VISION MINI SMART CAMERA

World's Smallest Vision System

The Vision MINI smart camera is designed specifically for reliable vision performance in embedded identification and inspection applications. As the world's smallest fully integrated vision system, the Vision MINI's ultra-compact size and wide angle optics provide the best performance available for machine vision tasks at close range.

With the Vision MINI, OEM design engineers can quickly implement robust inspection, color matching, symbol decoding, OCR and more in a single compact vision solution.

Vision MINI: At a Glance

- *Ultra-compact shape and size*
- *Complete with processor, lens, illumination and AutoVISION software for easy integration into embedded applications*
- *Simultaneously inspect multiple part features*
- *Mono and color sensor options*

AutoVISION Software: Provides a simple setup and run time interface for solving basic to mid-range vision applications.

Visionscape Software (optional): Enables scripting and other advanced programming capabilities.

AutoVISION Button: Performs automatic focus, photometry, and training.

Visible Indicators: Shows inspection status and IO state at a glance.

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

Vision MINI: Capabilities

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

Plus Visionscape Option:

- Optical Character Verification (OCV)
- Image transformation and scaling
- Precision calibration
- Custom vision tools (scripting)

Compact & Lightweight
The Vision MINI is the world's smallest fully integrated smart camera. Its compact size allows flexible positioning in tight spaces. The lightweight and durable magnesium alloy case weighs less than 2 oz.

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

Reliability & Longevity
The Vision MINI delivers both high performance and reliability, along with the assurance of long term availability and support. This is essential for OEMs, who require uninterrupted availability throughout the lifecycle of their products, and enables them to focus on new development instead of obsolescence issues.

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.

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

Application Examples
Clinical instruments
- Tube and cap absence and presence
- Color detection and matching

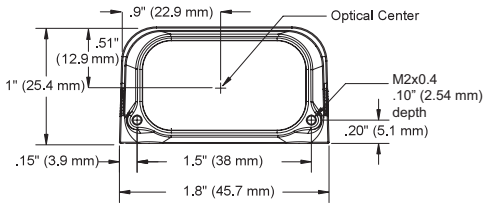
Electronics assembly
- Fiducial location

Pharmaceutical packaging
Medical devices

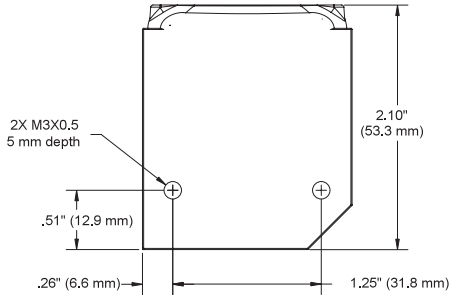
MICROSCAN®

Vision MINI Smart Camera Specifications and Options

FRONT



BASE



Note: Nominal dimensions shown. Typical tolerances apply.

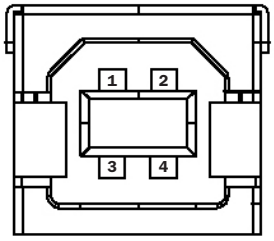
PIN ASSIGNMENTS

High Density 15 Pin D-sub Socket

Pin No.	Host RS-232	In/ Out
1	Power +5 VDC	In
2	TxD	Out
3	RxD	In
4	Power/Signal Ground	
5	NC	
6	NC	Out
7	Output 1 TTL[a]	Out
8	Default configuration[b]	In
9	Trigger	In
10	NC	In
11	Output 3 TTL[a]	Out
12	Learn (NPN)	In
13	Chassis ground[c]	
14	Output 2 TTL[a]	Out
15	NC	

a. Can sink 10 mA and source 10 mA.
b. The default is activated by connecting pin 8 to ground pin 4.
c. Chassis ground: Used to connect chassis body to earth ground only. Not to be used as power or signal return.

USB Type B Socket



No.	Function
1	Vbus (5V)
2	D–
3	D+
4	Ground

MECHANICAL

Height: 1” (25.4 mm)
Width: 1.80” (45.7 mm)
Depth: 2.10” (53.3 mm)
Weight: 2 oz. (57 g)

ENVIRONMENTAL

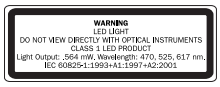
Enclosure: IP54 (category 2)
Humidity: up to 90% (non-condensing)
Operating Temperature: 0° to 40° C (32° to 104° F)
Storage Temperature: -50° to 75° C (-58° to 167° F)

CE MARK

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

Type: High output LEDs



SYMBOLOGY TYPES

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 microseconds to 1/60 seconds
SXGA: 1280 x 1024 pixels
QXGA (Color): 2048 x 1536 pixels

IMAGING PARAMETERS

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

CONNECTOR

Type: 3 ft. cable terminated with High Density 15-pin D-Sub socket connector and USB Type B connector

INDICATORS

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

ELECTRICAL

Power: 5 VDC +/– 5 %, 200 mV p-p max. ripple, 554 mA @ 5 VDC (typ.)
Optional Int.: 10-28 V Accy

COMMUNICATION PROTOCOLS

Standard Interface: RS-232 and/or USB

DISCRETE I/O

Trigger Input: 5 to 28 vdc rated (.16 mA)
Learn: 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

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**–One year limited warranty on parts and labor. Free extended three year warranty available with online product registration.

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