VISION MINI Xi

Miniature Ethernet Vision System

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

With integrated Ethernet and serial connectivity, 24V, 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 form factor*
- *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 and 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 versatile 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 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

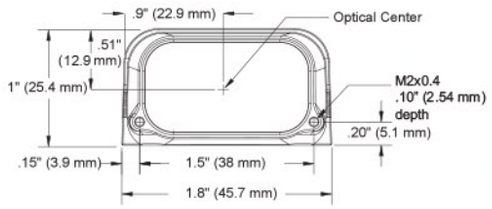
Electronics
- Laser markings on printed circuits boards, flex circuits

Semiconductors
- Laser marks on packages and components

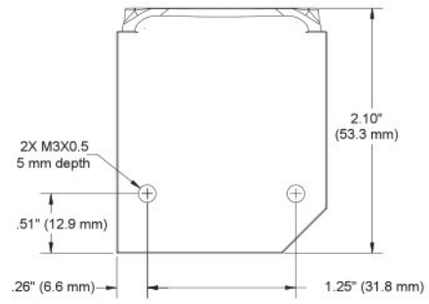
MICROSCAN®

Vision MINI Xi Smart Camera Specifications and Options

FRONT

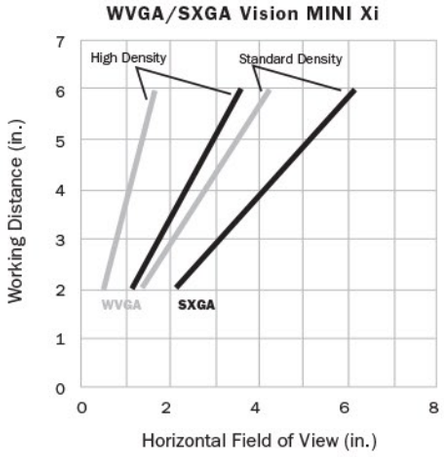


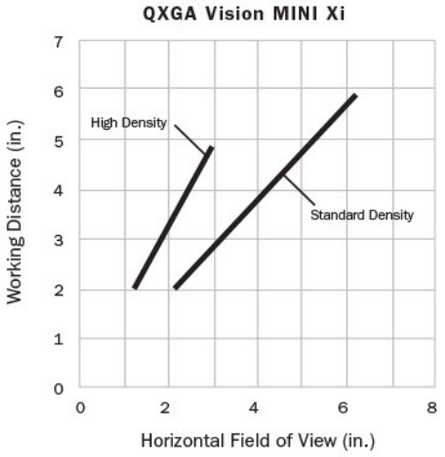
BASE



Note: Nominal dimensions shown. Typical tolerances apply.

FIELD OF VIEW AND WORKING DISTANCE





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

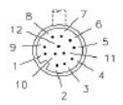
SYMBOLOGY TYPES
2D Symbologies: Data Matrix (ECC 0-200), QR Code, Micro QR Code, Aztec Code, Dot Code
Stacked Symbologies: PDF417, Micro PDF417, GS1 Databar (Composite and Stacked)
Linear Barcodes: Code 39, Code 128, BC412, I2 of 5, UPC/EAN, Codabar, Code 93, Pharmacode, PLANET, PostNet, Japanese Post, 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

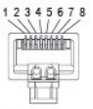
PIN ASSIGNMENTS

M12 12-Pin Plug:



9	Host RxD
10	Host TxD
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

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: EtherNet/IP, Ethernet TCP/IP, RS-232

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, (Ice <100 mA at 24 VDC, current limited by user)