

**Quadrus EZ™ simplifies 2D reading. Fully featured to operate in static or moving applications, Quadrus EZ™ is ideal for any 1D or 2D barcode application or companies considering the transition from 1D to 2D bar codes.**

Quadrus EZ™ is the next generation in vision-based scanning, combining the ease of use of a laser bar code scanner with advanced software features of vision technology.

**Compared to vision systems Quadrus EZ™ :**

- is easy to use, no PC is required.
- is more cost effective.

**Compared to laser bar code scanners Quadrus EZ™:**

- reads 2D symbols.
- has omnidirectional reading.
- has the ability to decode etched or dot peen symbols.

QUADRUS EZ™

## DYNAMIC 1D & 2D BAR CODE READER

**Ease of Use:**

Designed into every aspect of Quadrus EZ™, initial set up can be done in seconds.

**A 2-step setup:**

1. Position symbol using the "X" pattern.
2. Push the EZ™ button to read.

**Field of View Locator & Good Read Indicator:**

A red "X" identifies the field of view center, allowing fast and accurate placement. After the symbol has been targeted, Quadrus EZ™ emits a bright green flash (visible from all angles) signaling a successful read.

**Dynamic Reading:**

High decode speeds allow the Quadrus EZ™ to decode moving symbols, regardless of orientation, at speeds up to 60 reads/sec.

**USB & Ethernet Connectivity:**

Embedded USB and Ethernet protocols are available for high speed data and image transfer.

**2D Label Validation:**

The multiple validation parameters provide information which is helpful for monitoring printing/marketing quality of a symbol to gauge readability.

**Video Input/Output:**

Quadrus EZ™ offers optional video input and output ports. This allows standard analog RS-170 cameras to be used, and a live video feed to view images. Adding a camera can expand optical flexibility to increase focal ranges, or be used where there may be size constraints.

**Symbologies:**

Quadrus EZ™ reads multiple 2D symbologies and traditional linear codes.



**EZ button:**


- Enables locator pattern
- Enables the calibrate mode
- Enables read rate mode
- Defaults the scanner

This simplifies initial set up process and allows the scanner to be configured directly on the line, without the aid of a PC.

**Extensive Focal Range:**

Quadrus EZ™ offers four optical versions, factory adjustable from 2 to 10 inches. Additional focal points and field of views can be achieved by attaching an analog RS-170 progressive scan camera to the unit.

**2D Symbologies**


· Data Matrix  (ECC 0-200)

· QR Code 

**Stacked Symbology**

· PDF417 

**Linear Bar Codes**

· BC412 

· Code 39 

· Code 128 

· I-2 of 5 

Codes depicted above are for display purposes only. For a sample packet, contact Microscan, [info@microscan.com](mailto:info@microscan.com)



**ESP™ Software:**

Quadrus EZ™ operates with Microscan's Easy Setup Program. Microscan's ESP™ software is Windows-based and easy to use.

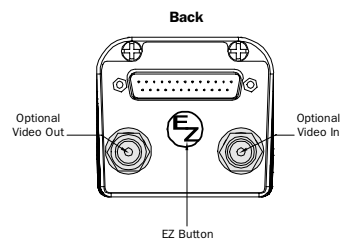
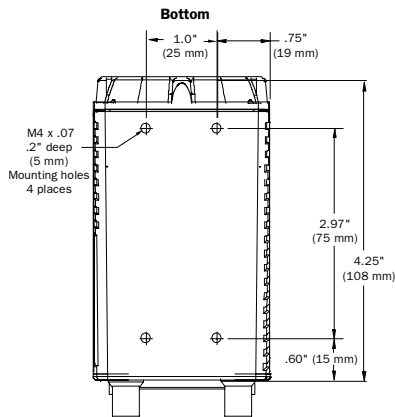
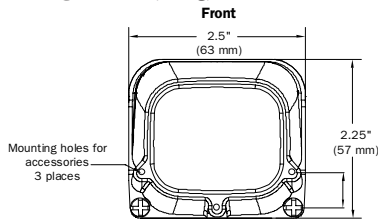
**MICROSCAN®**

# QUADRUS EZ™ DYNAMIC 1D & 2D BAR CODE READER

## SPECIFICATIONS AND OPTIONS

### MECHANICAL

**Height:** 2.25" (57 mm)  
**Width:** 2.5" (64 mm)  
**Depth:** 4.2" (107 mm)  
**Weight:** 12 oz. (340 g)



### ENVIRONMENTAL

**Enclosure:** IP65 (standard unit)  
**With video I/O option:** IP55  
**Operating Temperature:** 0° to 43°C (32° to 109°F), if mounted on a Microscan stand. If mounted on non-metal surface, maximum operating temperature is 40°C (104°F)  
**Storage Temperature:** -50° to 75° C (-58 to 167°F)  
**Humidity:** up to 90% (non-condensing)

### EMISSIONS/IMMUNITY

**ITE Disturbances:** EN55022: 1998 (radiated and conducted). Class A  
**General Immunity:** EN55024:1998 (residential)  
**Heavy Industrial Immunity:** EN61000-6-2:1999

### LIGHT SOURCE

**Type:** High output LEDs

### LIGHT COLLECTION OPTIONS

**CCD Array:** 659 x 494 pixels  
 progressive scan, square pixel.  
 software adjustable shutter speed,  
 electronic mechanism

**CMOS Array:** 640 by 480 pixels  
 progressive scan, square pixel,  
 software adjustable shutter speed,  
 electronic mechanism

### SYMBOLGY TYPES

**2D Symbolgies:**  
 Data Matrix (ECC 0-200), PDF417, QR Code  
**Linear Bar Codes:** Code 39, Code 128, IBM BC 412, I2 of 5.

### QUADRUS EZ™ MAXIMUM 2D SYMBOL SIZES

By Element Size and Lens Type at 4" (102 mm) Focal Length

Field of View (FOV)		Narrow	Medium	Wide	Extra Wide
	<b>X-dimension</b>	.49" (12 mm)	.78" (19 mm)	.95" (24 mm)	1.88" (48 mm)
	<b>Y-dimension<sup>a</sup></b>	.37" (9 mm)	.56" (14 mm)	.71" (18 mm)	1.41" (36 mm)
<b>Symbol</b>	Adjusted Y <sup>1</sup>	.355" (9.0 mm)	.538" (14 mm)	.68" (17 mm)	1.35" (34 mm)
.005" (.127 mm)	Aligned to FOV	64 X 64			
	Rotated <sup>2</sup>	48 X 48			
.0075" (.191 mm)	Aligned to FOV		64 X 64	88 X 88	
	Rotated		48 X 48	64 X 64	
.010" (.254 mm)	Aligned to FOV			64 X 64	
	Rotated			48 X 48	
.015" (.381 mm)	Aligned to FOV				88 X 88
	Rotated				64 X 64

<sup>1</sup> A 20 pixel combined top and bottom buffer (96%) around the symbol is the adjusted Y-dimension.

<sup>2</sup> When 2D symbols are rotated 45°, their maximum Y-dimension is divided by 1.41 to assure readability.

### STANDARD OFFERING

#### CONNECTORS/PIN ASSIGNMENTS

**Host Connector:** 25-pin D-subminiature plug

Pin No.	Host RS232	Host & Aux RS232	Host RS422/485	In/Out
1	Chassis ground			
2	TxD			Out
3	Rx D			In
4	RTS	TxD		Out
5	CTS	RxD		In
6	Output 1 (+)			Out
7	Signal Ground			
8	Output 2 (+)			Out
9	Trigger (-)			In
10	Trigger (+)			In
11	Default configuration <sup>a</sup>			In
12	Input 1 (+)			In
13		RxD (+)		In
14		TxD (-)		Out
15	Output 3 (+)			Out
16		RxD (-)		In
17	Power Ground			
18	Power +10 to 28 VDC			In
19		TXD +		Out
20	Output 1 (-)			Out
21	Output 2 (-)			Out
22	Output 3 (-)			Out
23	Input 1 (-)			In
24	New master (-)			In
25	New master (+)			In

<sup>a</sup>The default is activated by connecting pin 11 to ground pin 7.

#### USB OPTION

**Host Connector:** Pins Utilized

Pin No.	Function	In/Out
13	USB D (+)	In/Out
14	USB D (-)	In/Out
16	USB VBUS	In
19	USB GND	Out

#### ETHERNET OPTION

**Host Connector:** Pins Utilized

Pin No.	Function	In/Out
13	Ethernet RX (+)	In
14	Ethernet TX (-)	Out
16	Ethernet RX (-)	In
19	Ethernet TX (+)	Out

#### VIDEO INPUT (Option)

**Signal System:** Progressive scan  
**Number of Scanning Lines:** 525 lines/non-interlaced  
**Input:** Analog 1 Vp-p

#### VIDEO OUTPUT (Option)

**Signal System:** EIA  
**Number of Scanning Lines:** 525 lines/ 2:1 interlaced  
**Output:** Analog 1 Vp-p/75 ohm

### READ PARAMETERS

**Pitch:** ±30° **Skew:** ±30° **Tilt:** 360°  
**Decode Rate:** Up to 60 decodes per second  
**Focal Range:** 2 to 10 inches (factory adjustable)

### STATUS LIGHTS

**LEDs:** Read Performance, Power, Read Status, and Network Status

### COMMUNICATION PROTOCOLS

**Standard Interface:** RS-232, RS-422, RS-485, RS-232, Daisy Chain  
**Optional Interface:** Ethernet, USB

### ELECTRICAL

**Power Requirements:** Input, 10 to 28 VDC, 200 mV p-p max ripple, 270 mA at 24 VDC (typ.-CMOS), 333 mA at 24 VDC (typ.-CCD).  
**Trigger, New Master, Input 1:** (Optoisolated) 5 to 28 VDC rated, (12mA at 24 VDC).  
**Outputs 1/2/3:** (Optoisolated) 1 to 28 VDC rated, (I<sub>CE</sub> < 100mA at 24 VDC, current limited by user).

### SAFETY CERTIFICATIONS

Designed for: FCC, TÜV, CE, cUL, UL, BSMI

### ISO 9001/Cert. No. 00-1047

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### Specification, 07/02-Base B

Specifications subject to change.

Product specifications are given for typical performance at 25° Celsius (77° Fahrenheit) using grade A labels. Some performance characteristics may vary at high temperatures or other environmental extremes.

**Warranty** — One year limited warranty on parts and labor. Extended warranty available.

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For more details and virtual product tour go to [www.quadrus-ez.com](http://www.quadrus-ez.com).