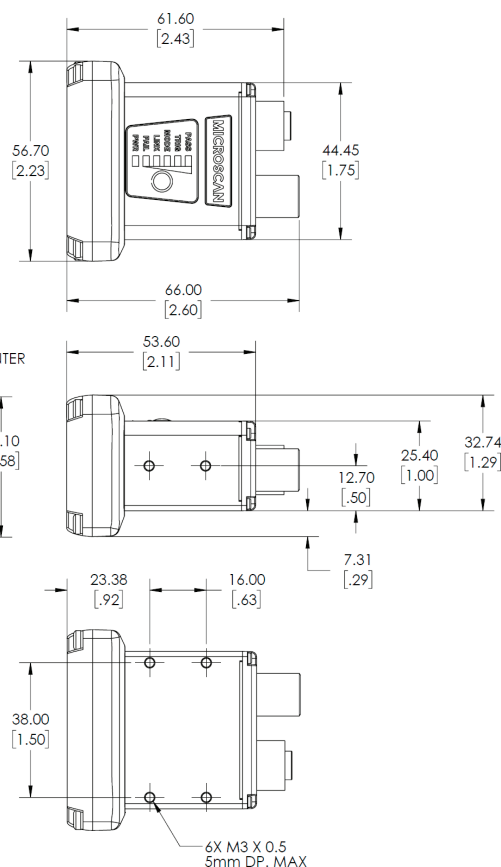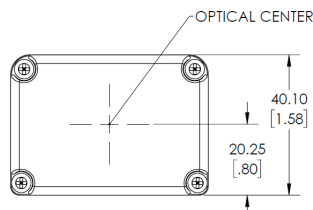# MicroHAWK® ID-45
Specifications and Options

Ultra-Compact
Height: 40.10 mm (1.58")
Width: 56.70 mm (2.23")
Length: 53.60 mm (2.11")

Integrated LEDs

WebLink Interface Onboard

61.60 [2.43]
56.70 [2.23]
44.45 [1.75]
66.00 [2.60]

OPTICAL CENTER
53.60 [2.11]
40.10 [1.58]
20.25 [.80]
25.40 [1.00]
12.70 [.50]
32.74 [1.29]
7.31 [.29]
23.38 [.92]
16.00 [.63]
38.00 [1.50]
6X M3 X 0.5 5mm DP. MAX

Note: Nominal dimensions shown. Typical tolerances apply.

DIMENSIONS
Height: 40.10 mm (1.58")
Width: 56.70 mm (2.23")
Length: 53.60 mm (2.11")
Weight: 98.47 g (3.47 oz.)

ENCLOSURE
IP-65/67, Aluminum

ENVIRONMENTAL
Operating Temperature: 0° to 45° C (32° to 113° F)
Storage Temperature: -50° to 75° C (-58° to 167° F)
Humidity: 5% to 95% (non-condensing)

EMISSIONS
EN 55022:2010 Class A Limits

ELECTRICAL
10-30 VDC, 200 mV p-p max ripple, 150 mA at 24 VDC (typ.)

CONNECTOR
M12 12-Pin Power/IO, M12 8-Pin Ethernet

COMMUNICATION
RS-232, Ethernet TCP/IP, PROFINET, EtherNet/IP™, Passive Power over Ethernet (PoE), 24V

DISCRETE I/O
3 in/3 out, Optoisolated Trigger Input; New Master: Bi-directional, Optoisolated, 4.5-28 V rated (10 mA @ 28 VDC); Outputs (1, 2, 3): Bi-directional, Optoisolated, 1-28 V rated (I_{CE} < 100 mA at 24 VDC, current limited by user)

ILLUMINATION
High-Output LEDs: Inner: 4 Red, 4 White; Outer: 24 Red (624 nm)

INDICATORS
TRIG, PASS, FAIL, MODE, LINK, PWR LEDs; 2 Target Pattern LEDs; 2 Good Read Green Flash LEDs

SPEED
High-Speed (Maximum Sensor FPS)

MEMORY
2 GB Non-Volatile Flash, 256 MB RAM

DECODER
X-Mode (Poor or Damaged 1D/2D + DPM)

OPTICS
High-Density, UHD

SENSOR
WVGA (Mono): CMOS 0.34 MP (752 x 480)
SXGA (Mono): CMOS 1.2 MP (1280 x 960)

SHUTTER
Global (WVGA, SXGA)

EXPOSURE
50 - 100,000, Default: 2,500 µs

FOCUS
HD: Liquid Lens Autofocus (42 - 300 mm)
UHD: Liquid Lens Autofocus (32 - 150 mm)
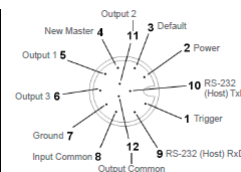
ACQUISITION SPEED
Up to 42 FPS (SXGA)

SYMBOLOGIES
2D: Data Matrix (ECC 0-200), QR Code, Micro QR Code, Aztec Code
Stacked: PDF417, MicroPDF417, GS1 Databar (Composite and Stacked)
Linear: Code 39, Code 128, BC412, Interleaved 2 of 5, UPC/EAN, Codabar, Code 93, Pharmacode, PLANET, POSTNET, Japanese Postal, Australia Post, Royal Mail, Intelligent Mail, KIX

SAFETY AND QUALITY
FCC, CE, RoHS-Compliant

QMS CERTIFICATION
www.microscan.com/quality

CONNECTOR A: M12 12-Pin Plug

Pin	Function
1	Trigger
2	Power
3	Default
4	New Master
5	Output 1
6	Output 3
7	Ground
8	Input Common
9	Host RxD
10	Host TxD
11	Output 2
12	Output Common

Output 2
New Master 4
11 3 Default
2 Power
Output 1 5
10 RS-232 (Host) TxD
Output 3 6
1 Trigger
Ground 7
12
9 RS-232 (Host) RxD
Input Common 8
Output Common

CONNECTOR B: M12 8-Pin Socket

Pin	Function
1*	V+
2*	V-
3*	V-
4	TX (-)
5	RX (+)
6	TX (+)
7*	V+
8	RX (-)
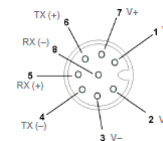
*24V Passive PoE Only, MODE B Only

TX (+) 6
7 V+
RX (-) 5
1 V+
RX (+) 8
TX (-) 4
2 V-
3 V-

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MicroHAWK® ID-45 Field of View and Read Range Charts

WVGA and SXGA Autofocus, HD

Object Distance Std Models		WVGA HIGH-DENSITY AUTOFOCUS			
		Horizontal Field of View		Vertical Field of View	
in.	mm	in.	mm	in.	mm
2.0	50	1.3	33.5	0.8	21.5
2.5	64	1.7	42.0	1.0	26.5
3.2	81	2.1	52.5	1.3	33.0
4.0	102	2.6	65.0	1.6	41.0
5.2	133	3.3	84.5	2.1	53.5
7.5	190	4.7	119.5	3.0	75.0
11.8	300	7.4	187.0	4.6	117.0

Object Distance Std Models		SXGA HIGH-DENSITY AUTOFOCUS			
		Horizontal Field of View		Vertical Field of View	
in.	mm	in.	mm	in.	mm
2.0	50	1.4	36.5	1.1	27.4
2.5	64	1.8	46.0	1.4	34.5
3.2	81	2.3	57.2	1.7	42.9
4.0	102	2.8	71.4	2.1	53.6
5.2	133	3.6	90.5	2.7	67.9
7.5	190	5.0	127.0	3.8	95.3
11.8	300	7.8	198.4	5.9	148.8

Symbol Size	WVGA High-Density Read Range Testings			
(mils)	IE (mm)	PPE	OE (mm)	PPE
3.3	50	1.9	53	1.8
5	50	2.8	57	2.5
7.5	50	4.2	61	3.6
10	50	5.6	64	4.6
15	50	8.5	71	6.3

Symbol Size	SXGA High-Density Read Range Testings			
(mils)	IE (mm)	PPE	OE (mm)	PPE
3.3	50	3.0	NA	NA
5	50	4.6	144	1.7
7.5	50	6.8	208	1.8
10	50	9.2	291	1.7
15	50	13.9	374	2

Note: Minimum 1D element is typically 1/2 the size of minimum 2D element. Example: 10 mil 2D = 5 mil 1D.

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SXGA Autofocus, UHD

	SXGA UHD AUTOFOCUS		
Min. 2D Element	Horizontal Field of View (mm)		Read Range (mm)
mil size	Inside	Outside	Autofocus
2	10	24	40 - 104
3.3	10	36	40 - 146
5	10	39	40 - 150