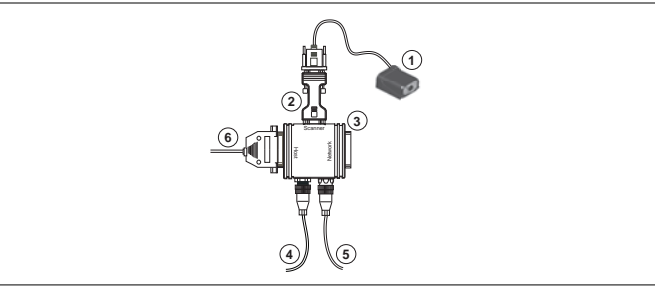


Quick Start Guide Quadrus MINI Series



P/N 83-116302 Rev A

Step 1 — Check Hardware



Hardware Required

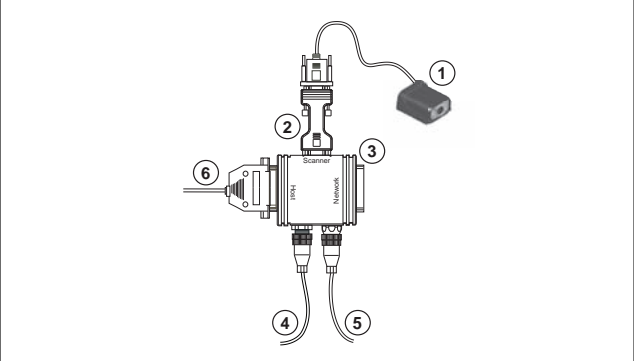
Caution: Be sure that all cables are connected **BEFORE** applying power to the system. Always power down **BEFORE** disconnecting any cables.

Item	Description	Part Number
1	Quadrus MINI	FIS-6300-000XG
	Quadrus MINI ESD Safe	FIS-6300-100XG
	Quadrus MINI 3	FIS-6300-200XG
	Quadrus MINI Velocity	FIS-6300-300XG
2	IC-332 Adapter	FIS-0001-0035G
3	IB-131 Interface Box	99-000018-01
4	Power Supply	97-100004-15 (90-264 VAC, 24VDC, USA/Euro plug)
5	Object Detector	99-000017-01
6	Communication Cable	61-300026-03

Step 2 — Connect the System

Connecting by RS-232 / RS-422 / RS-485

- Connect the imager (1) to the IB-131/IC-332 interface (2) and (3).
- Connect the communication cable (6) to the host, and to the host port on the IB-131 (3).
- Connect the object detector (5) to the IB-131 (3).
- Connect the power supply (4) to the IB-131 (3).
- Apply power to the imager.

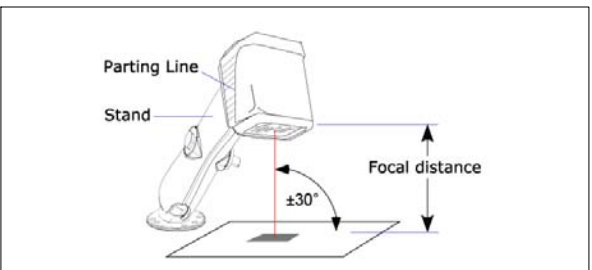


Hardware Configuration

Caution: Be sure that all cables are connected **BEFORE** applying power to the system. Always power down **BEFORE** disconnecting any cables.

Step 3 — Position Imager

- Position the imager at a focal distance between 2" and 6".
- Tip the imager relative to the symbol to avoid the glare of direct (specular) reflection. The case parting line should be perpendicular to the plane of the symbol by either pitching the symbol or the imager as shown.
- Position the imager in a place with as little ambient light as possible.
- Symbols can be rotated (tilted) at any angle; however, for best results symbols should be aligned with the FOV (field of view).
- In the case of linear symbols, aligning the bars in the direction of their movement ("ladder" orientation) will minimize the chances of blurring, and will produce better reads.
- Avoid excessive skew or pitch. Maximum skew is $\pm 30^\circ$; maximum pitch is $\pm 30^\circ$.



Imager / Symbol Positioning

Note: For accuracy of testing and performance, Microscan recommends using a 4" (102 mm) mounting arm adapter kit (98-000048-01). Contact your Microscan sales manager for details about mounting arm adapter kits and other accessories.

Step 4 — Install ESP

(ESP stands for *Easy Setup Program*.)

ESP is Microscan's proprietary setup and testing software. It is *not* meant to be a tool for a real-time production environment; the purpose of ESP is to provide a quick and easy way to set up and configure your imager. With your imager connected to a host computer (Windows Vista, XP, or 2000), you can use ESP for configuration and imager control.

If installing from a Microscan Installation and Support CD:

1. Insert the Microscan Tools CD in your computer's CD drive.
2. Choose **ESP Software** from the main menu.
3. Select the **Current Version** of ESP Software and follow the file download prompts.

If downloading from the web:

1. Go to <http://www.microscan.com/downloadcenter>
2. Create a new "myMicroscan" member account or, if you are already a member, enter your user name and password.
3. Click the **Download Software** link and extract the latest version of ESP to a directory of your choice. *Note where your ESP.exe file is stored on your hard drive.*
4. At the end of the installation process, the following icon will appear on your desktop:



5. Click the **ESP** icon to start the program.

ESP System Requirements

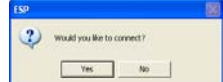
- 166 MHz Pentium processor (recommended)
- Windows Vista, XP, or 2000 operating system
- Internet Explorer 5.0 or higher
- 64 MB minimum RAM
- 40 MB minimum disk space

Step 5 — Select Model

When you start ESP, this menu will appear:



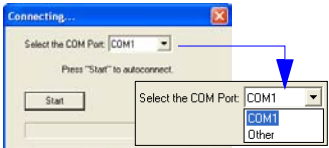
1. Click the button showing the imager used in your application.
2. Click **OK**.
Note: You can also simply double-click the button showing your imager to make your selection.
3. Click **Yes** when this dialog appears:



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 – Autoconnect

- Click **Start** when the **Autoconnect** dialog appears.

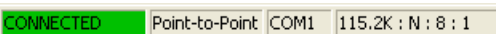


- If your communications port is not the default **COM1**, use the dropdown menu to change your port.



- Once you have chosen the correct port, click **Start** to connect.

When you are connected, you will see the green connection indicator in the status bar at the bottom right of your screen:



- If the connection attempt fails, click the **Autoconnect** button, select a different communications port, and try again.

Note: If your RS-232 host settings cannot be changed to match the imager's settings, check the **Force Connect** box.



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 9 – Test Read Rate

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

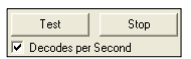
Test Read Rate by EZ Button

- 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 will illuminate. While the object is being inspected, the Read Rate LEDs will indicate the read rate percentage on the back of the unit.
- To end the Read Rate test, press the EZ Button and quickly release.



Test Read Rate by ESP

- Click the **Test** button to start the Read Rate test and **Stop** to end it.



If a symbol has been successfully decoded, its data and related features will be presented in the field below the image display window. Also, while the object is being inspected, the Read Rate LEDs will indicate the Read Rate percentage on the back of the unit.

- To end the test, click the **Stop** button.

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

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 7 – Locate the Symbol

Locate by ESP

- In **ESP's EZ Mode**, click the **Locate** button to enable the blue target pattern. The symbol in the field of view will appear in the video view beneath the **Locate** and **Calibrate** buttons, and you will see the blue target pattern projected from the front of the imager.

- Center the target pattern on the symbol. At 2 to 3 inches, the pattern resembles an **X**. At 3 to 6 inches, the pattern resembles a **V**.

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.

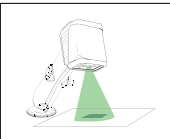
- Hold down the EZ Button for about one second and release when you hear one short beep. The amber **20%** LED will illuminate, and you will see the blue target pattern projected from the front of the imager.
- Center the target pattern on the symbol.

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. Upon successful completion of this routine, a green LED pattern will flash brightly and illuminate the symbol. If unsuccessful, the imager will emit 5 short beeps and stop searching.



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 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, 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 Serial Command

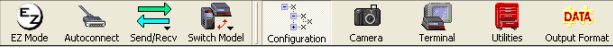
Send **<@CAL>** from a terminal program to begin calibration.

Step 10 – Configure the Imager in ESP

To make setup changes to the imager, click the **App Mode** button.

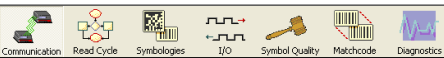


The following modes are accessible by clicking the buttons in the first row of **App Mode** icons:



- Click the **Autoconnect** button to establish communications between **ESP** and the imager.
- Click the **Send/Recv** button to send or receive commands.
- Click the **Camera** button to access a live Video view, Evaluate image captures, Calibrate the imager, set the Window of Interest, fine-tune capture settings and processing settings in the Configuration Database, and control multiple read cycle functions in 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 test Read Rate, request or clear Counters, enable or disable the imager or send output pulses in Device Control, determine the Differences from Default in the current settings, add or remove master symbol data in Master Database, and verify or update the imager's Firmware.
- Click the **Output Format** button to determine the order and content of data output.

Click the **Configuration** button to display the second row of **ESP** icons. From here you can make changes in the tree controls that can be accessed by clicking the buttons on the second row of icons in the **ESP** window.

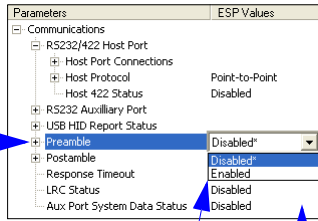


For further details, see **Microscan ESP Help** in the dropdown Help menu.

Step 11 – Save Changes in ESP

To make changes to a configuration setting:

- Left click** on the **+** to expand the desired tree.
- Double click** on the desired parameter and click once in the selection box to view options.
- Place your cursor in the selection box, scroll down to the setting you want to change, and **click once** on the setting.
- Left click** on the open screen to complete your selection.
- Right click** on the open screen and select **Save to Reader** to implement the command in the imager.



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.