SPECIFICATION

Customer :

Customer's Model No. :

Model No. : **IG820BT** Wireless Area Image Barcode Scanner

Date :

Sample Serial No. :

Spec. Version & Revision Date: V01   2019.09.02

Received/Approved by

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Revision History

Version	Date	Context
V00	2019.01.15	Release
V01	2019.09.02	Update Performance & Scan Map

A. General Description

IG820/IG821 (wired) / IG820BT(wireless) is a brand new gun-type area imager bar code scanner, has most modern design with rugged casing and supports IP42 sealing protection, which is designed especially for retail, logistic and warehousing management market. We include friendly functions with replaceable multi-interface cable options that makes it more easily to be operated by the customers to accommodate to user environment. An optional stand can be ordered to facilitate hand-free reading application.

With its unmatched performance for the majority of 1D and 2D bar codes increasing your productivity. It supports barcode scanning with up to 250mm reading depth for the majority of 1D, 2D bar codes and GS1 DataBar™ codes.

IG820BT's out of range or batch transmission mode with memory capacity stores up to 30,000 inputs of EAN13 barcodes. Wireless scanner and cradle equipped Class1 Bluetooth V2.1 EDR technology with transmission range up to 80m/262.47 ft. in line of open sight, supports both SPP and HID profiles can easily pair up with other Bluetooth compatible mobile equipments.
With its Intelligent Activation, it automatically switches over from button trigger mode to auto-sense mode while placing scanner on its stand or charging cradle.

IG820/BT is a high performance barcode scanner which provides customers with the most cost-effective solution in the market. It is perfectly suitable and definitely the best choice for any retail and logistic environment.

B. Physical Characteristics

Weight	
Body weight	Approx. 160g / 5,65 oz
Material	ABS / Rubber
Cable Length	5FT.（150cm）
Connector	RJ 45C 10Pins
Dimension	73.5 mm W x 76.2mm H x 173 mm L
Color Available	Black

a. Cable drawing (Unit:mm)

(1) RS232
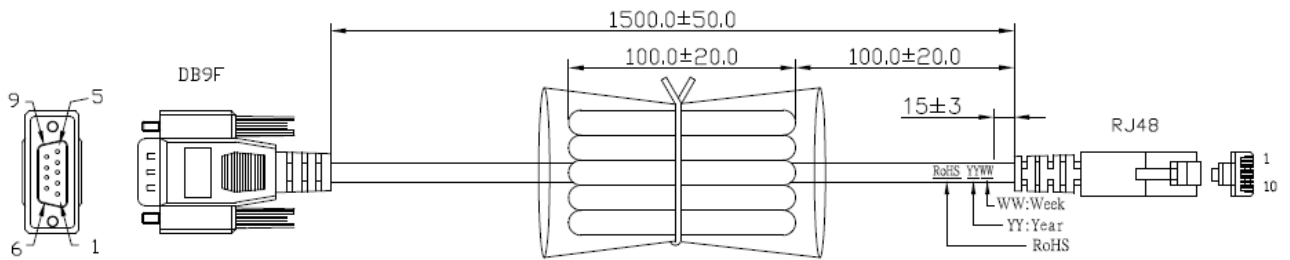
DB9F	RJ48	FUNCTION	COLOR
5	3	GND	Brown
9	5	DC +5V	Red
2	7	TXD	Orange
3	9	RXD	Yellow
8	1	RTS	Green
7	10	CTS	Blue
Shell			Spiral

(2) USB
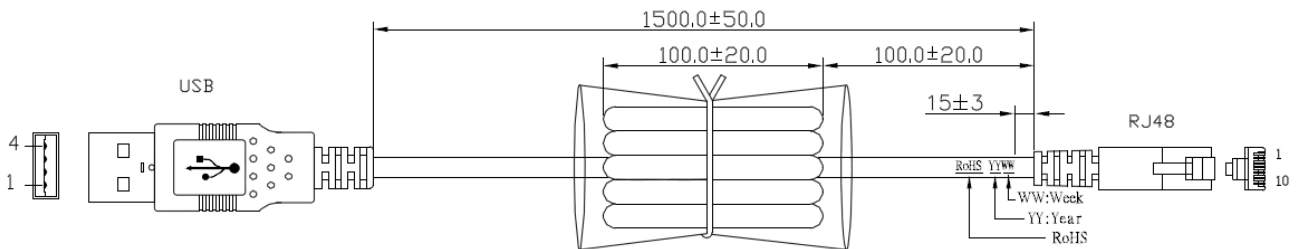
USB	RJ45	FUNCTION	COLOR
1	5	VCC	Red
2	6	D-	Green
3	8	D+	Blue
4	3	GND	Brown
Shell	3	SHIELDING	

b. Pin Assignment

(1) RS-232 Interface

DB 9 Female

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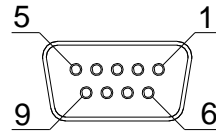
(2) USB Interface

USB A Type Male

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

Mechanical drawing
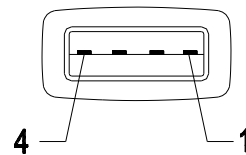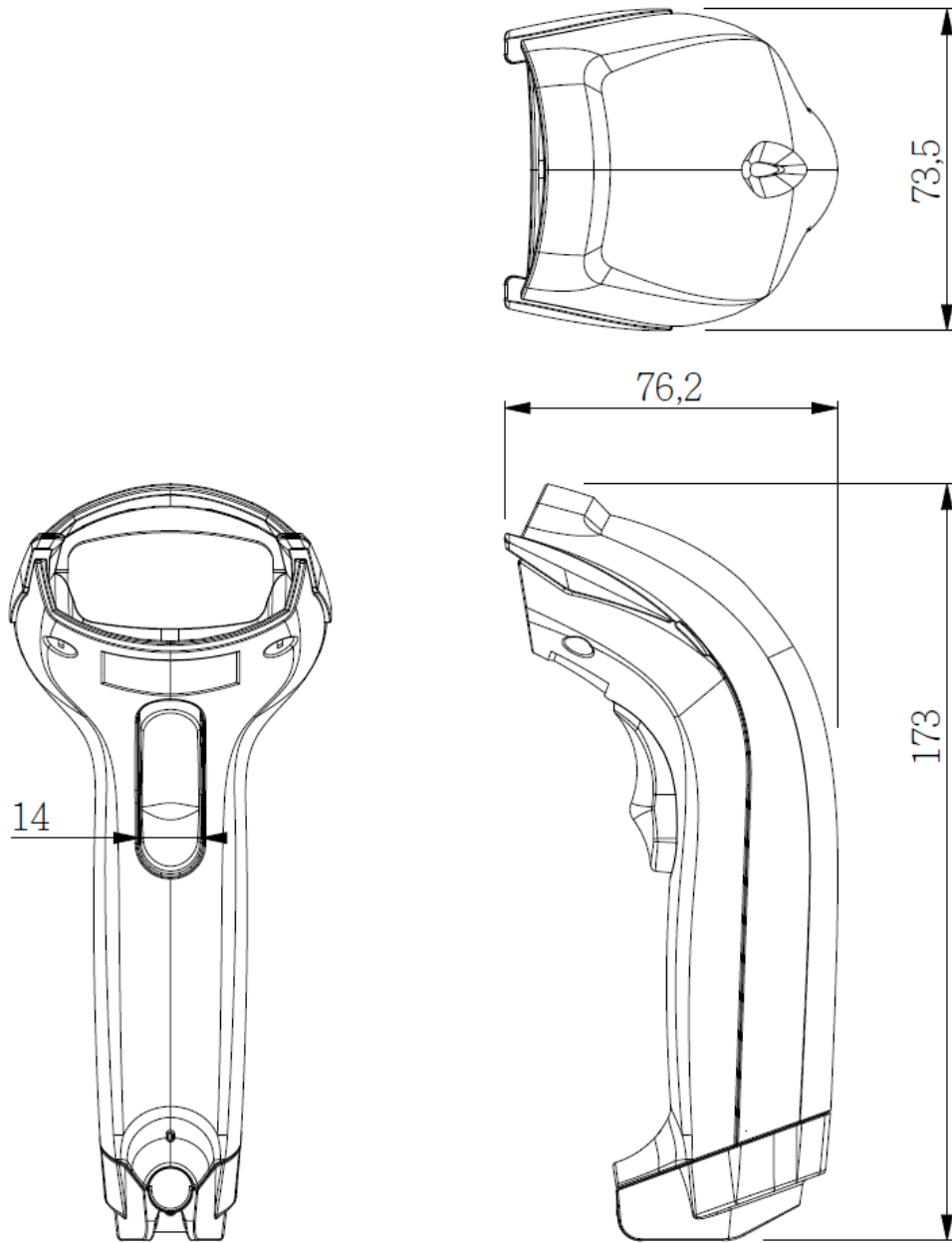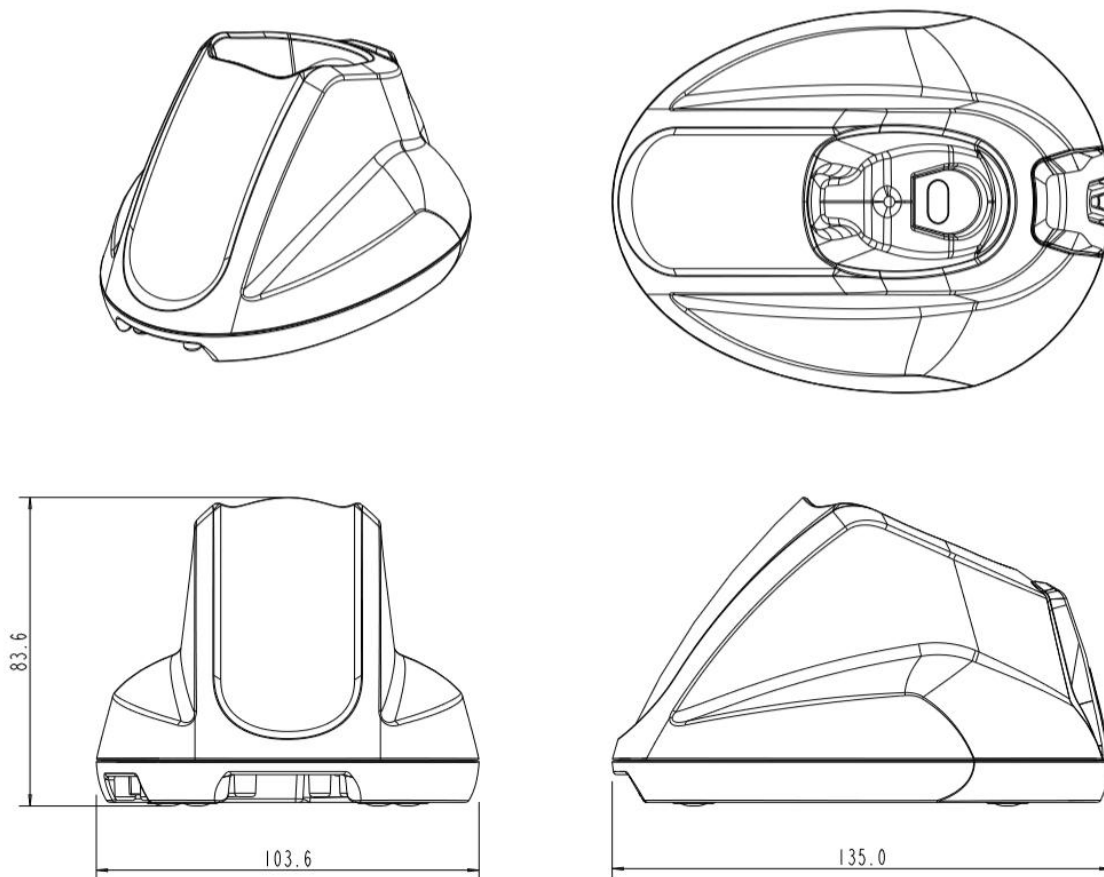
C. Electrical Characteristics

Scanner:	
Power Battery	Li-ion 3.7V / 2600 mAh
Charge Time	Approx. 5 hours
Reads per Charge	20,000 times in continuous read
LED Indicator	Good read: Green
	Error / Alarm: Red
	Bluetooth Communication: blue
Power Consumption	
Operation	445mA
Cradle:	
Input Voltage	5 VDC @ 2 A / Input AC 110-240V
Power Consumption	
Operation	70mA
LED Indicator	Good read: Green
	Bluetooth Communication: blue

D. Performance

Light Source	White light LED
Sensor	1280 (H) x 800 (V) pixels
Field of view	Horizontal – 55°, Vertical – 35°
Scan Rate	60 fps (at full resolution)
Reading Distance	250mm@20mil/0.5mm, PCS90%
Print Contrast Ratio	PCS25%
Resolution	3mil/0.076mm@PCS90% Code39, 5mil/0.127mm@PDF417
Reading Angle	*Test Conditions : Code 39, 10mil/0.25mm,PCS90%*
Pitch Angle	5°~60° (±5°)
Skew Tolerance	5°~60° (±5°)
Ambient Light	100,000 Lux Max.
Sealing	IP42 water and dust protection

E. Environmental

Operating Temperature	0 ^{o}C to 50 ^{o}C (32 ^{o}F to 122 ^{o}F)
Storage Temperature	-20 ^{o}C to 70 ^{o}C (-4 ^{o}F to 158 ^{o}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 Expended	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. Scan Map

Barcode	Depth of field
3mil Code39	30 ~ 70 mm
4mil Code39	20 ~ 80 mm
5mil Code39	20 ~ 100mm
6mil Code39	20 ~ 120 mm
10mil Code39	20 ~ 170 mm
13mil Code39	20 ~ 200 mm
20mil Code39	20 ~ 250 mm
20mil QR Code	20 ~ 180 mm
20mil PDF417	20 ~ 110 mm
20mil Data Matrix	20 ~ 180 mm

Note:

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

Reading area

53x34   107x67   160x100   213x134

50
100
150
200
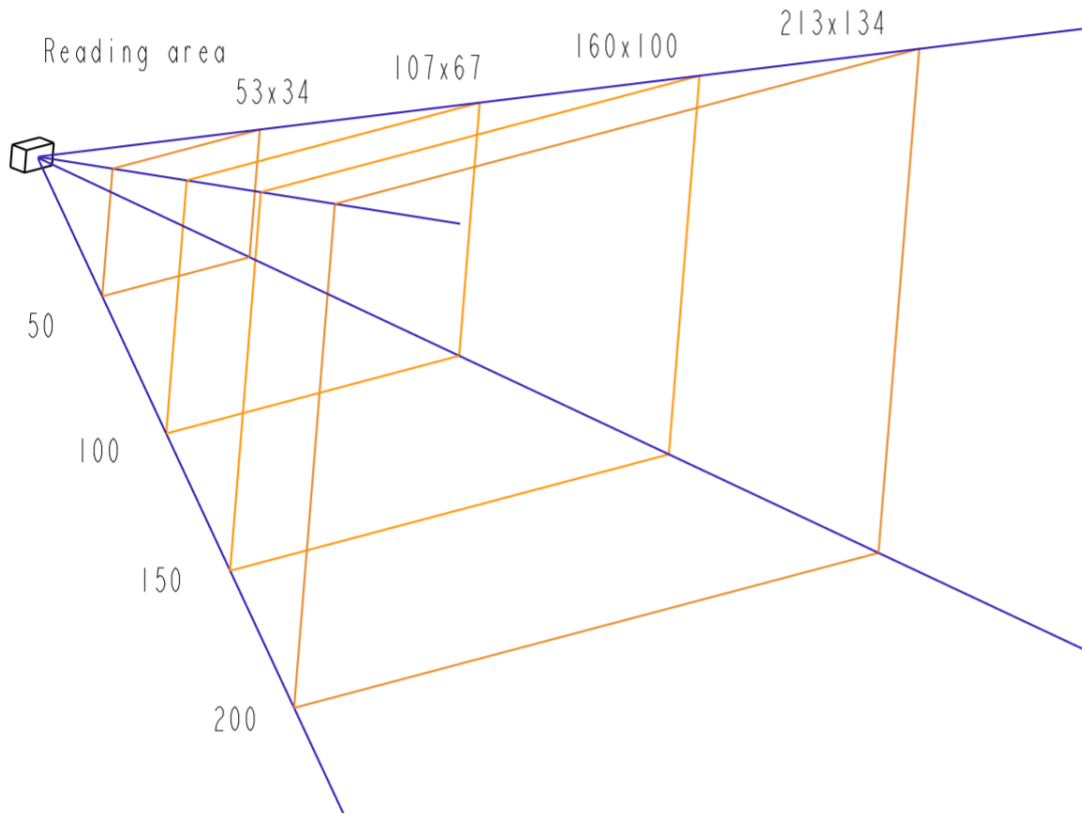
H. Reliability

Life Time	
Trigger Switch	1,000,000 times
MTBF(Calculated)	50,000 hours
Thermal Shock	
High Temp.	50 ^{o}C (122 ^{o}F)
Low Temp.	-20 ^{o}C (-4 ^{o}F)
Cycle time	30 minutes for high temp. , 30 minutes for low temp.
Cycles	24 cycles
Cable Bending Test	25,000 times minimum (30 times/min @ 500g/90 ^{o})
Drop resistance	59.05 inches(150cm) drop on concrete surface
Electro-Static Discharge	Both contact and air at up to 16KV