

MICROHAWK MV-20

SPECIFICATIONS AND OPTIONS



Ultra-Compact
Height: 24 mm (0.94")
Width: 34 mm (1.34")
Length: 39 mm (1.54")

Integrated LEDs

DIMENSIONS

Height: 24 mm (0.94")
Width: 34 mm (1.34")
Length: 39 mm (1.54")
Weight: 26 g (0.92 oz.)

ENCLOSURE

IP40, Plastic

ENVIRONMENTAL

Operating Temperature: 0° to 40° C
 (32° to 104° F)
Storage Temp.: -50° to 75° C
 (-58° to 167° F)
Humidity: 5% to 95% (non-condensing)
Operating Life: 50,000 hours @ 25° C

EMISSIONS

EN 55022:2010 Class A Limits

ELECTRICAL

5 VDC \pm 5%; 350 mA at 5 VDC (typ.)

CONNECTOR

Micro-B USB

COMMUNICATION

USB 2.0 High Speed, Ethernet over USB/HID

ILLUMINATION

Inner Red: 4 LEDs, 625 nm nominal
Inner White: 4 LEDs
Light Modes: Off, On, Strobe

INDICATORS

Power LED, 2 Target Pattern LEDs,
 2 Inspection Passed Green Flash LEDs

SPEED

400 MHz

MEMORY

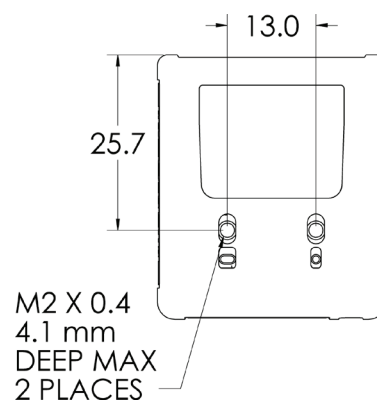
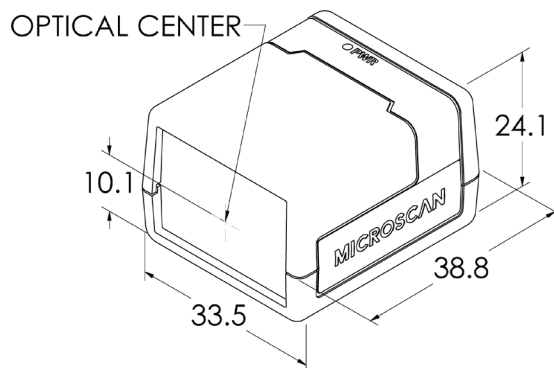
2 GB Non-Volatile Flash, 256 MB RAM

SOFTWARE

AutoVISION Sensor, AutoVISION, Visionscape

FTP IMAGE STORAGE

Supported



Note: Nominal dimensions shown.
 Typical tolerances apply.

SENSOR OPTIONS

WVGA (Mono): CMOS 0.34 MP (752 x 480),
 4.51 x 2.88 mm, 6 μ m pixel size
SXGA (Mono): CMOS 1.2 MP (1280 x 960),
 4.80 x 3.60 mm, 3.75 μ m pixel size
QXSGA (Color): CMOS 5 MP (2592 x 1944),
 4.536 x 3.402 mm, 1.75 μ m pixel size

EXPOSURE TIME

WVGA: 50 to 66,667 μ s; **SXGA:** 66 to 58,825 μ s;
QXSGA: 66 to 66,667 μ s

SHUTTER

Global (WVGA, SXGA), Rolling (QXSGA)

LENS TYPES

5.2, 8.0, 12.0, 16.0 mm lenses

FOCUS

Fixed Focus: Standard Density (5.2 mm), High Density
 (8.0 mm); Factory Set to 50, 102, 190, or 300 mm

FRAMES PER SECOND

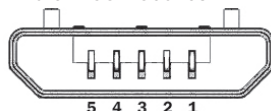
WVGA: Up to 60; **SXGA:** Up to 42;
QXSGA: Up to 5

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

PIN ASSIGNMENTS

Micro-B USB Socket



No.	Function
1	Vbus (5V)
2	D-
3	D+
4	NC
5	Ground

SAFETY AND QUALITY

FCC, CE, RoHS-Compliant

QMS CERTIFICATION

www.microscan.com/quality

MICROSCAN®

www.microscan.com

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Specifications are subject to change.
 For complete technical information, please see the
 MicroHAWK MV-20/MV-30/MV-40 Smart Camera Guide, available at
www.microscan.com.

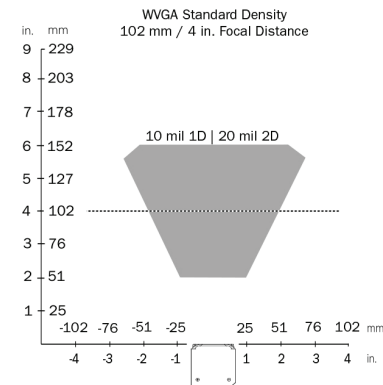
Warranty – For current warranty information about this product,
 please visit www.microscan.com/warranty.

MICROHAWK MV-20 FIELD OF VIEW AND READ RANGE CHARTS

WVGA Sensor Read Ranges

Focus Distance	WVGA HIGH DENSITY							WVGA STANDARD DENSITY						
	Field of View		Typical 2D Mil Size	Depth of Field (mm)		Min. 2D Mil Size		Field of View		Typical 2D Mil Size	Depth of Field (mm)		Min. 2D Mil Size	
	in.	mm	mil size	Inside	Outside	mil size		in.	mm	mil size	Inside	Outside	mil size	
2.0	50	1.4	35	7.5	43	58	5	2.0	50	10	38	65	7.5	
2.5	64	1.5	38	7.5	55	73	5	2.2	55	10	49	78	7.5	
3.2	81	1.9	49	10	65	97	7.5	2.8	70	15	56	106	10	
4.0	102	2.6	65	10	83	121	10	3.7	94	20	52	152	15	
5.2	133	3.1	80	15	90	176	10	4.5	115	20	78	187	15	
7.5	190	4.5	114	20	133	246	15	6.5	165	30	128	252	20	
11.8	300	7.1	180	30	179	422	30	10.2	260	40	219	381	30	

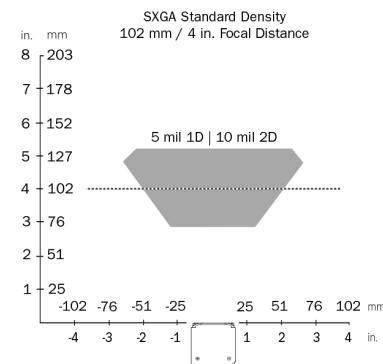
Example Read Range:



SXGA Sensor Read Ranges

Focus Distance	SXGA HIGH DENSITY							SXGA STANDARD DENSITY						
	Field of View		Typical 2D Mil Size	Depth of Field (mm)		Min. 2D Mil Size		Field of View		Typical 2D Mil Size	Depth of Field (mm)		Min. 2D Mil Size	
	in.	mm	mil size	Inside	Outside	mil size		in.	mm	mil size	Inside	Outside	mil size	
2.0	50	1.5	37	5	47	55	3.3	2.1	53	7.5	37	64	5	
2.5	64	1.6	41	5	58	70	3.3	2.3	59	7.5	49	78	5	
3.2	81	2.0	52	7.5	70	92	5	2.9	75	7.5	60	102	7.5	
4.0	102	2.7	69	7.5	88	116	5	3.9	100	10	74	131	7.5	
5.2	133	3.4	85	10	107	159	7.5	4.8	123	10	88	161	10	
7.5	190	4.8	122	15	137	243	10	6.9	175	15	115	265	15	
11.8	300	7.6	192	20	185	400	15	10.9	277	20	224	427	20	

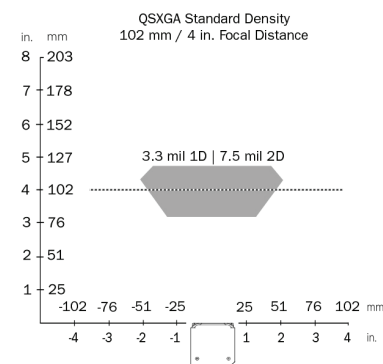
Example Read Range:



QXSGA Sensor Read Ranges

Focus Distance	QXSGA HIGH DENSITY							QXSGA STANDARD DENSITY						
	Field of View		Typical 2D Mil Size	Depth of Field (mm)		Min. 2D Mil Size		Field of View		Typical 2D Mil Size	Depth of Field (mm)		Min. 2D Mil Size	
	in.	mm	mil size	Inside	Outside	mil size		in.	mm	mil size	Inside	Outside	mil size	
2.0	50	1.4	35	5	46	55	3.3	2.0	51	5	43	59	3.3	
2.5	64	1.5	39	5	59	68	3.3	2.2	57	5	55	72	3.3	
3.2	81	2.0	50	5	74	87	3.3	2.8	72	5	69	92	5	
4.0	102	2.6	66	5	94	110	3.3	3.8	96	7.5	80	124	5	
5.2	133	3.2	81	7.5	112	153	5	4.6	117	7.5	107	159	7.5	
7.5	190	4.6	116	10	154	227	7.5	6.6	168	10	150	231	10	
11.8	300	7.2	184	15	227	373	10	10.4	265	15	203	397	15	

Example Read Range:



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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