

QUADRUS EZ™

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

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.

DYNAMIC 1D & 2D BAR CODE READER

Ease of Use:

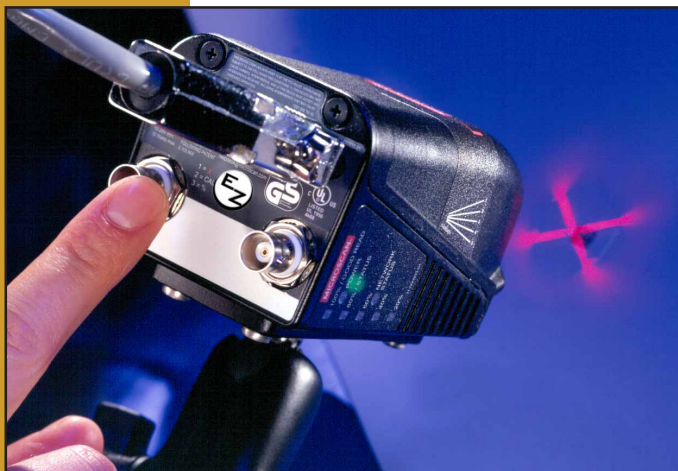
Designed into every aspect of Quadrus EZ™, initial set up can be done in seconds.

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.



EZ button:

- Enables locator pattern
- Enables the calibrate mode
- Enables decodes/seconds 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.

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/marking 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 the 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.

2D Symbologies

· Data Matrix  (ECC 0-200)

· QR Code 

Stacked Symbology

· PDF417 

Linear Bar Codes

· BC 412 

· 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



ESP™ Software:

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

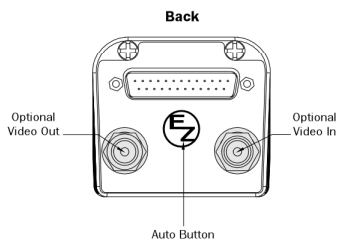
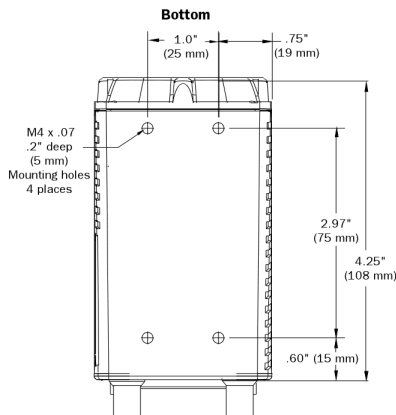
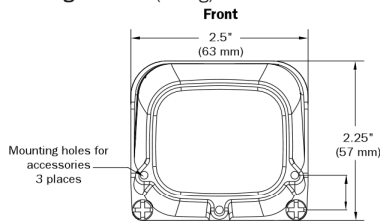
MICROSCAN®

QUADRUS EZ™ BAR CODE AND 2D CODE READER

SPECIFICATIONS AND OPTIONS

MECHANICAL

Height: 2.25" (57 mm)
Width: 2.5" (64 mm)
Depth: 4.2" (108 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), mounted on a Microscan stand.
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 pixels, software adjustable shutter speed, electronic mechanism

SYMBOLGY TYPES

Linear bar codes: Code 39, Code 128, IBM BC 412, I2 of 5.

2D symbolgies:

Data Matrix (ECC 0-200), PDF-417, QR Code

QUADRUS EZ™ MAXIMUM 2D SYMBOL SIZES

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

FOV		Narrow	Medium	Wide	Extra Wide
	X-dimension	.49" (12 mm)	.78" (19 mm)	.95" (24 mm)	1.88" (48 mm)
	Y-dimension^a	.37" (9 mm)	.56" (14 mm)	.71" (18 mm)	1.41" (36 mm)
Symbol	Adjusted Y ¹	.355" (9.0 mm)	.538" (14 mm)	.68" (17 mm)	1.35" (34 mm)
.005" (.127 mm)	Aligned to FOV	64 X 64			
	Rotated ²	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

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

² 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	RxD			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 ^a			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

^a 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 characters

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, 10-28 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, 5-28 VDC rated, (12mA at 24 VDC).

Outputs 1/2/3: optoisolated, 1-28 VDC rated, (I_{ce} < 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, 05/02-Base A

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.

MICROSCAN®

Microscan Systems, Inc.

Tel 800 251 7711 / Fax 425 226 8250

Microscan Europe

Tel 31 172 423360/ Fax 31 172 423366

Microscan Asia Pacific R.O.

Tel 65 6846 1214 / Fax 65 6846 4641

www.microscan.com

Tech Support: helpdesk@microscan.com

Product Information: info@microscan.com

For more details and virtual product tour go to www.quadrus-ez.com.