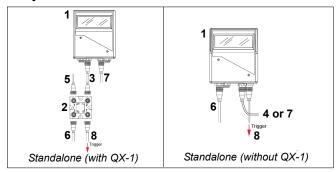
# Quick Start Guide QX-870 Industrial Raster Scanner





P/N 83-110870-04 Rev A

# Step 1 — Check Hardware



Hardware Required

Caution: Be sure that all connections are secure BEFORE applying power. Always power down BEFORE disconnecting any cables.

Item	Description	Part Number
1	QX-870 Industrial Raster Scanner	FIS-0870-XXXXG
2	QX-1 Interface Device	98-000103-02
3	QX Cordset, Common, M12 12-pin Socket to M12 12-pin Plug, 1 m	61-000162-02
4	QX Cordset, Host, Serial, M12 12-pin Plug to DB9 Socket, 1 m	61-000152-02
5	QX Cordset, Host, Serial, M12 12-pin Socket to DB9 Socket, 1 m	61-000153-02
6	QX Power Supply, 100-240VAC, +24VDC, M12 12-pin Socket	97-000012-01
7	QX Cordset, Host, Ethernet, M12 8-pin Plug (Screw-On) to RJ45, 1 m	61-000160-02
8	QX Photo Sensor, M12 4-pin Plug, NPN, Dark On, 2 m	99-000020-02

Note: Additional cordsets and accessories are available in the Omron Microscan Product Pricing Catalog.

## Step 2 — Connect the System

**Important:** If you are connecting Ultra-Lock cordsets to the QX-870 and QX-1, align the pins first and then push the connector into place. <u>Do not twist</u> the connectors, as this will bend the pins.

**Important:** Do not attempt to power more than four scanners with a single power supply in a daisy chain configuration. Add a QX-1 and one power supply for every four additional scanner in the daisy chain.

**Note:** The configuration instructions below are for simple, direct connections to an RS-232 or Ethernet host. The QX-1 can be added to RS-232 or Ethernet configurations in which greater flexibility and complexity are required. The first diagram in Step 1 shows a standalone configuration that includes the QX-1.

#### RS-232 Standalone (without QX-1)

- Connect the Serial Communication Cable from "B" on the QX-870 to the host.
- 2. Connect the photo sensor (if required) to "T" on the QX-870.
- 3. Connect the power supply to "P/M" on the QX-870.
- 4. Plug in the power supply.

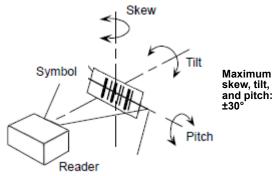
#### **Ethernet Standalone (without QX-1)**

**Important:** Configure Ethernet-enabled scanners off-line and then connect to the network when ready for dynamic use.

- Connect the Ethernet Communication Cable from "B" on the QX-870 to the host network.
- 2. Connect the power supply to "P/M" on the QX-870.
- 3. Plug in the power supply.

# Step 3 — Position Scanner

- Place a test symbol in a location with as little ambient light as possible.
- 2. Position the scanner at the focal distance used in your application.
- 3. Align the test symbol with the scanner's field of view.
- 4. Tip the scanner relative to the test symbol to avoid glare from specular reflection.



### Step 4 — Install ESP

ESP Software can be found on the Omron Microscan Tools Drive that is packaged with the QX-870.

- 1. Follow the prompts to install ESP from the Tools Drive.
- 2. Click on the ESP icon to run the program.



**Note:** ESP can also be installed from the **Download Center** at **www.microscan.com**.

Refer to the QX-870 Industrial Raster Scanner User Manual for detailed information about using ESP to configure the QX-870.

#### **Minimum System Requirements**

- 233 MHz Pentium PC
- Windows 8, 7, Vista, or XP operating system (32-bit or 64-bit)
- · Internet Explorer 6.0 or higher
- · 128 MB RAM or greater
- · 160 MB free disk space
- 800 x 600 256 color display (1024 x 768 32-bit color recommended)

#### Step 5 — Select Model

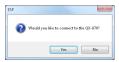
When you start ESP, the model menu will appear:



- 1. Click the button showing the QX-870.
- 2. Click OK.

**Note:** You can also simply double-click the button showing your scanner to make your selection.

3. Click **Yes** when this dialog appears:



Note: If you need to select another model later, click the Switch Model button near the top of the screen or use Model > New Model in the menu toolbar.

#### Step 6 — Connect

#### RS-232

To connect using the Connection Wizard:

- Click Connect on the menu toolbar, and then select Connection Wizard.
- Select RS-232.
- Configure RS-232 settings as required by the application, and click Connect.



 When a connection is established, the green indicator in the status bar at the bottom right of the screen will be visible:



**Important:** The scanner is in **Continuous Read Mode** by default. For best connection results, be sure that no decodable symbols are within the scanner's field of view while attempting to connect.

#### Step 6 — Connect (cont.)

#### Ethernet TCP/IP

To connect using the Connection Wizard:

- Click Connect on the menu toolbar, and then select Connection Wizard.
- Select Ethernet.
- Configure Ethernet settings as required by the application, and click Connect.



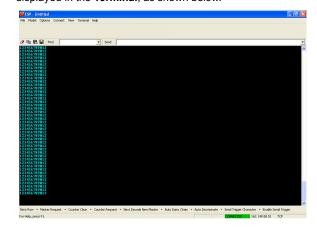
 When a connection is established, the green indicator in the status bar at the bottom right of the screen will be visible.

**Important:** The scanner is in **Continuous Read Mode** by default. For best connection results, be sure that no decodable symbols are within the scanner's field of view while attempting to connect.

#### Step 6 — Connect (cont.)

#### Ethernet TCP/IP (cont.)

When the QX-870 is connected, incoming symbol data can be displayed in the **Terminal**, as shown below.



# Step 7 — Test Read Rate

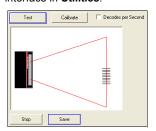
**Read Rate** indicates the number or percentage of successful decodes per second achieved by the scanner.

 Click the **Test** button in ESP's **EZ Mode** to start the Read Rate test

Symbol data and read rate percentage information should appear in the **Symbol Information** table. The Read Rate LEDs on the side of the QX-870 will indicate the percentage of successful decodes per second.

2. Click Stop to end the Read Rate test.

**Note:** Read Rate can also be tested using the **Read Rate** interface in **Utilities**.



Refer to the *QX-870 Industrial Raster Scanner User Manual* for information about how to test read rate using serial commands or the scanner's EZ button.

## Step 8 — Configure and Save

Click the **App Mode** button to make configuration changes to the scanner.



The following modes are accessible by clicking the buttons at the top of the screen:



- Click the EZ Mode button to return to EZ Mode.
- Click the Autoconnect button to establish communications.
- Click the Send/Recy button to send or receive commands.
- Click the Switch Model button to open the model menu, or to return to the previous model.
- Click the Parameters button to show the tabbed tree control views.
- Click the Setup button to show the tabbed interface views.
- Click the Terminal button to display decoded symbol data and to send serial commands.
- Click the **Utilities** button to access Read Rate, Counters, Device Control, Differences from Default, Master Database, Digital Bar Code, and Firmware.

For further details, see **ESP Help** in the Help dropdown menu.