MINI HAWK

MINI Hawk: At a Glance

- *Decode speed and read range: Varies by model*
- *X-Mode Decoding Technology*
- *Autofocus*
- *Optional USB Connectivity*

MINI Hawk 3MP: 3 megapixel resolution imager
MINI Hawk HR: High resolution imager
MINI Hawk HS: High speed imager

ESP® Easy Setup Program: Single-point software provides quick and easy setup and configuration of all Omron Microscan readers.

EZ Button: This performs reader setup and configuration with no computer required.

Visible Indicators: Include "good read" green flash, LEDs and symbol positioning tool.

For more information on this product, visit www.microscan.com.

MINI Hawk: Available Codes

Linear	All Standard	Postal Codes
Stacked	MicroPDF, PDF417, GS1 Databar	
2D	Data Matrix, QR, Micro QR, Aztec	

Ultra-Compact Autofocus Imager

The MINI Hawk is a powerful miniature imager that solves a wide range of data tracking and traceability needs across all industries. It provides aggressive barcode reading algorithms and easy setup for any 1D, 2D, or direct part mark (DPM) application. Reliable decoding is ensured through X-Mode technology, which reads damaged or difficult symbols with no configuration or setup required.

With easy setup, powerful image processing, and multiple configurations, the MINI Hawk is an ideal solution for any barcode or DPM application.

X–Mode Technology
Our patented X-Mode technology provides easy setup and deployment in any application. In addition to reliable decoding of damaged or difficult linear codes and 2D symbols, the MINI Hawk features advanced decode algorithms to read a wide range of direct part marks.

Flexibility
Mulitple resolutions are available to provide solutions to a wide range of applications.

Wide Field of View
Read symbols as large as 2" (50.8 mm) square as close as 1" (25.4 mm) with diffractive field illumination and optional right angle mirror.

Compact and Lightweight
Miniature form factor fits easily in tight spaces, and is lightweight for mounting into robotic applications.

Autofocus
For real time dynamic autofocus, position the symbol at the center of the field of view, and push the EZ button. The MINI Hawk automatically adjusts focal distance and sets internal parameters to optimize the symbol.

Application Examples
Assembly line manufacturing
Component tracking
Automotive
- Dot peen mark on power-train components
- Laser marks on automotive electronics components

Medical devices
- Laser marks on components

Electronics
- Laser markings on printed circuits boards, flex circuits

Semiconductors
- Laser marks on packages and components

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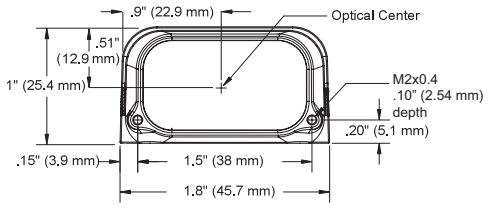
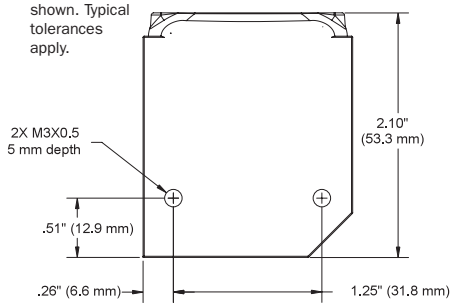
MINI HAWK SPECIFICATIONS AND OPTIONS

Front

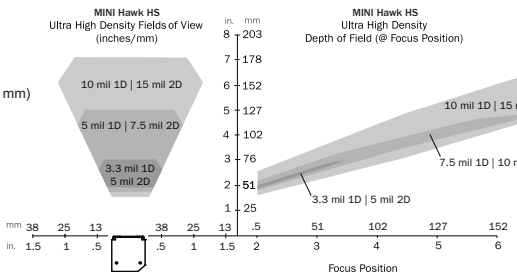


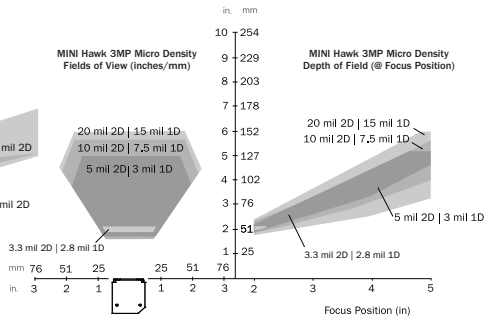
Note: Nominal dimensions shown. Typical tolerances apply.

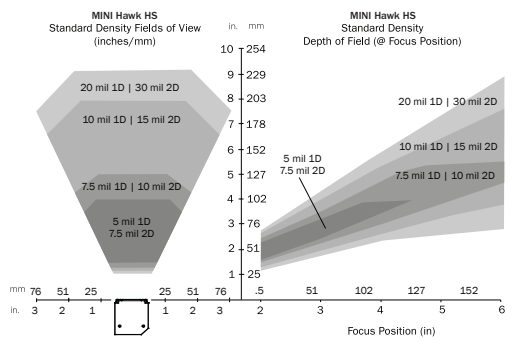
Base

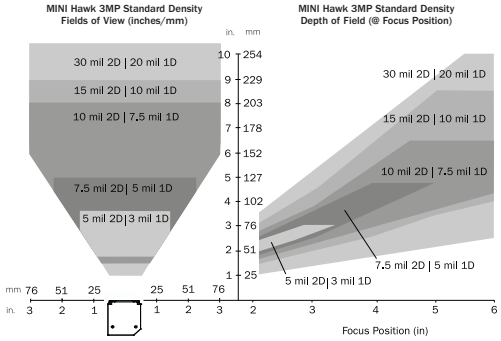


READ RANGES (GRAPHS AND TABLES)









Narrow-bar-width		Field of View (maximum)	Read Range (using autofocus)
1D	2D		
Ultra High Density			
.0033” (0.08 mm)	.005” (0.13 mm)	1.6” (40 mm)	1.9 to 4.4” (47 mm to 110 mm)
.0075” (0.19 mm)	.010” (0.25 mm)	2.5” (64 mm)	1.7 to 6.7” (42 mm to 170 mm)
.015” (0.38 mm)	.020” (0.51 mm)	2.9” (74 mm)	1.5 to 8.0” (38 mm to 203 mm)
Standard Density			
.005” (0.13 mm)	.0075” (0.19 mm)	2.8” (72 mm)	1.6 to 4.4” (41 mm to 112 mm)
.0075” (0.19 mm)	.010” (0.25 mm)	3.8” (97 mm)	1.5 to 6.2” (38 mm to 157mm)
.010” (0.25 mm)	.015” (0.38 mm)	4.7” (118 mm)	1.4 to 7.6” (36 mm to 193 mm)
.020” (0.51 mm)	.030” (0.76 mm)	6.2” (158 mm)	1.3 to 10.0” (33 mm to 254 mm)

MINI Hawk HS units used for data provided in table. Subject to change. See User Manual for complete data.

MECHANICAL

Height: 1” (25.4 mm) **Width:** 1.80” (45.7 mm)
Depth: 2.10” (53.3 mm) **Weight**: 2 oz. (57 g)

ENVIRONMENTAL

Enclosure: IP54 (category 2)
Humidity: up to 90% (non-condensing)
Operating Temperature: 0° to 40°C (32° to 104°F)
Storage Temperature: -50° to 75° C (-58° to 167°F)

CE MARK

EN 55024: 1998 ITE Immunity Standard
EN 55022:98 ITE Disturbances

LIGHT SOURCE

Type: High output LEDs

LIGHT COLLECTION OPTIONS

Progressive scan, square pixel. Software adjustable shutter speed, electronic shutter
MINI Hawk 3MP: 2048 by 1536 pixels (QXGA)
MINI Hawk HR: 1280 by 1024 pixels (SXGA)
MINI Hawk HS: 752 by 480 pixels (WVGA)

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

READ PARAMETERS

Pitch: ±30° **Skew**: ±30° **Tilt**: 360°
Decode Rate: Up to 60 decodes per second (HS model)
Focal Range: 1.3 to 9.3” (33 to 236 mm) (autofocus)

CONNECTOR

Type: 3 ft. cable terminated with High Density 15-pin D-Sub socket connector or USB Type A connector

INDICATORS

LEDS: Read Performance, Power, Read Status
Green Flash: Good read **Blue V:** Symbol locator
Beeper: Good read, match/mismatch, noread, serial command confirmation, on/off

COMMUNICATION PROTOCOLS

Standard Interface: RS-232, RS-422, or USB

HOST CONNECTOR/PIN ASSIGNMENTS

High Density 15 Pin D-sub Socket Connector

Pin No.	Host RS232	Host/Aux RS232	Host RS422/485	In/ Out
1	Power +5 VDC			In
2	TxD	TxD	TxD(–)	Out
3	RxD	RxD	RxD(–)	In
4	Power/Signal Ground			
5	NC			
6	RTS	Aux TxD	TxD(+)	Out
7	Output 1 TTL			Out
8	Default configuration[a]			In
9	Trigger			In
10	CTS	Aux RxD	RxD (+)	In
11	Output 3 TTL			Out
12	New Master (NPN)			In
13	Chassis ground[b]			
14	Output 2 TTL			Out
15	NC			

a. The default is activated by connecting pin 8 to ground pin 4.
b. Chassis ground: Used to connect chassis body to earth ground only. Not to be used as power or signal return.

ELECTRICAL

Power: 5 VDC +/– 5 %, 200 mV p-p max. ripple, 494 mA @ 5 VDC (typ.) **Optional Int.:** 10-28 V Accessory

DISCRETE I/O

Trigger Input, New Master: 5 to 28 VDC rated (.16 mA)
Outputs (1, 2, 3): 5V TTL compatible, can sink 10 mA and source 10mA
Optional I/O: Optoisolated (with IC-332 accessory)

QMS CERTIFICATION

www.microscan.com/quality

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Read Range and other performance data is determined using high quality Grade A symbols per ISO/IEC 15415 and ISO/IEC 15416 in a 25° C environment. For application-specific Read Range results, testing should be performed with symbols used in the actual application. Omron Microscan Applications Engineering is available to assist with evaluations. Results may vary depending on symbol quality. **Warranty–**For current warranty information on this product, please visit www.microscan.com/warranty.

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