

# QX-830




## Compact Industrial Laser Scanner


The QX-830 laser scanner combines flexible connectivity with high performance decoding capabilities to reliably read 1D bar codes in almost any automation environment. In addition to the Quick Connect System and X-Mode Technology, the QX-830 features IP65 industrial sealing and optional embedded Ethernet protocols.


High performance, simple connectivity, and the highest quality enclosure make the QX-830 an ideal laser scanner for any industrial application.


### QX-830: At a Glance

- Scans/second: 300 to 1400
- Read Range: 1 to 37" (25 to 940 mm)
- Optional Embedded Ethernet TCP/IP & EtherNet/IP
- IP65 Enclosure

 **ESP® Easy Setup Program:** Single-point software solution provides quick and easy setup and configuration of all Microscan readers.

 **EZ Button:** This performs reader setup and configuration with no computer required.

 **Visible Indicators:** Performance indicators include "good read" green flash and LEDs.

 **QX Platform:** Quick Connect system and X-Mode technology combine to provide high performance connectivity, networking, and decoding.

For more information on this product, visit [www.microscan.com](http://www.microscan.com).

### QX-830: Available Codes

Linear All Standard  


Stacked MicroPDF   PDF417   GS1 Databar  






#### Quick Connect System

The innovative Quick Connect System includes M12 Ultra-Lock™ connectors and cordsets for plug-and-play setup of single or multi-reader solutions.

#### X-Mode Technology

Symbol reconstruction provides decoding of damaged, poorly printed, or poorly aligned 1D bar codes to ensure high read rates and throughput.

#### High Performance

Aggressive decoding capabilities allow reliable reading of bar codes out to 37" (94 cm), at up to a 10" (25.4 cm) beam width.

#### Ethernet Protocols

The QX-830 includes optional embedded Ethernet TCP/IP and EtherNet/IP for high speed communication.

#### Real-time Feedback

Visible LED indicators on the side of the scanner and a "good read" green flash projecting from the front window provide confirmation of the scanner's performance. The green flash is visible within a complete 360 degree radius from the scanner.

#### Flexibility

The compact size of the QX-830 allows flexible positioning for a variety of applications.

#### Application Examples

- Any industrial environment from light to heavy duty
- Conveyor lines
- Packaging and sortation
- Electronics production
- Embedded within machinery

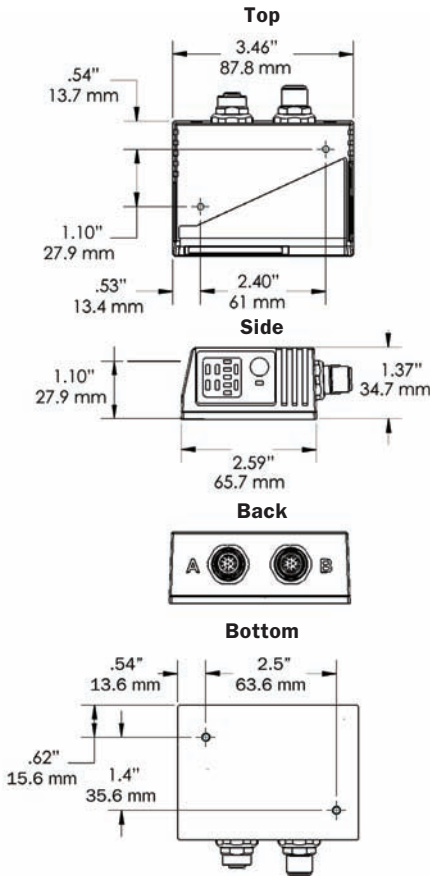
# MICROSCAN®

# QX-830 COMPACT INDUSTRIAL LASER SCANNER

## SPECIFICATIONS AND OPTIONS

### MECHANICAL

**Depth:** 2.59" (66 mm)  
**Width:** 3.47" (88 mm)  
**Height:** 1.38" (35 mm)  
**Weight:** 7.5 oz. (212 g)



### READ RANGES<sup>1</sup>

#### LOW DENSITY RANGE DATA

| Narrow-bar-width | Read Range                |
|------------------|---------------------------|
| .0075" (.191 mm) | 10 to 12" (254 to 305 mm) |
| .010" (.254 mm)  | 7 to 16" (178 to 406 mm)  |
| .015" (.381 mm)  | 6 to 19" (152 to 483 mm)  |
| .020" (.508 mm)  | 5 to 22" (127 to 558 mm)  |
| .040" (1.02 mm)  | 4 to 30" (102 to 762 mm)  |

#### MEDIUM DENSITY RANGE DATA

|                  |                            |
|------------------|----------------------------|
| .0075" (.191 mm) | 2 to 5.2" (51 to 132 mm)   |
| .010" (.254 mm)  | 1.5 to 7.0" (38 to 178 mm) |
| .015" (.381 mm)  | 1.5 to 8.5" (38 to 216 mm) |
| .020" (.508 mm)  | 1.5 to 11" (38 to 280 mm)  |
| .030" (.762 mm)  | 1.0 to 12" (25 to 304 mm)  |

#### HIGH DENSITY RANGE DATA

|                  |  |
|------------------|--|
| .0033" (.084 mm) | Call Microscan                         |
| .005" (.127 mm)  | 4 to 5.0" (102 to 127 mm)              |
| .0075" (.191 mm) | 3.5 to 6.75" (89 to 171 mm)            |
| .010" (.254 mm)  | 3.25 to 8" (82 to 203 mm)              |
| .015" (.381 mm)  | 3.25 to 9" (82 to 228 mm) <sup>1</sup> |

<sup>1</sup>Ranges based on a Grade A, Code 39 label. If your read range falls outside the above ranges, please call Microscan. Data subject to change.

### SCANNING PARAMETERS

**Mirror type:** Rotating, 10-faceted  
**Optional raster mirror image:** 10 raster scan lines over a 2° arc (or 0.500" raster height at 8" (203 mm) distance)  
**Scan rate:** Adjustable from 300 to 1400 scans/sec. **Scan width angle:** Typically 60°  
**Pitch:** ±50° max. **Skew:** ±40° max.  
**Label contrast:** 25% min. absolute dark to light differential at 655 nm wavelength

### PROTOCOLS

Point-to-Point, Point-to-Point w/RTS/CTS, Point-to-Point w/XON/XOFF, Point-to-Point w/RTS/CTS & XON/XOFF, Multidrop, Daisy Chain, User-Defined Multidrop, Ethernet TCP/IP, EtherNet/IP

### PIN ASSIGNMENTS CONNECTOR B

**CONNECTOR A**  
**M12 12-pin plug:**  
 Port 1 - RS-232

**M12 12-pin socket:**  
 Port 2 - RS-232  
 Port 3 - RS-422/485



| Pin Assignment |               |
|----------------|---------------|
| 9              | Host Rx/D     |
| 10             | Host Tx/D     |
| 2              | Power         |
| 7              | Ground        |
| 1              | Trigger       |
| 8              | Input Common  |
| 3              | Default       |
| 4              | New Master    |
| 5              | Output 1      |
| 11             | Output 2      |
| 6              | Output 3      |
| 12             | Output Common |



| Pin Assignment |                         |
|----------------|-------------------------|
| 9              | Port 2 Tx/D/Port 1 RTS  |
| 10             | Port 2 Rx/D/Port 1 CTS  |
| 2              | Power                   |
| 7              | Ground                  |
| 1              | Trigger                 |
| 8              | Input Common            |
| 3              | Terminated              |
| 4              | Input 1                 |
| 5              | Port 3 422/485 Tx/D (+) |
| 11             | Port 3 422/485 Tx/D (-) |
| 6              | Port 3 422/485 Rx/D (+) |
| 12             | Port 3 422/485 Rx/D (-) |

### ETHERNET CONFIGURATION CONNECTOR B

**M12 8-pin socket**  
 Port 4 - Ethernet



| Pin Assignment |               |
|----------------|---------------|
| 1              | Terminated    |
| 2              | Terminated    |
| 3              | Terminated    |
| 4              | Port 4 TX (-) |
| 5              | Port 4 RX (+) |
| 6              | Port 4 TX (+) |
| 7              | Terminated    |
| 8              | Port 4 RX (-) |

### ELECTRICAL

**Power requirement:** 10-28 VDC, 200 mV p-p max ripple, 180mA at 24 VDC (typ.)

### ENVIRONMENTAL

**Enclosure:** Die-cast aluminum, IP65 rated  
**Operating temperature:** 0° to 50°C (32° to 122°F)  
**Storage Temperature:** -29° to 70°C (-20° to 158°F)  
**Humidity:** Up to 90% (non-condensing)

### EMISSIONS

**Heavy industrial:** EN 61000-6-2:2005  
**Radiated emissions:** EN 55022:2006 Class A 30-1000 MHz  
**Conducted emissions:** EN 55022:2006 Class A .15-30 MHz

### COMMUNICATION INTERFACE

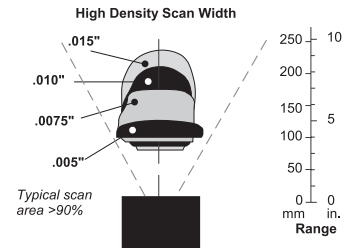
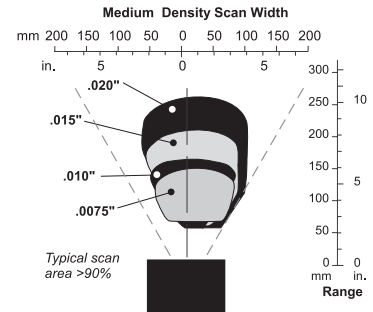
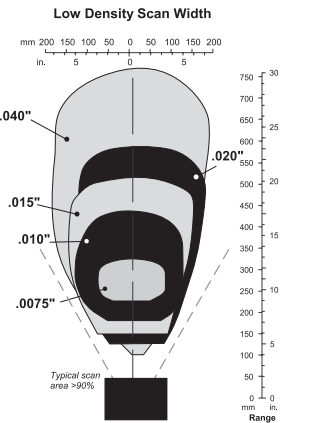
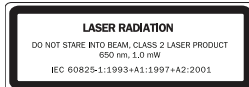
**Interface:** RS-232/422/485 or Ethernet

### SYMBOLOLOGIES

**Standard offering:** Code 39, Codabar, Code 93, Interleaved 2 of 5, Code 128, PDF417, Micro PDF417, Pharmacode, UPC, GS1 Databar **Applications standards:** UCC/EAN-128, AIAG

### LASER LIGHT

**Type:** Laser diode  
**Output wavelength:** 655 nm nominal  
**Operating life:** 50,000 hours @ 25°C  
**Safety class:** Visible laser: CDRH Class II, 655 nm



Note: Data subject to change.

### DISCRETE I/O

**Input 1: (Trigger/New Master):** Optoisolated, 4.5-28V rated, (13 mA at 24 VDC) New Master is (-) to signal ground  
**Outputs (1, 2 & 3):** Optoisolated, 1-28V rated, (I<sub>CE</sub> < 100 mA at 24 VDC, current limited by user)

### SAFETY CERTIFICATIONS

CDRH, FCC, UL/cUL, CE, CB, BSMI (compliant)



ISO 9001:2000  
 Certified QMS

### ROHS/WEEE COMPLIANT

### ISO CERTIFICATION

Issued by TÜV USA Inc, Member of TÜV NORD Group, Cert No. 06-1080

©2008 Microscan System, Inc. SP003B 09/08

Read Range and other 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 Read Range 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. Extended warranty available.

# MICROSCAN

### Microscan Systems Inc.

Tel 425 226 5700 / 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

Part of a full range of sales tools available from our web site:

### www.microscan.com

Product Information: info@microscan.com  
 Tech Support: helpdesk@microscan.com