MINI HAWK Xi

Compact Shape/Size

ACTUAL SIZE SHOWN
Height: 1" (25.4 mm)
Width: 1.80" (45.7 mm)
Length: 2.10" (53.3 mm)

X-Mode Technology

Integrated Ethernet
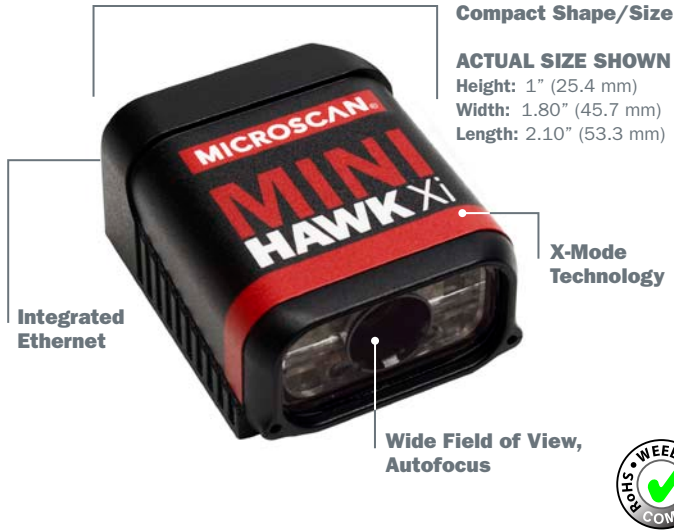
Wide Field of View, Autofocus

RoHS • WEEE COMPLIANT

Miniature Autofocus Ethernet Imager

The MINI HAWK Xi industrial imager packs high performance decoding into a compact package for for easy setup and reliable reading in almost any automation environment. Aggressive X-Mode technology reads any barcode, 2D symbol, or direct part mark (DPM) with no configuration or setup required.

High performance, easy setup, and embedded Ethernet make the MINI HAWK Xi an ideal compact imager for any industrial application.

MINI HAWK Xi: At a Glance

- *Decode speed and read range: Varies by model*
- *X-Mode Decoding Technology*
- *Autofocus*
- *Integrated Ethernet Connectivity*
- *10 to 30 VDC*

SXGA: High resolution imager
WVGA: High speed imager

ESP

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

EZ

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

GOOD READ

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

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

Decode Any Symbol
The MINI HAWK Xi consistently reads damaged, distorted or otherwise challenging direct part marks with our patented decode algorithms.

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

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 Xi automatically adjusts focal distance and sets internal parameters to optimize the symbol.

Embedded Ethernet
Integrated Ethernet TCP/IP is included for industrial connectivity and high speed communication.

Compact and Lightweight
Miniature form factor fits easily in tight spaces, and is lightweight for mounting into robotic applications.
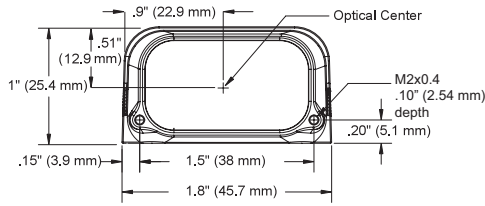
Application Examples
Assembly line manufacturing
Component tracking
Automotive
- Dot peen mark on powertrain components
- Laser marks on automotive electronics components
Medical devices
- Laser marks on components
Electronics
- Laser markings on printed circuits boards, flex circuits
Semiconductors
- Laser marks on packages and components

MINI HAWK Xi: Available Codes

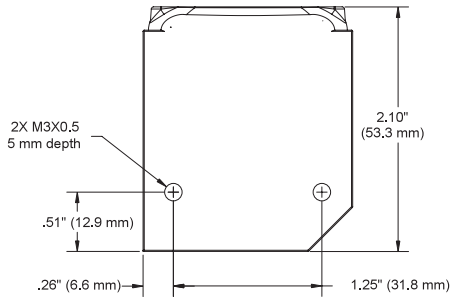|	All Standard	Postal Codes	
Linear			

	MicroPDF	PDF417	GS1 Databar
Stacked			

	Data Matrix	QR	Micro QR	Aztec
2D				

MICROSCAN®

MINI HAWK XI SPECIFICATIONS AND OPTIONS

Front

Optical Center

.9" (22.9 mm)
.51" (12.9 mm)
1" (25.4 mm)
M2x0.4 .10" (2.54 mm) depth
.20" (5.1 mm)
.15" (3.9 mm)
1.5" (38 mm)
1.8" (45.7 mm)

Base

2X M3X0.5 5 mm depth
2.10" (53.3 mm)
.51" (12.9 mm)
.26" (6.6 mm)
1.25" (31.8 mm)

Note: Nominal dimensions shown. Typical tolerances apply.

READ RANGES (GRAPHS AND TABLES)

WVGA Ultra High Density Fields of View (inches/mm)
10 mil 1D | 15 mil 2D
5 mil 1D | 7.5 mil 2D
3.3 mil 1D 5 mil 2D

WVGA Ultra High Density Depth of Field (@ Focus Position)
10 mil 1D | 15 mil 2D
7.5 mil 1D | 10 mil 2D
3.3 mil 1D | 5 mil 2D
Focus Position

WVGA Standard Density Fields of View (inches/mm)
20 mil 1D | 30 mil 2D
10 mil 1D | 15 mil 2D
7.5 mil 1D | 10 mil 2D
5 mil 1D 7.5 mil 2D

WVGA Standard Density Depth of Field (@ Focus Position)
20 mil 1D | 30 mil 2D
5 mil 1D 7.5 mil 2D
10 mil 1D | 15 mil 2D
7.5 mil 1D | 10 mil 2D
Focus Position (in)
Wide Axis (H = 16/25 W)

SXGA High Density Fields of View (inches/mm)
20 mil 2D | 15 mil 1D
10 mil 2D | 7.5 mil 1D
7.5 mil 2D | 5 mil
Wide Axis (H = 4/5 W)

SXGA High Density Depth of Field (@ Focus Position)
20 mil 2D | 15 mil 1D
10 mil 2D | 7.5 mil 1D
7.5 mil 2D | 5 mil 1D
Focus Position (in)

MECHANICAL

Height: 1" (25.4 mm)   **Width:** 1.80" (45.7 mm)
Depth: 2.10" (53.3 mm)   **Weight:** 3.2 oz. (91 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

WARNING
LED LIGHT
DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS
CLASS 1 LED PRODUCT
Light Output: .564 mW. Wavelength: 470, 525, 617 nm.
IEC 60825-1:1993+A1:1997+A2:2001

LIGHT COLLECTION OPTIONS

Progressive scan, square pixel. Software adjustable shutter speed, electronic shutter
SXGA: 1280 by 1024 pixels
WVGA: 752 by 480 pixels

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

Dual Cable: 6 ft. industrial Ethernet cable with RJ45 plug; and 3 ft. cable with M12 plug

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

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 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)

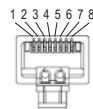WVGA units used for data provided in table. Subject to change. See User Manual for complete data.

PIN ASSIGNMENTS

M12 12-Pin Plug:

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

RJ45 Plug:

1 2 3 4 5 6 7 8

1	TX (+)
2	TX (−)
3	RX (+)
4	NC
5	NC
6	RX (−)
7	NC
8	NC

COMMUNICATION INTERFACE

Interface: RS-232 and Ethernet

ELECTRICAL

Power: 10-30 VDC, 200 mV p-p max. ripple, 132 mA @ 24 VDC (typ.)

DISCRETE I/O

Trigger Input, New Master: Bi-directional, optoisolated, 4.5-28V rated (10 mA at 28 VDC)
Outputs (1, 2, 3): Bi-directional, optoisolated, 1-28V rated, (Ice <100 mA at 24 VDC, current limited by user)

SAFETY CERTIFICATIONS DESIGNED FOR

FCC, UL/cUL, CE, CB, Class A

ROHS/WEEE COMPLIANT

ISO CERTIFICATION

Certified ISO 9001:2008 Quality Management System

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