QX HAWK

Lettore flessibile di immagini per Auto ID ad uso industriale

QX Hawk è il primo lettore di immagini al mondo ad essere totalmente integrato con tecnologia a lenti liquide, che permette una flessibilità di messa a fuoco infinita. Colmando il divario tra semplicità d'uso e prestazioni, QX Hawk dispone di un sistema a zoom ottici modulare ad alta risoluzione, un sistema di decodifica X-Mode avveniristico e una connettività "plug-and-play" semplice. Il lettore di immagini QX Hawk è in grado di leggere facilmente qualsiasi codice a barre o simbolo 2D, compresi i simboli DPM (direct part mark) 2D più impegnativi, in qualsiasi ambiente ed entro pochi secondi dall'installazione.

Decodifica di qualsiasi simbolo

Grazie agli straordinari algoritmi di decodifica X-Mode, QX Hawk è in grado di leggere regolarmente qualsiasi cosa, dai simboli a basso contrasto, danneggiati o particolarmente impegnativi ai simboli Data Matrix da 3,3 mil ad alta densità, fino ai codici a barre lineari molto lunghi.

Prestazioni straordinarie

QX Hawk è alimentato da un processore ARM/DSP dual core che consente la lettura di immagini ad alta velocità e la configurazione e comunicazione in tempo reale. L'elaborazione integrata, abbinata a tre input/output ad alta velocità direttamente associati al lettore QX Hawk, permette di fornire funzioni di controllo a livello di linea.

Semplicità di utilizzo

Oltre al formato compatto che garantisce un posizionamento flessibile, QX Hawk dispone anche di indicatori LED visibili, schema di puntamento laser, luce lampeggiante di colore verde di "lettura valida" e un pulsante EZ per l'installazione e la configurazione immediate.

Sistema ottico avanzato

La tecnologia di elaborazione delle immagini avanzata comprende un sistema a zoom ottici modulare ad alta risoluzione che consente al lettore QX Hawk di leggere i simboli a distanze comprese tra 20 mm e 800 mm, e addirittura oltre. Abbinato all'autofocus a lenti liquide in corso di brevetto, QX Hawk può coprire facilmente quasi ogni applicazione Auto ID.

Protocolli Ethernet

Vengono forniti protocolli Ethernet integrati per le comunicazioni ad alta velocità.

Design robusto

QX Hawk presenta un design industriale robusto con un contenitore IP65/67 in lega pressofusa e connettori M12.

Esempi di applicazione

- Schede a circuiti stampati
- Elettronica e produzione di semiconduttori
- Parti meccaniche
- Industria aerospaziale
- Dispositivi medici

QX Hawk: panoramica

- *Decodifiche/secondo: fino a 60*
- *Campo di lettura: Variabile in base al modello*
- *Autofocus a lenti liquide e zoom modulare*
- *Connettività Ethernet integrata*
- *Opzioni di configurazione: 0.4MP CMOS o 1.3MP CCD*

ESP® Easy Setup Program: La soluzione software single-point fornisce funzionalità di impostazione e configurazione rapide e semplificate per tutti i lettori Microscan.

Pulsante EZ: Questo pulsante consente di eseguire l'impostazione e la configurazione del lettore senza l'ausilio del computer.

Indicatori visibili: Gli indicatori delle prestazioni includono una luce lampeggiante di colore verde di "lettura valida" e LED.

Piattaforma QX: La combinazione tra sistema Quick Connect e tecnologia X-Mode fornisce capacità semplificate di connessione, rete e decodifica a prestazioni elevate.

Per ulteriori informazioni su questo prodotto, visitare il sito Web www.microscan.com.

QX Hawk: Codici disponibili

Lineari	Standard	Codici postali
Stacked	MicroPDF	PDF417 / GS1 Databar
2D	Data Matrix / QR / Micro QR / Aztec	

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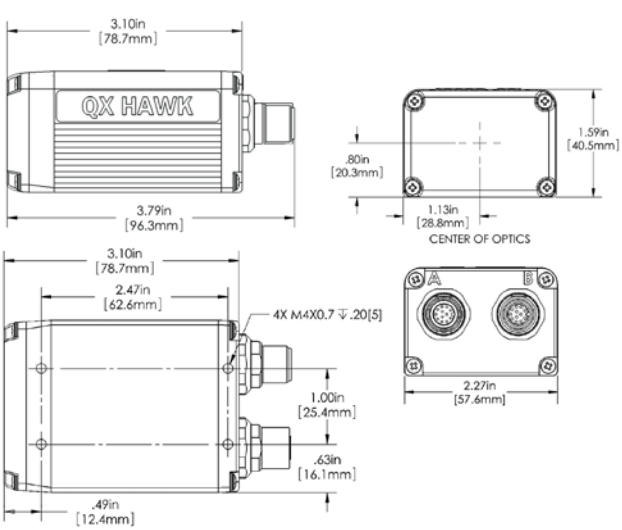
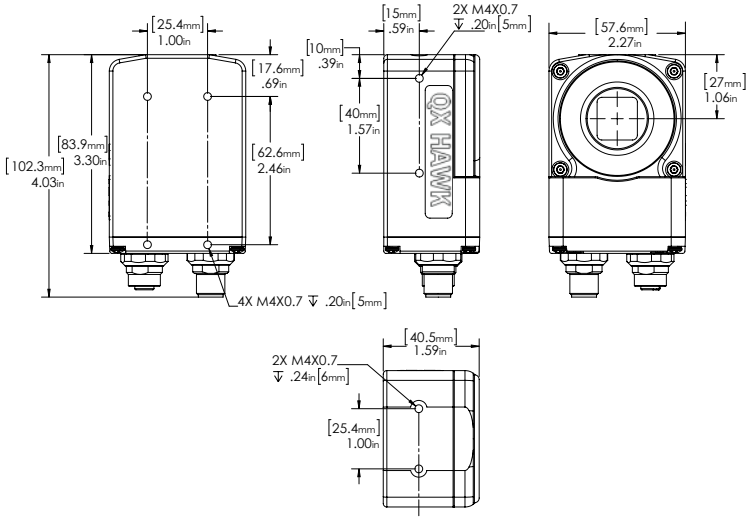
QX Hawk Flexible, Industrial Imager

Specifications and Options





NOTE: Nominal dimensions shown. Typical tolerances apply. For Integrated Optics Model Read Range charts and information, see Page 3.

MECHANICAL (INTEGRATED OPTICS)
Height: 1.59" (40.5 mm)
Width: 2.27" (57.6 mm)
Depth: 3.79" (96.3 mm)
Weight: 10 oz. (280 g)

MECHANICAL (C-MOUNT OPTICS)
Height: 4.03" (102.3 mm)
Width: 2.27" (57.6 mm)
Depth: 1.59" (40.5 mm)
Weight: 11 oz. (320 g)

ENVIRONMENTAL
Enclosure: Die-cast aluminum, IP65/67 rated
CMOS Operating Temperature: 0° to 50° C (32° to 122° F)
CCD Operating Temperature: 0° to 45° C (32° to 113° F)
Storage Temperature: -29° to 70° C (-20° to 158° F)
Humidity: Up to 90% (non-condensing)

COMMUNICATION INTERFACE
Interface: RS-232/422/485 or Ethernet

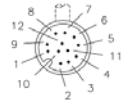
CE MARK
General Immunity for Light Industry:
EN 55024: 1998 ITE Immunity Standard
Radiated and Conducted Emissions of ITE Equipment: EN 55022:98 ITE Disturbances

LIGHT SOURCE (INTEGRATED OPTICS)
Type: High output LEDs

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

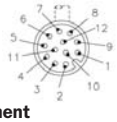
LIGHT COLLECTION OPTIONS
Progressive scan, square pixel.
Shutter: Software adjustable 10 µs to 1/60 second
Sensor: 1/3 inch
WVGA: CMOS, 752 by 480 pixels, up to 60 fps
SXGA: CCD, 1280 by 960 pixels, up to 20 fps

PIN ASSIGNMENTS
CONNECTOR A
M12 12-pin plug:



Pin	Assignment
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

CONNECTOR B
M12 12-pin socket:



Pin	Assignment
9	TxD/RTS
10	RxD/CTS
2	Power
7	Ground
1	Trigger
8	Input Common
3	Terminated
4	Input 1
5	422/485 TxD (+)
11	422/485 TxD (–)
6	422/485 RxD (+)
12	422/485 RxD (–)

ETHERNET CONFIGURATION CONNECTOR B
M12 8-pin socket:

Pin	Assignment
1	Terminated
2	Terminated
3	Terminated
4	TX (–)
5	RX (+)
6	TX (+)
7	Terminated
8	RX (–)

INDICATORS
LEDS: Read Performance, Power, Read Status, Network activity, I/O **Beeper:** Good read, match/mismatch, noread, serial command confirmation, on/off
INTEGRATED OPTICS MODEL ONLY:
Green Flash: Good read **Red X:** Symbol locator

READ PARAMETERS
Pitch: ±30° **Skew**: ±30° **Tilt**: 360°
CMOS Decode Rate: Up to 60 decodes per second
CCD Decode Rate: Up to 20 decodes per second

LASER LIGHT (INTEGRATED OPTICS)
Type: Laser diode
Output Wavelength: 655 nm nominal
Operating Life: 50,000 hours @ 25° C
Safety Class: Visible laser: Class 1

CLASS 1 LASER PRODUCT
Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

PROTOCOLS
Point-to-Point, Point-to-Point w/RTS/CTS, Point-to-Point w/XON/XOFF, Point-to-Point w/RTS/CTS & XON/XOFF, Multidrop, Daisy Chain, User-Defined Multidrop, Ethernet TCP/IP, EtherNet/IP

ELECTRICAL
CMOS Power Requirement: 5-28 VDC, 200 mV p-p max ripple, 135 mA at 24 VDC (typ.)
CCD Power Requirement: 5-28 VDC, 200 mV p-p max ripple, 170 mA at 24 VDC (typ.)

DISCRETE I/O
Input 1/Trigger/New Master: Bi-directional, optoisolated, 4.5–28V rated, (13 mA at 24 VDC)
Outputs (1, 2 & 3): Bi-directional, optoisolated, 1–28V rated, (I_{CE} <100 mA at 24 VDC, current limited by user)

SAFETY CERTIFICATIONS
CDRH, FCC, UL/cUL, CE, CB, BSMI (compliant)

ROHS/WEEE COMPLIANT

ISO CERTIFICATION
Certified ISO 9001:2008 Quality Management System

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–**For current warranty information on this product, please visit www.microscan.com/warranty.

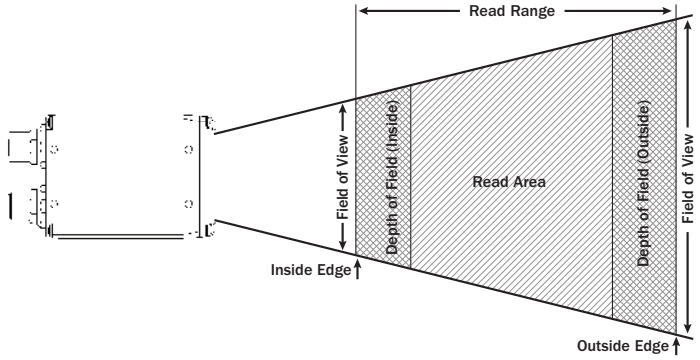
MICROSCAN®

Microscan Systems Inc.
Tel 425 226 5700 / 800 251 7711
Fax 425 226 8250
Microscan Europa
Tel 31 172 423360 / Fax 31 172 423366
Microscan Asia Pacifico
Tel 65 6846 1214 / Fax 65 6846 4641

www.microscan.com
Informazioni sui prodotti: info@microscan.com
Assistenza tecnica: helpdesk@microscan.com

QX Hawk Flexible, Industrial Imager

Specifications and Options



INTEGRATED OPTICS MODEL: CMOS MODULAR ZOOM OPTICS

Inches (mm)

12°

Narrow-bar-width		Read Range	Field of View		Depth of Field	
1D	2D	(using autofocus)	Inside Edge	Outside Edge	Inside Edge	Outside Edge
0.0033 (0.08)	0.005 (0.13)	3.4 to 6 (86 to 152)	0.9 (23)	1.42 (36)	0.2 (5)	0.4 (10)
0.0075 (0.19)	0.010 (0.25)	3.3 to 12.2 (83 to 310)	0.9 (23)	2.62 (66)	0.4 (10)	1.5 (38)
0.0150 (0.38)	0.020 (0.51)	3.3 to 13 (82 to 330)	0.9 (23)	2.77 (70)	0.5 (13)	3.5 (89)
0.0350 (0.89)	0.050 (1.27)	4 to 16 (101 to 406)	1.03 (26)	3.34 (85)	0.7 (18)	6.5 (165)

15°

Narrow-bar-width		Read Range	Field of View		Depth of Field	
1D	2D	(using autofocus)	At Inside Edge	At Outside Edge	Inside Edge	Outside Edge
0.0033 (0.08)	0.005 (0.13)	1.9 to 5 (48 to 127)	0.75 (19)	1.53 (39)	0.3 (6)	0.4 (10)
0.0075 (0.19)	0.010 (0.25)	1.8 to 8 (46 to 203)	0.72 (18)	2.28 (58)	0.4 (10)	1 (25)
0.0150 (0.38)	0.020 (0.51)	1.75 to 9 (44 to 229)	0.72 (18)	2.52 (64)	0.5 (13)	3 (76)
0.0350 (0.89)	0.050 (1.27)	3 to 10.8 (76 to 274)	1.03 (26)	2.96 (75)	0.6 (15)	4 (101)

30°

Narrow-bar-width		Read Range	Field of View		Depth of Field	
1D	2D	(using autofocus)	Inside Edge	Outside Edge	Inside Edge	Outside Edge
0.0033 (0.08)	0.005 (0.13)	1 to 3 (25 to 76)	0.83 (21)	1.8 (46)	0.4 (10)	0.8 (20)
0.0075 (0.19)	0.010 (0.25)	1 to 6.5 (25 to 165)	0.83 (21)	3.5 (89)	0.8 (20)	1.8 (46)
0.0150 (0.38)	0.020 (0.51)	1 to 16 (25 to 406)	0.83 (21)	8.3 (211)	2 (51)	8.5 (216)
0.0350 (0.89)	0.050 (1.27)	2 to 32 (51 to 813)	1.3 (33)	16.4 (417)	3 (76)	21.5 (546)

45°

Narrow-bar-width		Read Range	Field of View		Depth of Field	
1D	2D	(using autofocus)	Inside Edge	Outside Edge	Inside Edge	Outside Edge
0.0075 (0.19)	0.010 (0.25)	1 to 5 (25 to 127)	1.3 (33)	4.1 (104)	1.5 (38)	2 (51)
0.0150 (0.38)	0.020 (0.51)	1 to 9.5 (25 to 241)	1.3 (33)	7.5 (191)	2 (51)	6 (152)
0.0350 (0.89)	0.050 (1.27)	1 to 23.5 (25 to 597)	1.3 (33)	18.3 (465)	3.8 (97)	19 (483)

NOTE: Read ranges are for specific element sizes as listed in the tables.

INTEGRATED OPTICS MODEL: CCD MODULAR ZOOM OPTICS

Inches (mm)

12°

Narrow-bar-width		Read Range	Field of View		Depth of Field	
1D	2D	(using autofocus)	Inside Edge	Outside Edge	Inside Edge	Outside Edge
0.002 (0.05)	0.0033 (0.08)	3.5 to 7 (87 to 178)	0.9 (23)	1.62 (41)	0.1 (3)	0.3 (8)
0.005 (0.13)	0.0075 (0.19)	3.4 to 12 (86 to 304)	0.9 (23)	2.62 (66)	0.2 (5)	1 (25)
0.010 (0.25)	0.0150 (0.38)	3.3 to 13 (83 to 330)	0.9 (23)	2.77 (70)	0.4 (10)	2.5 (64)
0.020 (0.51)	0.0300 (0.76)	4 to 14 (101 to 355)	1.03 (26)	2.96 (75)	0.6 (15)	5 (127)

15°

Narrow-bar-width		Read Range	Field of View		Depth of Field	
1D	2D	(using autofocus)	At Inside Edge	At Outside Edge	Inside Edge	Outside Edge
0.002 (0.05)	0.0033 (0.08)	2 to 5 (51 to 127)	0.78 (20)	1.53 (39)	0.2 (5)	0.4 (10)
0.005 (0.13)	0.0075 (0.19)	1.9 to 8.3 (48 to 210)	0.75 (19)	2.35 (60)	0.3 (8)	1 (25)
0.010 (0.25)	0.0150 (0.38)	1.9 to 9.5 (47 to 241)	0.75 (19)	2.65 (67)	0.5 (13)	3 (76)
0.020 (0.51)	0.0300 (0.76)	3 to 10.3 (76 to 261)	1.03 (26)	2.84 (72)	0.6 (15)	4.5 (114)

30°

Narrow-bar-width		Read Range	Field of View		Depth of Field	
1D	2D	(using autofocus)	Inside Edge	Outside Edge	Inside Edge	Outside Edge
0.002 (0.05)	0.0033 (0.08)	1 to 3 (25 to 76)	0.83 (21)	1.8 (46)	0.4 (10)	0.8 (20)
0.005 (0.13)	0.0075 (0.19)	1 to 6.5 (25 to 165)	0.83 (21)	3.5 (89)	0.8 (20)	1.8 (46)
0.010 (0.25)	0.0150 (0.38)	1 to 16 (25 to 406)	0.83 (21)	8.3 (211)	2 (51)	8.5 (216)
0.020 (0.51)	0.0300 (0.76)	2 to 32 (51 to 813)	1.3 (33)	16.4 (417)	3 (76)	21.5 (546)

45°

Narrow-bar-width		Read Range	Field of View		Depth of Field	
1D	2D	(using autofocus)	Inside Edge	Outside Edge	Inside Edge	Outside Edge
0.005 (0.13)	0.0075 (0.19)	1 to 5 (25 to 127)	1.3 (33)	4.1 (104)	1.5 (38)	2 (51)
0.010 (0.25)	0.0150 (0.38)	1 to 9.5 (25 to 241)	1.3 (33)	7.5 (191)	2 (51)	6 (152)
0.020 (0.51)	0.0300 (0.76)	1 to 23.5 (25 to 597)	1.3 (33)	18.3 (465)	3.8 (97)	19 (483)

NOTE: Read ranges are for specific element sizes as listed in the tables.

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