensor	Resolution	1280 x 960	2560 x 1936	4096 x 3072
	Pixel Size	3.7 µm	2.8 µm	2.8 µm
	Format	1/3"	1/1.8"	1"
	Frame Rate	50 fps	35 fps	13 fps
	Color	Mono	Mono	Mono
	Partial Scan	Half 1280 x 480 @ 75 fps	Half 2560 x 968 @ 70 fps	Half 4096 x 1536 @ 25 fps
	Modes		Square 1936 x 1936 @ 45 fps	Square 3072 x 3072 @ 18 fps
Lens Options		C-Mount S-Mount with lens: 6 mm, 8 mm, 12 mm, or 16 mm	C-Mount	C-Mount
Illumination		Built-in LED Ring Light Red, Blue or White	N/A	N/A
Memory Storage		5GB Solutions, Images		
Processor		CPU 1.6 GHz Quad Core, 4 GB		
Connections		1 Gigabit Ethernet PoE, Serial RS-232, Encoder		
Inputs		4 opto-isolated, 12-30 VDC, Switching time 200 µs		
Outputs		4 opto-isolated, 200 mA max load at 24V, Switching time 200 µs		
Communications		Modbus, TCP/IP		
Image Logging		FTP		
Material		Aluminum		
Dimensions		60 mm x 60 mm x 50 mm		
Mounting		12 x M4x0.7		
Protection Rating		IP67		
OS		Camera setup on Windows		
Power		24V 300 mA (12V min -30V max) or PoE Type 1 IEEE 802.3af		
Operating Temperature		-25°C – 50°C		
Access Control		Password Protected (user option)		
Software Utilities Included		**Nexus** | Connection, file manager, and update utility for handling BOA Cameras		
		iDiscover | Camera network discovery and IP address resolution tool		
		BOA Emulator | Offline emulator for developing applications using image files		
		Report Generator | Creates documentation of parameters and settings		
		iDisplay | Operator interface software for viewing single or multiple cameras during runtime		
Camera Setup Parameters		Trigger Source | Strobe/Output Pulse | World Calibration | Internal Timer | Image Brightess Lens Correction | Trigger Delay | Focus Measurement | Color Calibration		
API		C++, C#, and Visual Basic® in Microsoft® Visual Studio®		

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Revision Number:
Revision Date: 2025 01 15