

Datenblatt

Barcode Lesegerät MicroHAWK ID-30

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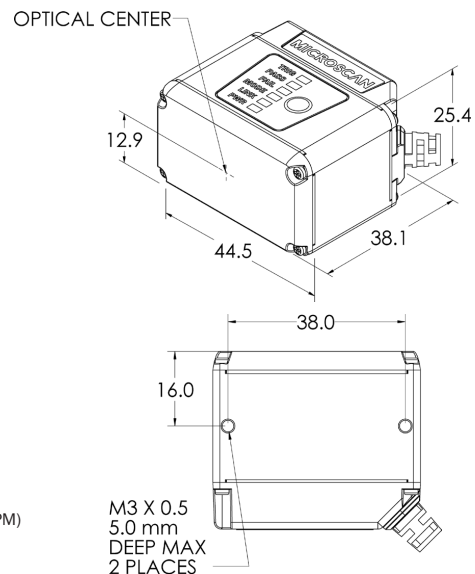
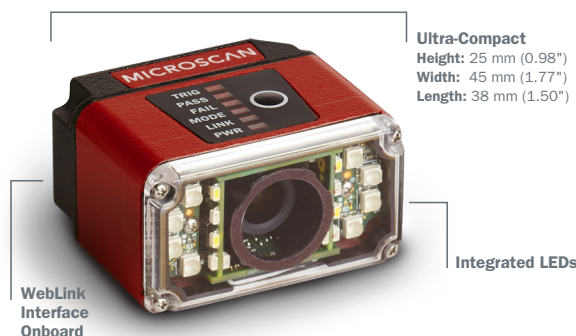


| | |
|---------------------------------|--------------------------------|
| Bezeichnung | MicroHAWK ID-30 |
| Schutzart | IP54 |
| Schnittstelle | RS232, USB |
| Typ | 1D und 2D, Codeleser |
| Kameratyp | Farbe, Monochrom, Smart-Kamera |
| Max. Arbeitsabstand | 40 - 425 mm |
| Anzahl Simultanmessungen | - |

2D BARCODE READERS

MICROHAWK® ID-30

SPECIFICATIONS AND OPTIONS



DIMENSIONS

Height: 25 mm (0.98")
Width: 45 mm (1.77")
Length: 38 mm (1.50")
Weight without Cable: 46 g (1.62 oz.)

ENCLOSURE

IP54, 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

5 VDC ± 5%, 600 mA at 5 VDC (typ.)

CONNECTOR

0.91 m Cable with High-Density 15-Pin D-Sub Socket

COMMUNICATION

RS-232, USB 2.0 High Speed, Ethernet over USB/HID

DISCRETE I/O

3 in/3 out: Trigger Input: 5-28 V rated (0.16 mA @ 5 VDC); New Master: 5 to 28 V rated (0.16 mA @ 5 VDC); Default: 3.3 V rated (0 mA @ 3.3 V); Outputs (1, 2, 3): 5 V TTL-compatible, can sink 10 mA and source 10 mA

ILLUMINATION

High-Output LEDs: Inner: 4 Red (625 nm), 4 White; Outer: 8 Red, White, Blue or IR
Operating Life: 50,000 hours @ 25° C

INDICATORS

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

MEMORY

2 GB Non-Volatile Flash, 256 MB RAM

SPEED

Standard (up to 10 FPS)
High-Speed (Max. Sensor FPS)

DECODER

Standard (High-Contrast 1D)
Plus (High-Contrast 1D/2D)
X-Mode (Poor or Damaged 1D/2D + DPM)

OPTICS

Standard Density, High-Density, UHD

SENSOR OPTIONS

WVGA (Mono): CMOS 0.34 MP (752 x 480)
SXGA (Mono): CMOS 1.2 MP (1280 x 960)
QSXGA (Color): CMOS 5 MP (2592 x 1944)

SHUTTER

Global (WVGA, SXGA), Rolling (QSXGA)

EXPOSURE TIME

50 - 100,000, Default: 2,500 µs

FOCUS

Standard, HD: Fixed (50-300 mm) or Autofocus
UHD: Fixed (64 mm, 400 mm) or Autofocus

FRAMES PER SECOND

WVGA: Up to 60

SXGA: Up to 42

QSXGA: 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, PharmacoCode, PLANET, POSTNET, Japanese Postal, Australia Post, Royal Mail, Intelligent Mail, KIX

SAFETY AND QUALITY

FCC, CE, UL, RoHS-Compliant

QMS CERTIFICATION

www.microscan.com/quality

Note: Nominal dimensions in MM are shown. Typical tolerances apply.

PIN ASSIGNMENTS

High-Density 15-Pin D-Sub Socket

| Pin | Function |
|-----|-------------|
| 1 | +5VDC |
| 2 | TX232 |
| 3 | RX232 |
| 4 | GND |
| 5 | D+ |
| 6 | N/C |
| 7 | Output 1+ |
| 8 | Default+ |
| 9 | Trigger+ |
| 10 | D- |
| 11 | Output 3+ |
| 12 | New Master+ |
| 13 | Chassis |
| 14 | Output 2+ |
| 15 | Vbus |

Note: Accessory cable required between 15-pin socket and host USB port.

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Specifications are subject to change. For complete technical information, please see the User Manual.
Warranty - For current warranty information about this product, please visit www.microscan.com/warranty.

OMRON
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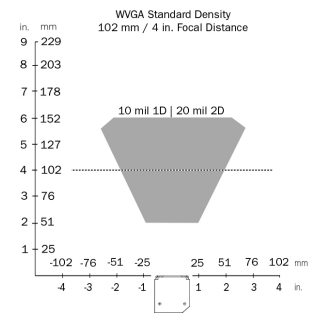
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MICROHAWK® ID-30 FIELD OF VIEW AND READ RANGE CHARTS

WVGA Sensor Fixed Focus 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 | |

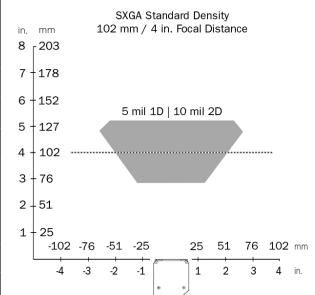
Example Read Range:



SXGA Sensor Fixed Focus 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 |

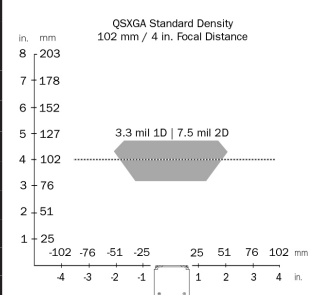
Example Read Range:



QSXGA Sensor Fixed Focus Read Ranges

| Focus Distance | QSXGA HIGH-DENSITY | | | | | QSXGA 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:



UHD Fixed Focus Read Ranges

| SXGA UHD - 64 MM | | | | |
|------------------|---------------------|---------|---------------|-------|
| Min. 1D Element | Depth of Field (mm) | | Field of View | |
| | Inside | Outside | Hor. | Vert. |
| 2 | 63.5 | 64.5 | 16.5 | 12.5 |
| 2.5 | 62.5 | 66 | | |
| 3 | 62.5 | 66 | | |
| 3.3 | 62.5 | 67 | | |

| SXGA UHD - 400 MM | | | | |
|-------------------|---------------------|---------|---------------|-------|
| Min. 2D Element | Depth of Field (mm) | | Field of View | |
| | Inside | Outside | Hor. | Vert. |
| 7.5 | 360 | 415 | 114 | 86 |
| 10 | 351 | 429 | | |
| 15 | 325 | 451 | | |
| 20 | 309 | 466 | | |
| 30 | 293 | 512 | | |
| 40 | 303 | 563 | | |

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

MICROHAWK® ID-30 FIELD OF VIEW AND READ RANGE CHARTS

WVGA Sensor Autofocus Read Ranges

| Object Distance Std Models | | WVGA HIGH-DENSITY AUTOFOCUS | | | |
|----------------------------|-----|-----------------------------|-------|------------------------|-------|
| | | Horizontal Field of View | | Vertical Field of View | |
| | | 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 | | WVGA STANDARD DENSITY AUTOFOCUS | | | |
|----------------------------|-----|---------------------------------|-------|------------------------|-------|
| | | Horizontal Field of View | | Vertical Field of View | |
| | | in. | mm | in. | mm |
| 2.0 | 50 | 2.1 | 52.5 | 1.3 | 34.0 |
| 2.5 | 64 | 2.6 | 65.5 | 1.6 | 41.5 |
| 3.2 | 81 | 3.2 | 82.0 | 2.0 | 51.0 |
| 4.0 | 102 | 4.0 | 102.0 | 2.5 | 64.0 |
| 5.2 | 133 | 5.2 | 132.0 | 3.2 | 82.0 |
| 7.5 | 190 | 7.3 | 185.0 | 4.5 | 115.5 |
| 11.8 | 300 | 11.3 | 288.0 | 7.1 | 180.0 |

| Symbol Size (mils) | WVGA High-Density Read Range Testings | | | |
|--------------------|---------------------------------------|-----|---------|-----|
| | 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 (mils) | WVGA Standard Density Read Range Testings | | | |
|--------------------|---|-----|---------|-----|
| | IE (mm) | PPE | OE (mm) | PPE |
| 5 | 50 | 1.8 | 60 | 1.5 |
| 7.5 | 50 | 2.7 | 69 | 2 |
| 10 | 50 | 3.6 | 77 | 2.5 |
| 15 | 50 | 5 | 92 | 3.1 |
| 20 | 50 | 7.2 | 99 | 4 |

| Object Distance Std Models | | SXGA HIGH-DENSITY AUTOFOCUS | | | |
|----------------------------|-----|-----------------------------|-------|------------------------|-------|
| | | Horizontal Field of View | | Vertical Field of View | |
| | | 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 |

| Object Distance Std Models | | SXGA STANDARD DENSITY AUTOFOCUS | | | |
|----------------------------|-----|---------------------------------|-------|------------------------|-------|
| | | Horizontal Field of View | | Vertical Field of View | |
| | | in. | mm | in. | mm |
| 2.0 | 50 | 2.3 | 57.2 | 1.7 | 42.9 |
| 2.5 | 64 | 2.9 | 73.0 | 2.2 | 54.8 |
| 3.2 | 81 | 3.5 | 88.9 | 2.6 | 66.7 |
| 4.0 | 102 | 4.3 | 109.5 | 3.2 | 82.2 |
| 5.2 | 133 | 5.6 | 141.3 | 4.2 | 106.0 |
| 7.5 | 190 | 7.9 | 200.0 | 5.9 | 150.0 |
| 11.8 | 300 | 12.4 | 314.3 | 9.3 | 235.7 |

| Symbol Size (mils) | SXGA High-Density Read Range Testings | | | |
|--------------------|---------------------------------------|------|---------|-----|
| | 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 |

| Symbol Size (mils) | SXGA Standard Density Read Range Testings | | | |
|--------------------|---|------|---------|-----|
| | IE (mm) | PPE | OE (mm) | PPE |
| 5 | 50 | 2.7 | 94 | 1.6 |
| 7.5 | 50 | 4.4 | 143 | 1.7 |
| 10 | 50 | 5.6 | 186 | 1.7 |
| 15 | 50 | 8.7 | 282 | 1.7 |
| 20 | 50 | 11.5 | 308 | 2.1 |

| 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 |

