

SPECIFICATION

Customer : _____

Customer's Model No. : _____

Model No. : **IG820** Gun-type Area Image Barcode Scanner

Date : _____

Sample Serial No. : _____

Spec. Version & Revision Date: V01 2018.09.20

Received/Approved by



ChampTek Incorporated
5F, No. 2, Alley 2, Shih-Wei Lane, Chung Cheng Rd.,
Xindian District, New Taipei City 231, Taiwan

Http://www.champtek.com

E-mail : sales@champtek.com

TEL : 886-2-22192385

FAX : 886-2-22192387

Revision History

Version	Date	Context
V00	2018.08.22	Release
V01	2018.09.20	Update Resolution

SPECIFICATION.....	1
A. General Description	4
B. Physical Characteristics	5
C. Electrical Characteristics.....	8
D. Performance	8
E. Environmental.....	8
F. Readable Symbologies	9
G. Scan Map.....	10
H. Reliability.....	11

A. General Description



IG820/IG821 is a brand new general purpose gun-type Area Imager Barcode Scanner which is designed especially for retail, logistic and warehousing management market. We include friendly functions with replaceable multiple interface cable options that makes it more easily to be operated by the customers to accommodate it to user environment.

IG820/821 has most modern design with rugged casing and supports IP42 sealing protection, with its unmatched reading performance for the majority of 1D/2D bar codes can increase your productivity.

At auto-sense mode, it senses an object in front of it and turns on the light to read barcodes, can extend its lifespan. With its Intelligent Activation*, it automatically switches over from button trigger mode to auto-sense mode while placing scanner on its stand. An optional stand can be ordered to facilitate hand-free reading application.

In short, IG820/821 provides customer with the most cost-effective solution in the market. It is perfectly suitable and definitely the best choice for any retail and logistic environment.

Note: *Only for IG821.

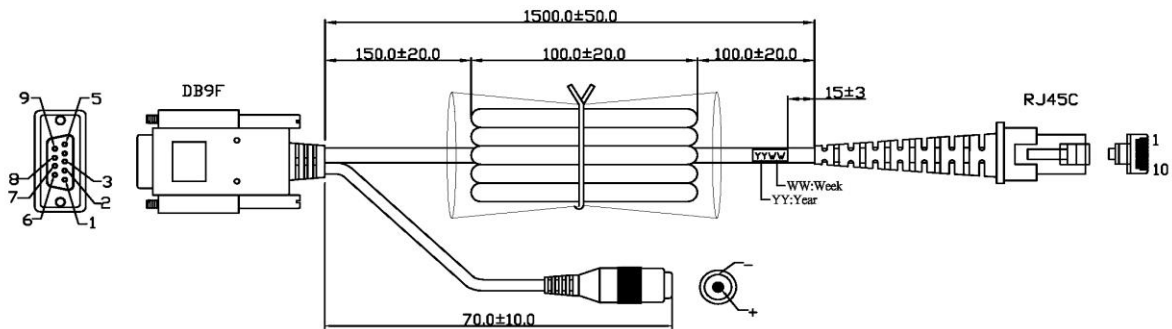
B. Physical Characteristics

Weight	
Body weight	Approx. 110g / 3,88 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 / Gray

a. Cable drawing (Unit:mm)

(1) RS232

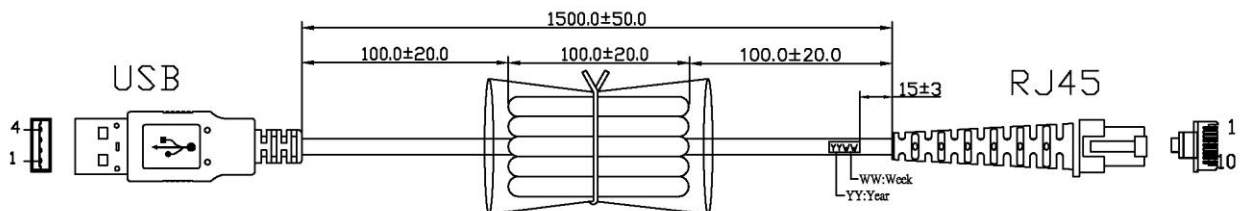
UNIT:mm



DB9F	RJ45C	DC JACK	FUNCTION	COLOR
5	3	Shell	GND	Brown
9	5	CORE	DC +5V	Red
2	7		TXD	Orange
3	9		RXD	Yellow
8	1		RTS	Green
7	10		CTS	Blue
Shell			Spiral	

(2) USB

UNIT:mm



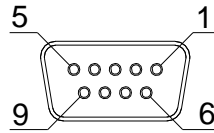
USB	RJ45	FUNCTION	COLOR
1	5	VCC	Red
2	4	D-	Blue
3	2	D+	Green
4	3	GND	Brown
Shell	3	SHIELDING	

b. Pin Assignment

(1) RS-232 Interface

DB 9 Female

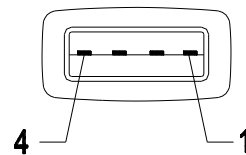
Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
9	Vcc/+5V
Power Lead	Vcc/+5V



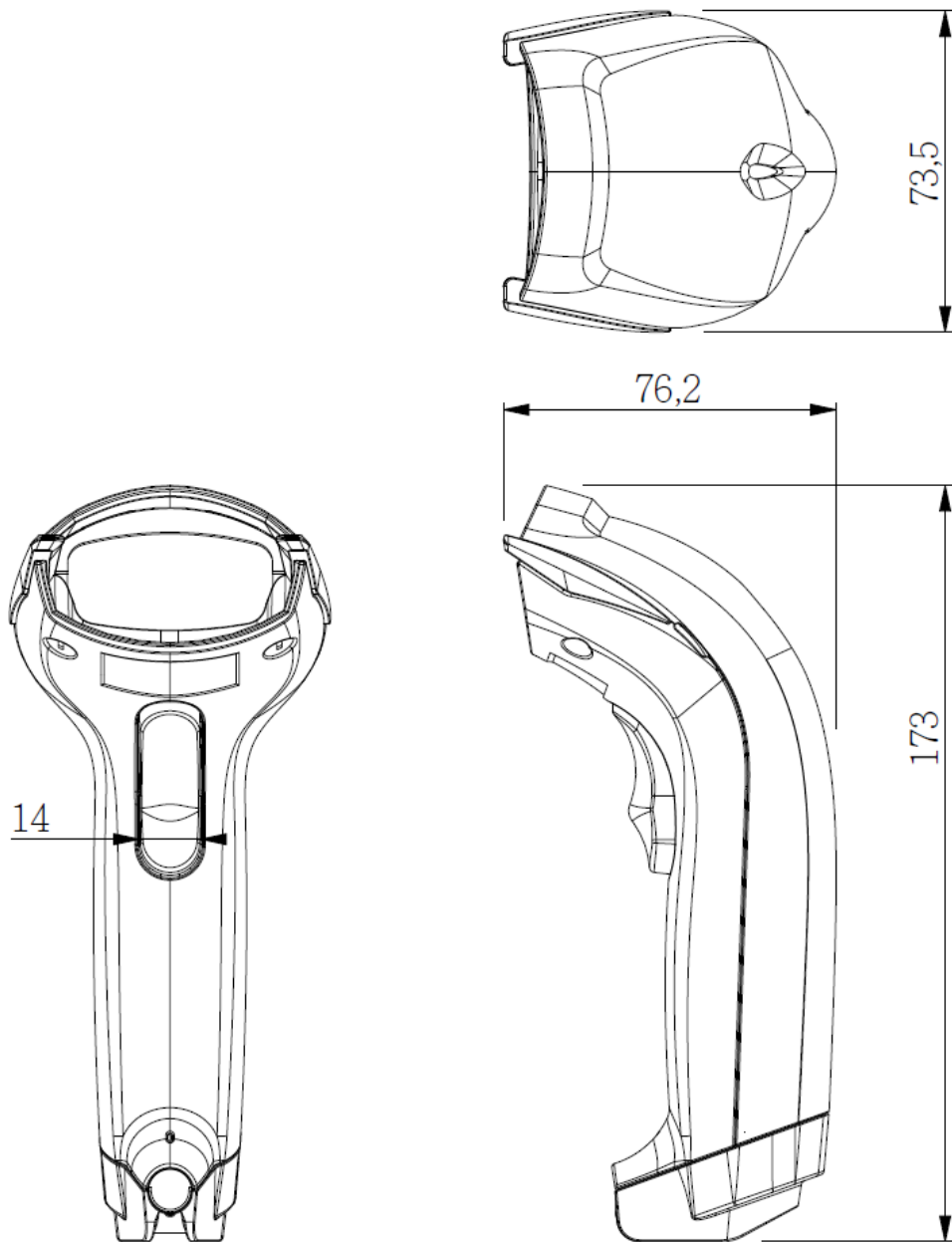
(2) USB Interface

USB A Type Male

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



Unit: mm



C. Electrical Characteristics

Interface	RS232	USB
Supply Voltage		
Output Voltage (Typ.)	±9V	+5V
Current Draw		
Stand by (Typ.)	180 mA	180 mA
Operation (Typ.)	360mA	360 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
Reading Distance	250mm@20mil/0.5mm, PCS90%
Print Contrast Ratio	PCS45%@5mil/0.127mm
Resolution	3mil/0.076mm@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.
Sealing	IP42 water and dust protection

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	

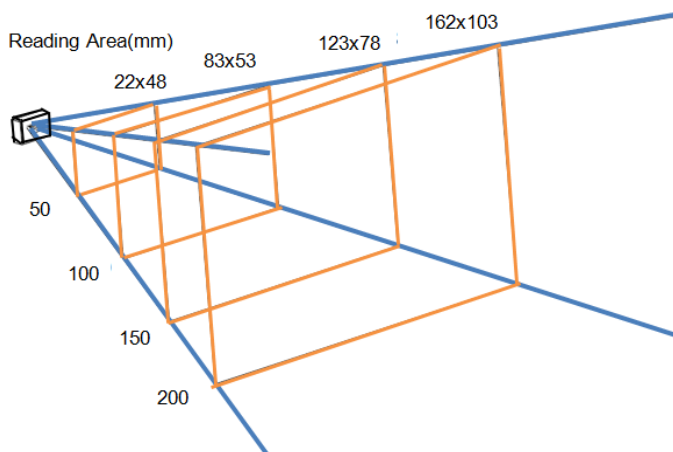
2D Symbologies	Readable	Default Enable
Aztec	V	
Data Matrix	V	V
PDF 417	V	V
Micro PDF 417	Optional	
QR Code	V	V
Micro QR Code	V	
GM Code	Optional	
Han Xin Code	Optional	

G. Scan Map

Barcode	Depth of field
3mil Code39	30 ~ 60 mm
4mil Code39	20 ~ 90 mm
5mil Code39	20 ~100 mm
6mil Code39	20 ~110 mm
10mil Code39	20~ 150 mm
13mil Code39	20 ~180 mm
20mil Code39	20 ~ 250 mm
20mil QR Code	30 ~ 150 mm
10mil PDF417	30 ~ 110 mm
20mil PDF417	30 ~ 150 mm
20mil Data Matrix	30 ~ 200 mm

Note:

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



H. Reliability

Life Time	
Trigger Switch	1,000,000 times
MTBF(Calculated)	50,000 hours
Thermal Shock	
High Temp.	50 °C (122 °F)
Low Temp.	-20 °C (-4 °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 °)
Drop resistance	70.86 inches(180cm) drop on concrete surface
Electro-Static Discharge	Both contact and air at up to 16KV