RTscan

RT870 Integration guide

Chapter 1 Introduction

1.1 Product Overview

RT870 is a embedded design 2d bar code reader for all kinds of kiosk, self-service and ticketing terminals, such as: Ticket vending machines; Access control gates & turnstiles; Transportation (ticketing of bus, metro...); Loyalty cards; Car park ticket machines.

RT870 performs excellent for bar code reading both from cell phone screen and paper. It is also outstanding for its high speed motion tolerance (>2m/s) which make it can detect and read bar code very quickly; and also outstanding for its capacity to decode almost all types of bar codes, including QRcode, Aztec, MaxiCode, Data Matrix, PDF417, EAN code, etc.

Physical Characteristics	
Dimensions:	77mmX66mmX45mm
Weight:	75g
Voltage:	5 VDC±10%
Current:	200mA
Performance Characteristics	
Light Source:	illumination: 6500K LED
Field of View:	72° (H) x 64° (V)
Roll / Pitch / Yaw:	360°, ±65°, ±60°
Print Contrast:	20% minimum reflective difference
Symbology Decode Capability	
1-D:	1D: Code 128, EAN-13, EAN-8, Code39, Code93, Marix 2 of 5, Codabar, Interleaved 2 of 5, GSI dataBar, etc.
2-D:	QR Code, Micro QR, Aztec, PDF417, Micro PDF417, Data Matrix, Maxicode, etc
Minimum Resolution	5 mil Code39
Interfaces Supported:	USB, 232
20mil QR Code 13mil UPCA 10mil Data Matrix 6.88mil PDF417	0mm-100mm 5mm-110mm 0mm-50mm 0mm-50mm

User Environment	
Operating Temperature:	-40°C to 70°C
Storage Temperature:	50°C to 85°C
Humidity:	0% to 95%, non-condensing
Drop/Shock Specifications:	Withstands 1.2m drops
Ambient Light Immunity:	0 to 100,000 lux

1.2 Illumination

The RT870 has one white LED (6500K) for supplementary lighting, making it possible to scan barcodes even in complete darkness. The illumination can be programmed On or Off.

Chapter 2 Installation

2.1 General Requirements

Dust and Dirt

The RT870 with enclosed design which protect itself from dust and dirt, and with its special design which makes it cover in the surface of the kiosks without gaps, this perfectly prevent dust and dirt come into the kiosk machine.
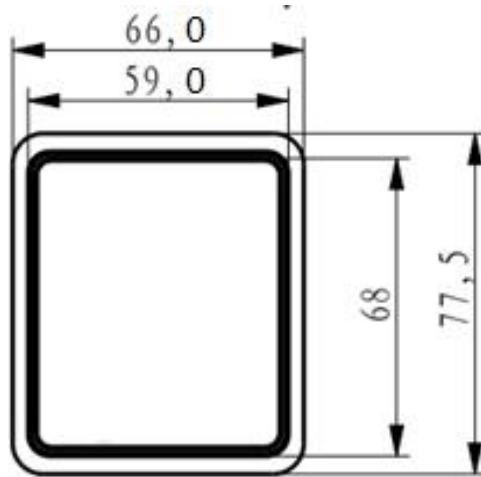
Eye Safety

The RT870 has LEDs what create the illumination beams. These LEDs are bright, but testing has been done to demonstrate that the engine is safe for its intended application under normal usage conditions. However, the user should avoid looking into the beam.
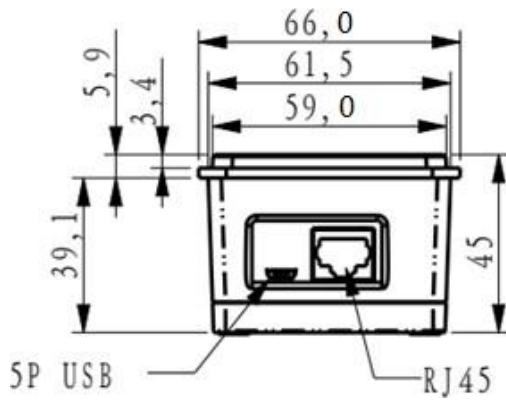
2.2 Mounting
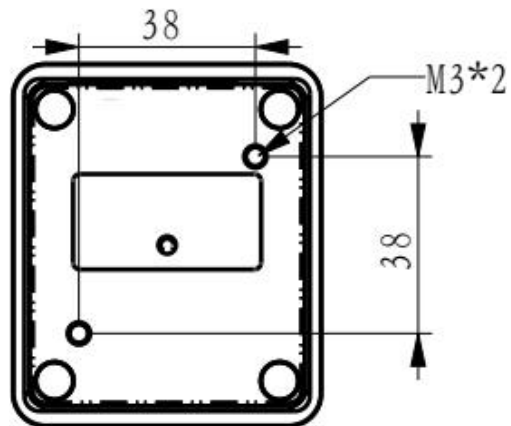
Mechanical mounting dimensions

Front View (unit: mm)

Left View (unit: mm)

Bottom View (unit: mm)

Reference for mounting

Chapter 4 Interfaces

4.3 Communication Interfaces

The RT870 can communicate with the host device through either RS232 serial port or USB port.

RS232:

This DB9 RS232 interface is applicable to most system.

USB HID-KBW:

Based on USB connection, the RT870's transmission is simulated as USB keyboard input. It works   on a Plug and Play basis and no driver is required.

USB COM Port Emulation:

The USB port on the host device is emulated as a serial port with the same data transmission and configuration as a real serial port. A driver is required.