

VISION MINI XI



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

Miniature Ethernet Vision System

The Vision MINI Xi is an ultra-compact smart camera featuring industrial connectivity and a complete vision tool set for machine vision tasks at close range. Manufacturing engineers can easily implement robust inspection, color matching, symbol decoding, OCR and more in tight spaces without compromise.

With integrated Ethernet and serial connectivity, 24 V interface, and optically isolated I/O, the Vision MINI Xi is ideal for use in any industrial application.

Vision MINI Xi: At a Glance

- Ultra-compact shape and size
- Complete with processor, lens, illumination and AutoVISION® software for easy integration into embedded applications
- Mono and color sensor options
- Integrated Ethernet Connectivity
- 10 to 30 VDC



AutoVISION Software (WVGA/SXGA only): Provides a simple setup and runtime interface for solving basic to mid-range vision applications.



Visionscape Software (QXGA standard; WVGA/SXGA optional): Enables scripting and other advanced programming capabilities.



Microscan Link: Allows visualization and management of tool values on external systems (PLC, PC, or HMI).



CloudLink: Displays linked tool values in a fully-customizable web-based HMI on browser-enabled devices.

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

Vision MINI Xi: Capabilities



- 1D/2D symbol decoding
- Optical Character Recognition (OCR)
- Symbol Quality Verification and OCV
- Dynamic part location
- Assembly verification
- Dimensional measurements

Plus Visionscape Option:

- Image transformation and scaling
- Precision calibration
- Custom vision tools (scripting)
- Program control functions
- 50+ machine vision tools

Compact & Lightweight

The Vision MINI Xi is the world's smallest fully integrated smart camera with embedded Ethernet. Its compact size allows flexible positioning in tight spaces. The lightweight and durable magnesium alloy case weighs little more than 3 oz.

Autofocus

The AutoVISION button provides one button set up of targeting and autofocus, and sets internal parameters to optimize image capture.

Powerful Capabilities

Features a robust tool set to address a wide range of automation challenges using vision technology. AutoVISION software provides an intuitive interface, step-by-step guides, and a library of presets that allow easy set up and deployment.

Embedded Ethernet

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

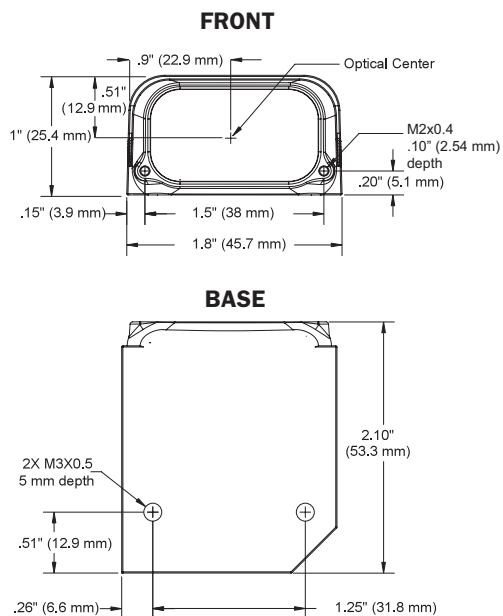
Scalable System

AutoVISION software allows easy expansion to more complex vision applications through migration to full Visionscape® software.

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

VISION MINI Xi SMART CAMERA SPECIFICATIONS AND OPTIONS



Note: Nominal dimensions shown. Typical tolerances apply.

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

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

LIGHT SOURCE

Type: High output LEDs



SYMBOLGY TYPES

2D Symbologies: Data Matrix (ECC 0-200), QR Code, Micro QR Code, Aztec Code, Dot 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

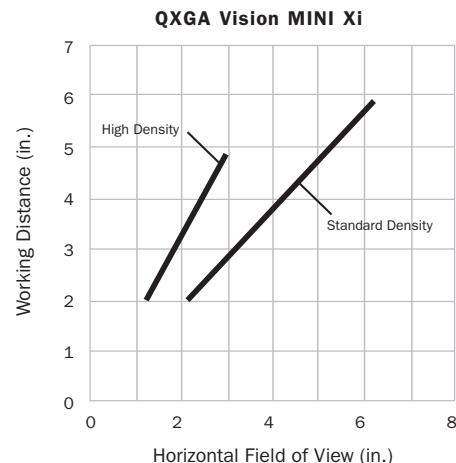
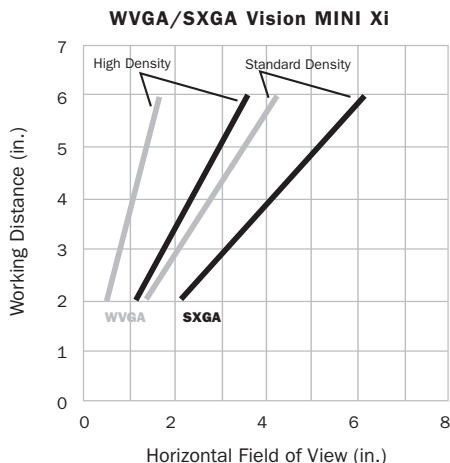
INDICATORS

LEDs: Trigger, Pass, Fail, Mode, Power, Link/Act
Green Flash: Pass
Blue V: Target locator

SENSOR OPTIONS

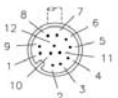
Progressive scan, square pixel.
Shutter: Software adjustable 10 μs to 16.7 ms
Shutter Type: Global (WVGA), Rolling (SXGA, QXGA)
Sensor: 1/2 inch
WVGA: CMOS 752 x 480 pixels, up to 60 fps
SXGA: CMOS 1280 x 1024 pixels, up to 15 fps
QXGA (Color): CMOS 2048 x 1536 pixels, up to 5 fps

FIELD OF VIEW AND WORKING DISTANCE



PIN ASSIGNMENTS

M12 12-Pin Plug:



9	Host Rx/D
10	Host Tx/D
2	Power
7	Ground
1	Trigger
8	Input Common
3	Default
4	Learn
5	Output 1
11	Output 2
6	Output 3
12	Output Common

RJ45 Plug:



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

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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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 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.

SOFTWARE OPTIONS

WVGA, SXGA: AutoVISION included, Visionscape and Verification/OCV upgrades available
QXGA (Color): Visionscape included

IMAGING PARAMETERS

Focal Range: 2 to 6" (50.8 to 152.4 mm) (autofocus)

IMAGING RATES

WVGA: up to 60 full frame images/second
SXGA: up to 15 full frame images/second
QXGA: up to 5 full frame images/second

CONNECTOR

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

ELECTRICAL POWER

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

COMMUNICATION PROTOCOLS

Standard Interface: RS-232 and Ethernet

DISCRETE I/O

Trigger Input, Learn: Bi-directional, optoisolated, 4.5-28V rated (10 mA at 28 VDC)
Outputs (1, 2, 3): Bi-directional, optoisolated, 1-28V rated, (I_{ce} <100 mA at 24 VDC, current limited by user)

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