Industrial Raster Laser Scanner

The QX-870 laser scanner partners the latest technologies in barcode reading and connectivity into an easy to use solution for barcode track, trace and control applications. Simple to set up and deploy, it features a programmable sweeping raster to read multiple codes, in varying locations, even if they are damaged or mis-aligned.

With plug and play setup and the most aggressive decode algorithms available, the QX-870 an ideal laser scanner for any industrial application.

**X-Mode Technology**
- Decodes damaged, poorly printed, or mis-aligned codes
- Ensures high read rates and throughput

**High Performance**
Aggressive decoding capabilities allow reliable reading of barcodes out to 30” (762 mm), at up to a 10” (254 mm) beam width.

**Sweeping Raster**
This programmable feature enables the reader for multiple symbols at varying distances and locations.

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

**Quick Connect System**
- M12 connectors and cordsets
- Plug and play setup
- Single or multi-scanner solutions

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

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

---

**QX-870: Available Codes**

**Linear**
- All Standard

**Stacked**
- MicroPDF
- PDF417
- GS1 Databar

---

**QX-870: At a Glance**

- Scans/second: 300 to 1400
- Read Range: 1 to 30” (25 to 762 mm)
- Optional Embedded Ethernet TCP/IP & EtherNet/IP
- IP65 Enclosure

---

**QX-870: Ethernet Protocols**
The QX-870 includes optional embedded Ethernet TCP/IP and EtherNet/IP for high speed communication.

**Application Examples**
- Any industrial environment from light to heavy duty
- Automotive assembly
- Packaging and sortation
- Electronics production
- Embedded within machinery
QX-870 INDUSTRIAL RASTER LASER SCANNER

SPECIFICATIONS AND OPTIONS

MECHANICAL
Height: 4.29” (109 mm)
Width: 3.74” (95 mm)
Depth: 1.40” (35.6 mm)
Weight: 16 oz. (453 g)

READ RANGES1
LOW DENSITY RANGE DATA

<table>
<thead>
<tr>
<th>Narrow-bar-width</th>
<th>Read Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0075” (0.191 mm)</td>
<td>10 to 12” (254 to 305 mm)</td>
</tr>
<tr>
<td>-010” (0.254 mm)</td>
<td>5 to 15” (127 to 381 mm)</td>
</tr>
<tr>
<td>-015” (0.381 mm)</td>
<td>2 to 10” (508 to 254 mm)</td>
</tr>
<tr>
<td>-020” (0.508 mm)</td>
<td>1 to 7” (254 to 178 mm)</td>
</tr>
<tr>
<td>-040” (1.02 mm)</td>
<td>0.5 to 3.5” (12.7 to 88.9 mm)</td>
</tr>
</tbody>
</table>

MEDIUM DENSITY RANGE DATA

<table>
<thead>
<tr>
<th>Narrow-bar-width</th>
<th>Read Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0075” (0.191 mm)</td>
<td>2.5 to 5.5” (64 to 140 mm)</td>
</tr>
<tr>
<td>-010” (0.254 mm)</td>
<td>1.5 to 3.5” (38 to 88.9 mm)</td>
</tr>
<tr>
<td>-015” (0.381 mm)</td>
<td>1.5 to 3.5” (38 to 88.9 mm)</td>
</tr>
<tr>
<td>-020” (0.508 mm)</td>
<td>1.5 to 3.5” (38 to 88.9 mm)</td>
</tr>
<tr>
<td>-030” (0.762 mm)</td>
<td>1.0 to 2.5” (25 to 63.5 mm)</td>
</tr>
</tbody>
</table>

HIGH DENSITY RANGE DATA

<table>
<thead>
<tr>
<th>Narrow-bar-width</th>
<th>Read Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0033” (0.084 mm)</td>
<td>Call Omron Microscan</td>
</tr>
<tr>
<td>-005” (0.127 mm)</td>
<td>4 to 6” (102 to 152 mm)</td>
</tr>
<tr>
<td>-0075” (0.191 mm)</td>
<td>3.5 to 6.5” (89 to 167 mm)</td>
</tr>
<tr>
<td>-010” (0.254 mm)</td>
<td>2.5 to 5” (63.5 to 127 mm)</td>
</tr>
<tr>
<td>-015” (0.381 mm)</td>
<td>2.5 to 5” (63.5 to 127 mm)</td>
</tr>
<tr>
<td>-020” (0.508 mm)</td>
<td>2.5 to 5” (63.5 to 127 mm)</td>
</tr>
<tr>
<td>-030” (0.762 mm)</td>
<td>1.0 to 3” (25 to 76.2 mm)</td>
</tr>
</tbody>
</table>

*Ranges based on a Grade A, Code 39 label, at 500 scans per second. Data subject to change.

SCANNING PARAMETERS
Mirror Type: Rotating, 10-faceted
Scan Rate: Adjustable from 300 to 1400 scans/sec; default is 500 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
Raster Mirror Performance:

- Raster sweep angle
- Maximum sweeps per second

<table>
<thead>
<tr>
<th>Raster sweep angle</th>
<th>Maximum sweeps per second</th>
</tr>
</thead>
<tbody>
<tr>
<td>1°–10°</td>
<td>80</td>
</tr>
<tr>
<td>11°–20°</td>
<td>60</td>
</tr>
<tr>
<td>21°–34° (max.)</td>
<td>40</td>
</tr>
<tr>
<td>35°–36° (max.)</td>
<td>20</td>
</tr>
</tbody>
</table>

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

COMMUNICATION INTERFACE
Interface: RS-232/422/485 and/or Ethernet

SYMBOLOGIES
Applications Standard: EAN-128, AIAG

LASER LIGHT
Type: Laser diode
Output Wavelength: 655 nm nominal
Operating Life: 50,000 hours @ 25° C
Safety Class: Visible laser: Class 2, 655 nm

ELECTRICAL
Power Requirement: 9 Watts (max.), 10–28 VDC, 200 mV-p-p max ripple, 270mA at 24 VDC (typ.)

QMS CERTIFICATION
www.microscan.com/quality

©2018 Omron Microscan Systems, Inc. SP056L-EN-0518
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. Omron Microscan Applications Engineering is available to assist with evaluations. Results may vary depending on symbol quality. Warranty: For current warranty information on this product, please visit www.microscan.com/warranty.

www.microscan.com