

MINI HAWK SERIES



Mini Imagers for Direct Part Marks

MINI Hawk imagers pack aggressive direct part mark (DPM) reading algorithms into a miniature imager that is both powerful and easy to use for barcode and 2D track, trace and control applications. Aggressive decoding is ensured through X-Mode technology, which reads damaged or difficult symbols with no configuration or setup required.

With multiple resolutions and high speed configurations available, there is a MINI Hawk imager to solve virtually any challenging application.


MINI Hawk Series: At a Glance

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


MINI HAWK 3: 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 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 Series: Available Codes

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

Decode Any Symbol

The MINI Hawk consistently reads damaged, distorted or otherwise challenging direct part marks with our patented decode algorithms.

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.

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.

X-Mode Technology

In addition to the most aggressive decoding available, X-Mode technology provides easy setup and deployment of the MINI Hawk in any application.

Compact and Lightweight

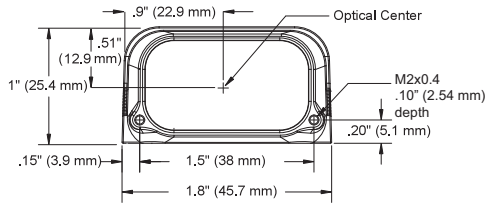
Miniature form factor fits easily in tight spaces, and is lightweight for mounting into robotic applications.

Application Examples

- 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

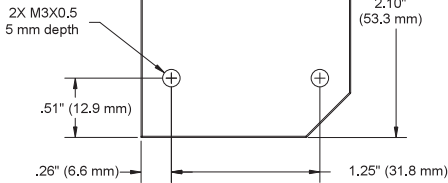
MINI HAWK SERIES SPECIFICATIONS AND OPTIONS

Front



Note: Nominal dimensions shown. Typical tolerances apply.

Base



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 3: 2048 by 1536 pixels (QXGA)
MINI HAWK HR: 1280 by 1024 pixels (SXGA)
MINI HAWK HS: 752 by 480 pixels (WVGA)



SYMBOLOGIES

2D Symbolologies: Data Matrix (ECC 0-200), QR Code, Micro QR Code, Aztec Code
Stacked Symbolologies: PDF417, Micro PDF417, GS1 Databar (Composite & Stacked)
Linear Barcodes: Code 39, Code 128, BC 412, I2 of 5, UPC/EAN, Codabar, Code 93, PharmacoCode, 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

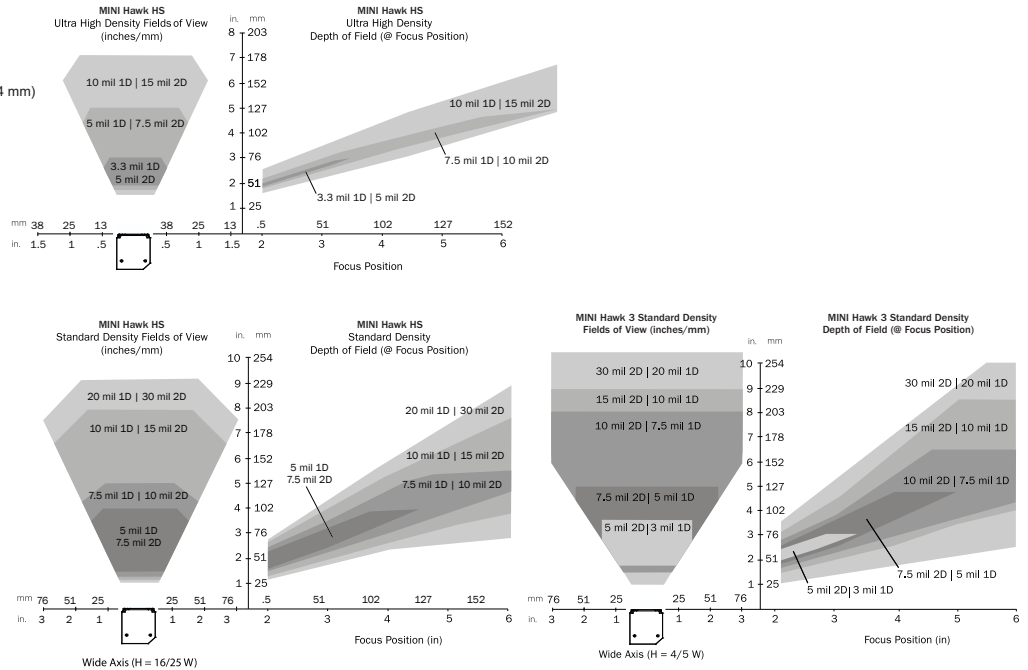
INDICATORS

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

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" (0.38 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 157 mm)
.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.

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)

SAFETY CERTIFICATIONS DESIGNED FOR

FCC, UL/cUL, CE, CB

ROHS/WEEE COMPLIANT

ISO CERTIFICATION

Certified ISO 9001:2008 Quality Management System

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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. Microscan Applications Engineering is available to assist with evaluations. Results may vary depending on symbol quality. **Warranty**—One year limited warranty on parts and labor. Free extended 3 year warranty upon online product registration.

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