

P/N 83-116801-04 Rev B

The diagram illustrates two wiring configurations for the device, labeled **Serial Standalone** and **Ethernet Standalone**.

Serial Standalone:

- 1:** Device
- 5:** Host (Serial 13-pin Socket to DB9)
- 3:** Common (12-pin Plug to 12-pin Socket)
- 2:** Power Supply (12-pin Socket)
- 6:** Photo Sensor
- 8:** Photo Sensor

Ethernet Standalone:

- 1:** Device
- 3:** Common (12-pin Plug to 12-pin Socket)
- 7:** Host (Ethernet 8-pin Plug to RJ45)
- 2:** Power Supply (12-pin Socket)
- 6:** Photo Sensor
- 8:** Photo Sensor

Item	Description	Part Number
1	QX Hawk C-Mount Industrial Imager	FIS-6801-XXXXGX
2	QX-1 Interface Device	98-000103-02
3	QX Cordset, Common, M12 12-pin Socket to M12 12-pin Plug, 1 m	61-000162-01 or -02
4	QX Cordset, Host, Serial, M12 12-pin Plug to DB9 Socket, 1 m	61-000152-01 or -02
5	QX Cordset, Host, Serial, M12 12-pin Socket to DB9 Socket, 1 m	61-000153-01 or -02
6	QX Power Supply, 24VDC, M12 12-pin Plug, 1.3 m, U.S./Euro	97-000012-01
7	QX Cordset, Host, Ethernet, M12 8-pin Plug to RJ45, 1 m	61-000160-01 or -02
8	QX Photo Sensor, M12 4-pin Plug, NPN, Dark On, 2 m	99-000020-02
9	QX Cordset, Smart Series Light to QX-1, ON/OFF (not shown)	61-000207-01




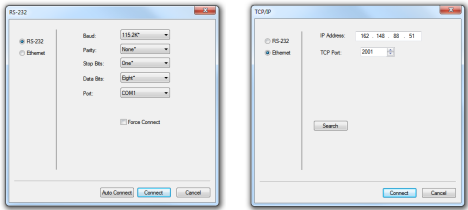
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Diagram illustrating the focal distance of a camera. A camera is shown above a surface. A red line represents the optical axis, and a double-headed arrow indicates the distance from the camera's sensor to the surface, labeled "Focal distance".

Step 6 — Connect

To connect using the Connection Wizard:

- Click **Connect** on the menu toolbar, and then select **Connection Wizard**.
- Select **RS-232** or **Ethernet** to activate the appropriate display.
- Configure 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:

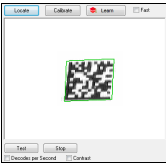


Important: The imager is in **Continuous Read Mode** by default. For best connection results, be sure that no decodable symbols are within the imager's field of view while attempting to connect.

Step 7 — Locate Symbol

Locate by ESP

- In **ESP's EZ Mode**, click the **Locate** button.
The symbol in the field of view will appear in the video view beneath the **Locate** and **Calibrate** buttons.
- Center the symbol in the imager's field of view.
Important: The entire symbol should fall within the field of view (FOV) of the imager. The field of view is what appears in **ESP's Locate/Calibrate** window in **EZ Mode**.
- Click the **Stop** button to end the **Locate** function.



Locate by EZ Button

- If you are not connected to a host computer, the EZ Button allows you to locate the symbol in the imager's field of view.
- Hold down the EZ Button for about one second and release when you hear one short beep. The amber **20%** LED will illuminate when the symbol is located.
- Note:** To end all EZ Button functions, press the EZ Button once and quickly release.

Step 8 — Calibrate

Imager settings can be adjusted automatically for optimum performance by either the EZ Button or by **ESP**. During the calibration routine, the imager will flash its Read Rate percent LEDs and illumination LEDs while searching camera settings and determining the best configuration for decoding symbol data. If unsuccessful, the imager will emit 5 short beeps and stop searching.

Calibrate by ESP

- Click the **Calibrate** button.
- The imager will search camera settings to determine the best configuration for decoding symbol data.
A successful calibration will display a green frame around the symbol in ESP, and the following message will appear: "Uploading all reader parameters." After a moment the symbol data will be presented in the field below the image display window.

Calibrate by EZ Button

- Hold down the EZ Button for about two seconds and release when you hear **two short beeps**. The **20%** and **40%** LEDs will illuminate.
- The imager will search camera settings to determine the best configuration for decoding symbol data.
Note: To end all EZ Button functions, press the EZ Button once and quickly release.

Calibrate by Serial Command

Send **<@CAL>** from a terminal program to begin auto-calibration.

Step 9 — Test Read Rate

Read Rate indicates the number of successful decodes per second achieved by the imager.

Test Read Rate by ESP

- Click the **Test** button to start the **Read Rate** test.



If a symbol has been successfully decoded, its data and related information will be presented in the field below the image display window. While the symbol is being decoded, the Read Rate LEDs will indicate the read rate percentage on the top of the unit.

- Click the **Stop** button to end the Read Rate test.

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

Test Read Rate by EZ Button

- To start the Read Rate test, hold down the EZ Button about three seconds until you hear **three short beeps**. The **20%**, **40%**, and **60%** LEDs on the top of the unit will illuminate.
While the symbol is being decoded, the Read Rate LEDs will indicate the read rate percentage on the top of the unit.
- To end the Read Rate test, press the EZ Button and quickly release.

Test Read Rate by Serial Command

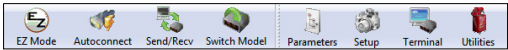
You can also start a test with the **<C>** or **<Cp>** command and end it with the **<J>** command.

Step 10 — Configure and Save

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



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 communication.
- Click the **Send/Recv** button to send or receive commands.
- Click the **Switch Model** button to open the model menu.
- Click the **Parameters** button to show the tree controls for Communication, Read Cycle, Symbolologies, I/O Parameters, Symbol Quality, Matchcode, and Diagnostics.
- Click the **Setup** button to access the Camera Setup tree and the interfaces for Video, Evaluation, Calibration, Window of Interest (WOI), Configuration Database, Ordered Output, Output Format, and Dynamic Setup.
- Click the **Terminal** button to display decoded symbol data, and to send serial commands to the imager using text or macros.
- Click the **Utilities** button to show the tabbed interfaces for Read Rate, Counters, Device Control, Differences from Default, Master Database, and Firmware.

Saving Options

- Send, No Save.** Changes will be lost when power is re-applied to the imager.
- Send and Save.** This activates all changes in current memory *and* saves to the imager for power-on.