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CHUNYE EV-X821T

CHUNYE EV-X821T QRcode 2D CMOS Barcode Scanner Module (TTL Interface) User Manual

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of the CHUNYE EV-X821T QRcode 2D CMOS Barcode Scanner Module with TTL interface. This embedded fixed engine scanner is designed for integration into various systems requiring efficient and accurate barcode and QR code reading capabilities.

2. Product Overview

The EV-X821T is a high-performance 2D CMOS barcode scanner module engineered for fixed installations. It offers robust scanning capabilities for both 1D and 2D barcodes, making it suitable for applications such as assembly lines and conveyor belts.

Key Features:

- **Fixed Installation:** Designed for permanent integration, eliminating the need for handheld operation in continuous scanning environments.
- **High-Speed Scanning:** Capable of accurately identifying barcodes and QR codes on fast-moving production lines, improving operational efficiency.
- **Supports Multiple Barcode Types:** Reads both 1D barcodes (e.g., EAN, UPC) and 2D barcodes (e.g., QR codes, Data Matrix).
- **Multi-Directional Reading:** Allows for scanning without precise alignment of the barcode, enhancing reading speed and accuracy.
- **High Resolution:** Enables recognition of small or poor-quality barcodes.

Product Components:



Figure 1: The EV-X821T barcode scanner module shown with its accompanying TTL interface cable.



Figure 2: Close-up front view of the EV-X821T module, showing the scanning window, illumination LEDs, and imaging sensor.

3. Setup

This section details the physical installation and connection of the EV-X821T module using the TTL interface.

3.1 Interface Selection

The EV-X821T module is available with different interface options. This manual specifically addresses the TTL interface version.



Figure 3: Illustration of the available interface options for the EV-X821T module. This specific product uses the TTL interface.

3.2 Physical Installation

1. Identify a suitable location for fixed installation, ensuring clear line of sight to the scanning area.
2. Secure the module using appropriate mounting hardware (not included) through the designated mounting holes on the scanner body.
3. Ensure the scanning window is unobstructed and positioned correctly relative to the items being scanned.

3.3 Electrical Connection (TTL Interface)

Connect the provided TTL cable to the module and your host system. Refer to your host system's documentation for specific TTL pin assignments and voltage requirements. Ensure correct polarity for power and data lines to prevent damage.

4. Operating Instructions

Once installed and connected, the EV-X821T module is ready for operation. The scanner automatically detects and decodes barcodes within its field of view.

4.1 Scanning Procedure

1. Ensure the module is powered on and properly connected to the host system.
2. Present the barcode or QR code within the scanner's field of view. The multi-directional reading capability reduces the need for precise orientation.
3. The scanner will automatically illuminate and attempt to read the code. A successful read is typically indicated by an audible beep (if configured) or a visual indicator (e.g., LED change).
4. The decoded data will be transmitted to the host system via the TTL interface.

4.2 Scanning Distance and Performance

The optimal scanning distance varies depending on the barcode type and density (mil). Refer to the diagram below for typical performance ranges.

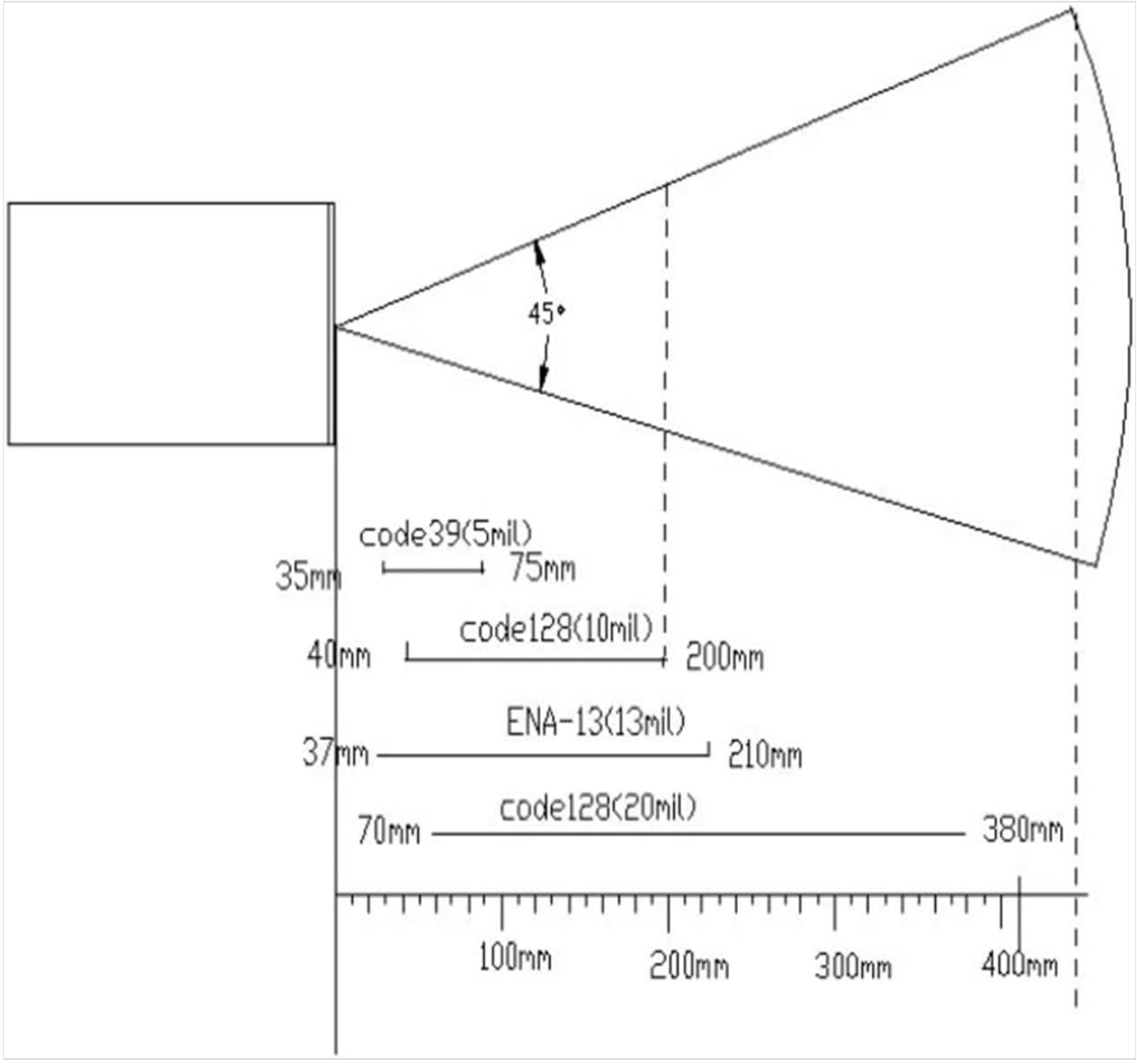


Figure 4: Diagram illustrating typical scanning distances for various barcode types and densities (e.g., Code39 5mil, Code128 10mil, EAN-13 13mil, Code128 20mil).

- **Code39 (5mil):** Approximately 35mm to 75mm

- **Code128 (10mil):** Approximately 40mm to 200mm
- **EAN-13 (13mil):** Approximately 37mm to 210mm
- **Code128 (20mil):** Approximately 70mm to 380mm

5. Maintenance

Proper maintenance ensures the longevity and optimal performance of your EV-X821T scanner module.

5.1 Cleaning

- Regularly clean the scanning window with a soft, lint-free cloth.
- For stubborn dirt, lightly dampen the cloth with water or a mild, non-abrasive cleaning solution. Avoid harsh chemicals.
- Ensure no liquid enters the module's housing.

5.2 Environmental Considerations

- Operate the scanner within its specified temperature and humidity ranges.
- Avoid exposing the module to excessive dust, moisture, or direct sunlight.

6. Troubleshooting

This section addresses common issues you might encounter with the EV-X821T scanner module.

6.1 Scanner Not Reading Barcodes

- **Check Power:** Ensure the module is receiving adequate power.
- **Check Cable Connection:** Verify that the TTL cable is securely connected to both the module and the host system.
- **Barcode Quality:** Inspect the barcode for damage, smudges, or poor print quality.
- **Scanning Distance:** Ensure the barcode is within the optimal scanning range (refer to Section 4.2).
- **Scanning Window:** Clean the scanning window for any obstructions or dirt.
- **Barcode Type:** Confirm that the scanner supports the type of barcode being read.

6.2 Intermittent Reading

- **Environmental Factors:** Check for excessive ambient light or reflections that might interfere with scanning.
- **Cable Integrity:** Inspect the TTL cable for any signs of damage or loose connections.

6.3 No Data Output to Host

- **Host System Configuration:** Verify that your host system's software or hardware is correctly configured to receive data from the TTL interface.
- **TTL Pinout:** Double-check the TTL pin assignments and ensure they match your host system's requirements.

7. Specifications

Feature	Specification
Model Number	EV-X821T
Interface	TTL (also available in USB, RS232 variants)
Scanning Technology	2D CMOS Imager

Supported Barcodes	1D (EAN, UPC, etc.), 2D (QR Code, Data Matrix, etc.)
Package Dimensions	1.18 x 0.79 x 0.39 inches
Item Weight	2.2 pounds
Manufacturer	CHUNYE

8. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact CHUNYE customer service directly. Keep your purchase receipt as proof of purchase.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question