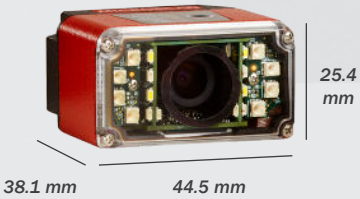
MicroHAWK MV Smart Cameras

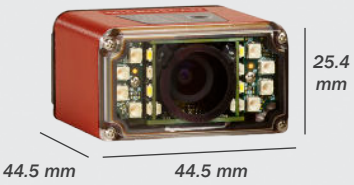
MicroHAWK® redefines imaging technology as a single, omni-capable platform for any automation task. With the scalability to accomplish simple to advanced machine vision in one, MicroHAWK offers the breadth of Microscan software and hardware options on the smallest smart camera suite ever developed. The MicroHAWK MV series consists of three industrial-rated miniature smart cameras with unrivaled flexibility, ease of use, and universal application potential.

MV-20

MV-30



MV-40



MicroHAWK At a Glance:

- Ultra-compact shape and size
- Complete with processor, lens, illumination, and software for easy integration into embedded and industrial applications
- Simultaneously inspect multiple part features and decode barcodes or direct part marks
- On-board storage for multiple jobs
- Mono and color sensor options available
- Customizable, fully-integrated hardware options

Compact & Lightweight
The MicroHAWK platform offers the world's smallest, fully-integrated smart cameras. Their compact size allows flexible positioning in tight spaces. Lightweight and durable, with either plastic or aluminum enclosure, the cameras weigh only 28-68g.

Autofocus
Liquid lens autofocus calibration finds and stores the optimum focus for each inspection task. Cameras automatically adjust to pre-set focal points for each inspection task to run multiple inspections at virtually any part-to-camera distance.

Intuitive Set-Up & Control
Plug-and-play hardware and intuitive interfaces offer the fastest setup time out of the box. User-friendly software features include assisted setup functions, browser-based interfaces, and simple graphical environments for device control.

Powerful Capabilities
Access the full range of Microscan automation tools, from selectable hardware options (sensor, optics, lighting, and autofocus), to advanced software tools for ID, gauging, inspection, and guidance, all on the world's smallest smart camera.

Scalable System
Expand MicroHAWK's applications from basic to complex machine vision inspection by scaling to advanced software all on the same device.

Application Examples

- Part tracking, traceability, and guidance
- Life sciences and clinical instrumentation
- Electronics assembly and test
- Machined part inspection
- Package and label inspection

Software Options:

Auto ID+

AutoVISION® Machine Vision Software *provides a simple setup & runtime interface for solving basic to mid-range vision and auto ID applications. Scalable to Visionscape®.*

Advanced Machine Vision

Visionscape® Machine Vision Software *provides a professional setup & runtime interface with access to Microscan's full auto ID, verification, and machine vision tools.*

MicroHAWK: Capabilities

- 1D/2D symbol decoding
- Optical Character Recognition (OCR)
- Symbol Quality Verification and OCV
- Dynamic part location
- Assembly verification
- Dimensional measurements
- Color Match and Color ID tool
- Image transformation and scaling
- Precision calibration
- Custom vision tools (scripting)
- Program control functions
- 50+ machine vision tools

MICROSCAN®

MicroHAWK MV Product Specifications

	MV–20			MV–30			MV–40		
SOFTWARE	AutoVISION® Sensor, AutoVISION, Visionscape®								
SPEED	400 MHz			800 MHz			800 MHz		
FOCUS TYPES	Fixed Focus: 5.2, 8.0, 12.0, and 16.0 mm lenses. Factory Adjustable (50-400 mm) Autofocus: 5.2, 7.7, 12.0, and 16.0 mm lenses. Software Adjustable (50-500 mm)								
SENSORS	WVGA	SXGA	QSXGA	WVGA	SXGA	QSXGA	WVGA	SXGA	QSXGA
PIXELS	752x480	1280x960	2592x1944	752x480	1280x960	2592x1944	752x480	1280x960	2592x1944
SIZE	0.34 MP	1.2 MP	5.0 MP	0.34 MP	1.2 MP	5.0 MP	0.34 MP	1.2 MP	5.0 MP
TYPE	Mono-chrome	Mono-chrome	Color	Mono-chrome	Mono-chrome	Color	Mono-chrome	Mono-chrome	Color
SENSOR SIZE	4.51 x 2.88 mm	4.80 x 3.60 mm	4.536 x 3.402 mm	4.51 x 2.88 mm	4.80 x 3.60 mm	4.536 x 3.402 mm	4.51 x 2.88 mm	4.80 x 3.60 mm	4.536 x 3.402 mm
PIXEL SIZE	6 µm	3.75 µm	1.75 µm	6 µm	3.75 µm	1.75 µm	6 µm	3.75 µm	1.75 µm
EXPOSURE TIME	50 µsec - 66,667 µsec	66 µsec - 58,825 µsec	66 µsec - 66,667 µsec	50 µsec - 66,667 µsec	66 µsec - 58,825 µsec	66 µsec - 66,667 µsec	50 µsec - 66,667 µsec	66 µsec - 58,825 µsec	66 µsec - 66,667 µsec
SHUTTER	Global		Rolling	Global		Rolling	Global		Rolling
FRAME RATE	60	42	5	60	42	5	60	42	5
FTP IMAGE STORAGE	Yes								
PASSIVE PoE	N/A			N/A			24 Volt Passive PoE, Type B. Requires Microscan Power Supply		
CONNECTIVITY	USB 2.0 High Speed, Ethernet over USB			RS-232, USB 2.0 High Speed, Ethernet over USB			RS-232, Ethernet TCP/IP, EtherNet/IP™, PROFINET®		
CONNECTOR	Micro-B USB			High-Density 15-Pin D-Sub			M12 12-Pin Power, M12 8-Pin Ethernet		
ENCLOSURE	IP40, Plastic			IP54, Aluminum			IP65/67, Aluminum		
CABLE	N/A			0.91 m			N/A		
ILLUMINATION	Inner LEDs: 4 White and 4 Red Outer LEDs: N/A			Inner LEDs: 4 White and 4 Red Outer LEDs: 8 High-Output White or Red (Optional)			Inner LEDs: 4 White and 4 Red Outer LEDs: 8 High-Output White or Red (Optional)		
DISCRETE I/O	N/A			2 in, 3 out Trigger Input, New Master Input: 5-28V rated (0.16mA @ 5VDC) Strobe Output, 2 General Purpose Outputs: 5V TTL-compatible, can sink 10mA and source 10mA			2 in, 3 out, Opto-isolated Trigger Input; New Master Input: Bi-directional, opto-isolated, 1-28V rated (10mA @ 28VDC) Strobe Output, 2 General Purpose Outputs: Bi-directional, opto-isolated, 1-28V rated (ICE < 100mA at 24VDC, current limited by user)		
ELECTRICAL	5 VDC ± 5 %, 350 mA at 5 VDC (typ.)			5 VDC ± 5 %, 600 mA at 5 VDC (typ.)			4.75-30 VDC, 200 mV p-p max ripple, 150 mA at 24 VDC (typ.)		
DIMENSIONS	24 mm x 34 mm x 39 mm			25 mm x 45 mm x 38 mm			25 mm x 45 mm x 45 mm		
WEIGHT	26 g			46 g (Excluding Cable)			68 g		
INDICATOR LEDs	Power LED, Target LEDs, Inspection Passed Green Flash			Power LED, Status LEDs, Target LEDs, Inspection Passed Green Flash			Power LED, Status LEDs, Target LEDs, Inspection Passed Green Flash		

Note: Specifications are subject to change.

SYMBOLOGIES

2D Symbologies: Data Matrix (ECC 0-200), QR Code, Micro QR Code, Aztec Code **Stacked Symbologies:** PDF417, Micro PDF417, GS1 Databar (Composite & Stacked)
Linear Barcodes: Code 39, Code 128, BC 412, I2 of 5, UPC/EAN, Codabar, Code 93, Pharmacode, PLANET, PostNet, Japanese Post, Australian Post, Royal Mail, Intelligent Mail, KIX

LIGHT SOURCE Type: High-output LEDs **Output Wavelength:** Inner Red: 625 nm nominal; Outer Red: 617 nm nominal **Operating Life:** 50,000 hours @ 25° C
ENVIRONMENTAL Operating Temp.: 0° to 40° C (32° to 104° F) **Storage Temp.:** -50° to 75° C (-58° to 167° F) **Humidity:** 5% to 95% (non-condensing)
EMISSIONS: EN 55022:2010 Class A Limits **SAFETY & QUALITY:** FCC, CE, RoHS Compliant **QMS Certification:** www.microscan.com/quality

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