

SPECIFICATION

Customer : _____

Customer's Model No. : _____

Model No. : **FI323**

Fixed Mount Area Imager Barcode Scanner

Date : _____

Sample Serial No. : _____

Spec. Version & Revision Date: V00 2018.09.20

Received/Approved by

CHAMPTEK[®]

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Revision History

Version	Date	Context
V00	2018.09.20	Release

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A. General Description

The FI323 is a high performance, omni-directional area imager bar code scanner. It uses digital imaging technology to provide intuitive and fast reading of 1D and 2D bar codes as well as supporting more advanced features like image capture deactivation. It is designed for various built-in and OEM solutions, such as self-service kiosks, POS (Point-of-Sales) terminals, ATM, price checkers, healthcare and Mobile device solutions etc.

It supports up to 200mm reading depth of 1D and 2D barcode, its scan rate is up to 60 images per second. Based on CMOS technology for optimal image sensitivity and dynamic range, the FI323 features scanning speeds two times faster than traditional 2D imagers.

FI323 is a high performance area imager scanner, provides customers with the most cost-effective solution in the market and perfectly suitable and definitely the best choice for any OEM and built-in application



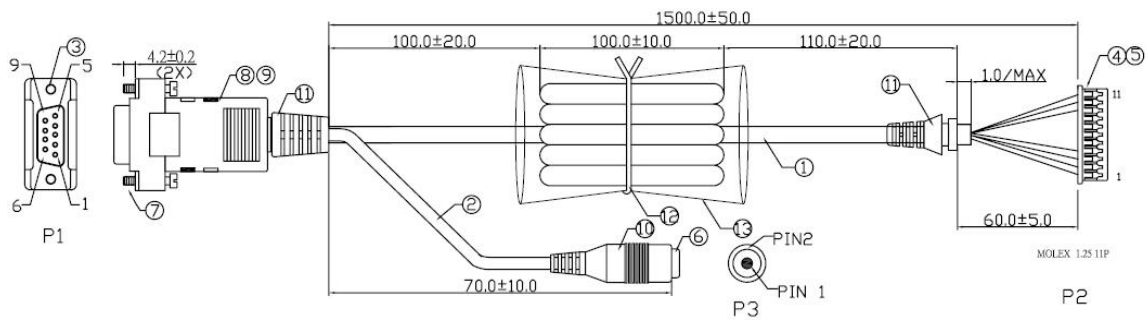
B. Physical Characteristics

Weight	
Body weight	Approx. 3 oz (85 g)
Cable weight(USB)	Approx. 4.24 oz (120 g)
Material	
	Polycarbonate
Cable Length	5FT. (150cm)
Dimension	
	56 mm W x 69 mm D x 28 mm H

1) Cable drawing

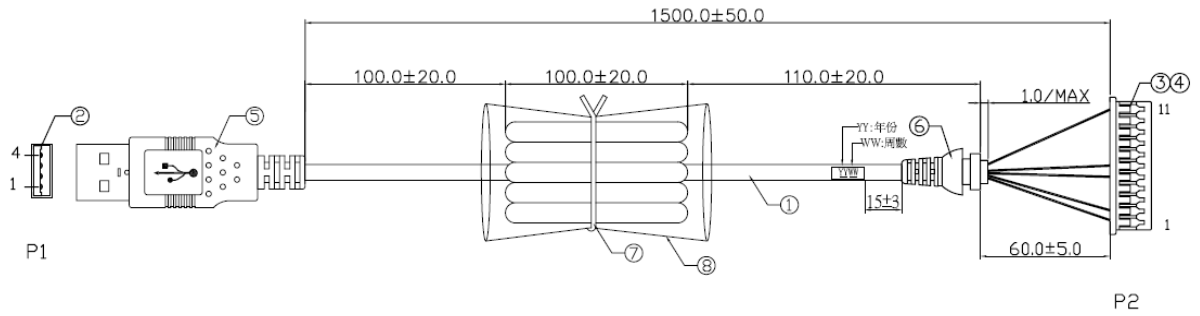
Unit : mm

(1)RS232



Pin Item					Description
P1	Color	P2	Color	P3	
9	Red	2	Red	1	VCC, +5V
3	Yellow	4			RXD
2	Orange	3			TXD
5	Brown	1	Brown	2	GND
8	Green	9			RTS
7	Blue	10			CTS
steel casing	wire-winding	11			SHIELDING

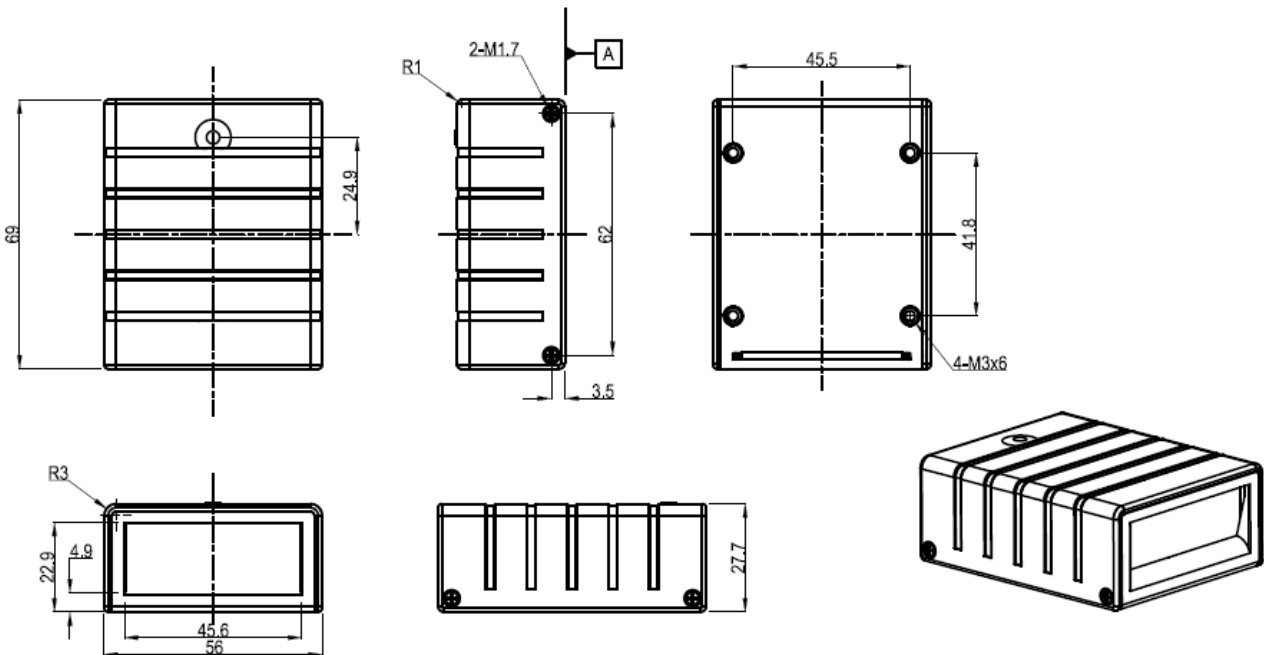
(2) USB(Virtual COM port)



Pin Item			Description
P1	Color	P2	
1	Red	2	VCC
2	Blue	6	D-
3	Green	5	D+
4	Brown	1	GND
steel casing	wire-winding	11	SHIELDING

2) Mechanical drawing

Unit : mm



C. Electrical Characteristics

Interface	RS232	USB-HID (or Virtual COM port)
	DC Adaptor	USB Power
Supply Voltage	DC +5V±5%	
Current Draw		±10%
Stand by (Typ.)	180 mA	180 mA
Operation (Typ.)	380 mA	380 mA

D. Performance

Light Source	White light LED
Sensor	752 (H) x 480 (V) pixels
Field of view	Horizontal – 40°, Vertical – 25°
Scan Rate	60 fps (at full resolution)
Reading Distance	200mm@20mil/0.5mm, PCS90%
Print Contrast Ratio	PCS30%@5mil/0.127mm
Resolution	4mil/0.1mm@PCS90% Code39, 10mil/.26mm@PCS90% QRCode
Reading Angle	<i>Test Conditions : Code 39, 10mil/0.25mm,PCS90%</i>
Pitch Angle	5°~60° (±5°)
Skew Tolerance	5°~60° (±5°)
Ambient Light	100,000 Lux Max.

E. Environmental

Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-20 °C to 70 °C (-4 °F to 158 °F)
Relative Humidity	20% to 95% (Non-condensing)

F. Readable Symbologies

1D Symbologies	Readable	Default Enable
UPC-A	V	V
UPC-E	V	V
EAN-8/JAN-8	V	V
EAN-13/JAN-13	V	V
Code 39	V	V
Code 128	V	V
Codabar/NW7	V	V
Interleaved 25	V	V
Industrial 25	V	
Matrix 25	V	
Code 93	V	
China Post	V	
Code 11	V	
MSI/Plessey	V	
Telepen	V	
GS1 Databar Omni-directional	V	
GS1 Databar Limited	V	
GS1 Databar Expanded	V	

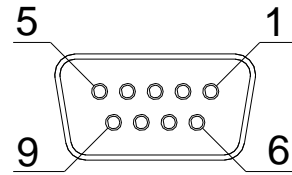
2D Symbologies	Readable	Default Enable
Aztec	V	
Data Matrix	V	V
PDF 417	V	V
Micro PDF 417	Optional	
QR Code	V	V
Micro QR Code	V	
GM Code	Optional	
Han Xin Code	Optional	

G. Pin Assignment

(a)RS232 Interface

DB 9 Female

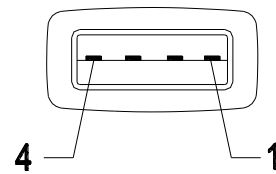
Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
9	Vcc/+5V
Power Lead	Vcc/+5V



(b)USB Interface

USB A Type Male

Pin No.	Function
1	Vcc
2	D-
3	D+
4	GND

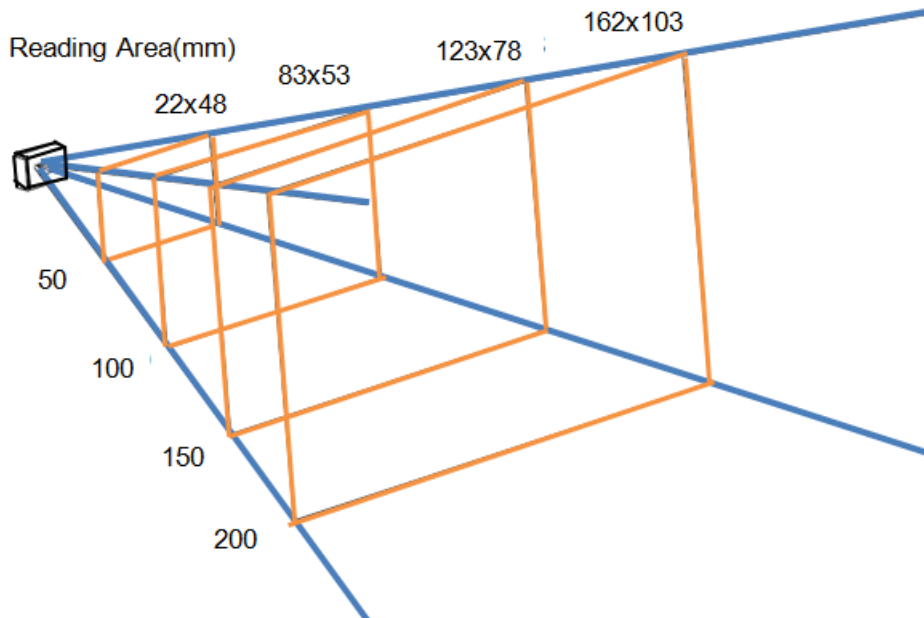


H. Depth of field

Barcode	Depth of field
4mil Code39	60~90 mm
5mil Code39	50~100 mm
6mil Code39	50~110 mm
10mil Code39	40~180 mm
13mil Code39	40~190 mm
20mil Code39	40~200 mm
20mil QR Code	40~150 mm
10mil PDF417	50~120 mm
20mil PDF417	40~150 mm
20mil Data Matrix	50~130 mm

Note:

1. The test is under ambient light 700 ~ 800 Lux.
2. Reading area



I. Reliability

Life Time

MTBF(Calculated) 50,000 hours

Thermal Shock

High Temp. 50 °C (122 °F)

Low Temp. -20 °C (-4 °F)

Mechanical Shock 2000 G, 0.7 ms, half sinus, 3 axes