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.

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

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.

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

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

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.

Intelligent Raster

In addition to sweep angle and speed controls, the QX-870 features a programmable raster with intelligent auto framing technology. Advanced software will automatically frame the raster height and width of the laser to match the barcode, allowing selective targeting of codes within a single read cycle.

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
Specifications and Options

**MECHANICAL**

- **Height:** 4.29" (109 mm)
- **Width:** 3.74" (95 mm)
- **Depth:** 1.76" (45 mm)
- **Weight:** 16 oz. (453 g)

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

**ELECTRICAL**

- **MIN DEPTH:** 6mm
- **MAX DEPTH:** 180 mm (7.08"")
- **Weight:** 1.40lb (63.6mm) 3.56lb (95mm)

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**ENVIRONMENTAL**

- **Enclosure:** IP65 rated
- **Operating Temperature:** 0° to 50° C (32° to 122° F)
- **Storage Temperature:** -58° to 167° F (-58° to 75° C)
- **Humidity:** Up to 90% (non-condensing)

**EMISSIONS**

- **Heavy Industrial:** EN 55022:2006
- **Industrial:** EN 55022:2006
- **Residential:** EN 55022:2006
- **Intermediate:** EN 55022:2006

**COMMUNICATION INTERFACE**

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

**SYMBOLOGIES**

- **Standard:** Code 39, Codabar, Code 93, Interleaved 2 of 5, Code 128, PDF417, Micro PDF417, Pharmacode, UPC, GS1 Databar
- **Applications Standard:** 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: Class 2

**ELECTRICAL**

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

**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:** ±40° max.
- **Skew:** ±50° max.
- **Label Contrast:** 25% min. absolute dark to light differential at 655 nm wavelength

**READ RANGES**

**LOW DENSITY RANGE DATA**

- **Ripple:** 270mA at 24 VDC (typ.)
- **Power Requirement:** 10–28 VDC, 200 mV

**MEDIUM DENSITY RANGE DATA**

- **Ripple:** 270mA at 24 VDC (typ.)
- **Power Requirement:** 10–28 VDC, 200 mV

**HIGH DENSITY RANGE DATA**

- **Ripple:** 270mA at 24 VDC (typ.)
- **Power Requirement:** 10–28 VDC, 200 mV

**PROTOCOLS**

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

**PIN ASSIGNMENTS**

- **Connector A (Serial):**
- **Connector B (Serial):**

**DISCRETE I/O**

- **Inputs:**
- **Outputs:**

**SAFETY CERTIFICATIONS**

- **CDRH, FCC, CE, CB, BSMI (compliant)**

MIRACONIC.

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