

SPECIFICATION

Customer : _____

Customer's Model No. : _____

Model No. : **IG820/IG821** Gun-type Area Image Barcode Scanner

Date : _____

Sample Serial No. : _____

Version & Revision Date: V05

2020.08.03

Received/Approved by

SCANTECH ID[®]
CHAMPTEK Group

Web: <http://scantech-id.com>
E-mail: sales@scantech-id.com

SCANTECH ID
Heliumweg 34a 3812 RE Amersfoort,
The Netherlands

TEL: +31 (0) 33 4698400
FAX: +31 (0) 33 4650615

Revision History

Version	Date	Context
V00	2018.08.22	Release
V01	2018.09.20	Update Resolution
V02	2019.05.03	Update Performance
V03	2019.06.13	Update Performance
V04	2019.09.10	Update Scan Map
V05	2020.08.03	Update Symbology

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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 itself to user environment.

IG820/IG821 has most modern design with rugged casing and supports IP42 sealing protection, with its unmatched performance for the majority of 1D and 2D bar codes increasing your productivity. An optional stand can be ordered to facilitate hand-free reading application.

At auto-sense mode, it senses an object approaching and turns on the light to read barcodes. With IG821's Intelligent Activation, it automatically switches over from button trigger mode to auto-sense mode while placing scanner on its stand.

In short, IG820/IG821 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.

Features

- Support 1D, 2D and GS1 Databar codes.
- Good performance on both display and printed label reading.
- Support automatic sense reading and is able to read under 0 Lux dark environment.
- Support multiple interface options, USB HID, Virtual COM and RS-232.
- Designed as IP42 sealing protection.
- With the intelligent activation (Only for IG821), it automatically switches over to automatic-sense reading while placed on the stand.
- Both contact and air 16KV Electro-Static discharge.
- A stand option can be ordered to facilitate hand-free reading options.
- Vibration when scanning (optional)
- Applicable on Android tablet or smart phone with optional cable.

B. Physical Characteristics

Weight

Body weight Approx. 110g / 3,88 oz

Material ABS / Rubber

Cable Length 5FT. (150cm)

Connector RJ 45C 10Pins

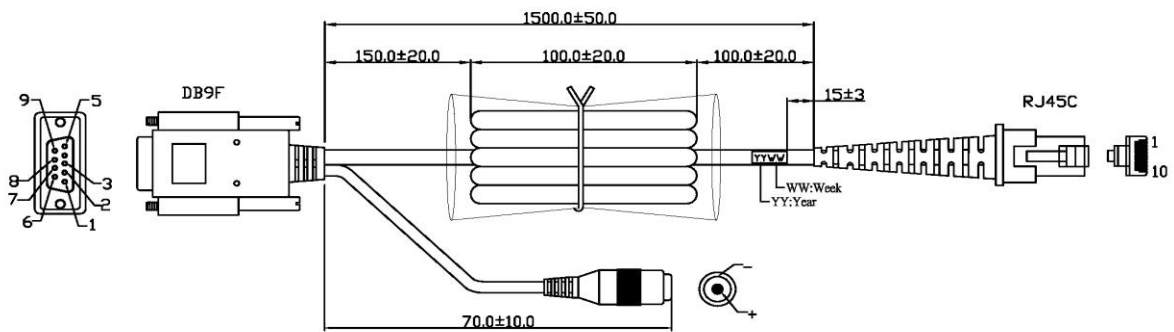
Dimension 73.5 mm W x 76.2mm H x 173.0 mm L

Color Available Black / Gray

a. Cable drawing (Unit: mm)

(1) RS232

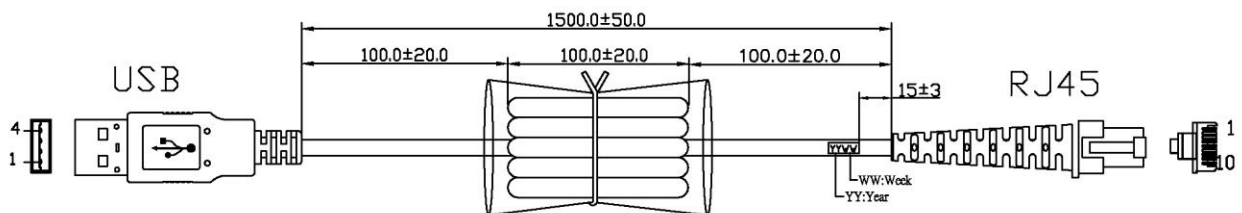
UNIT:mm



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



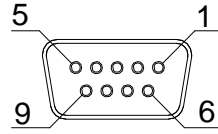
USB	RJ45	FUNCTION	COLOR
1	5	VCC	Red
2	4	D-	Blue
3	2	D+	Green
4	3	GND	Brown
Shell	3	SHIELDING	

b. Pin Assignment

(1) RS-232 Interface

DB 9 Female

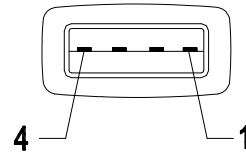
Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
9	Vcc/+5V
Power Lead	Vcc/+5V



(2) USB Interface

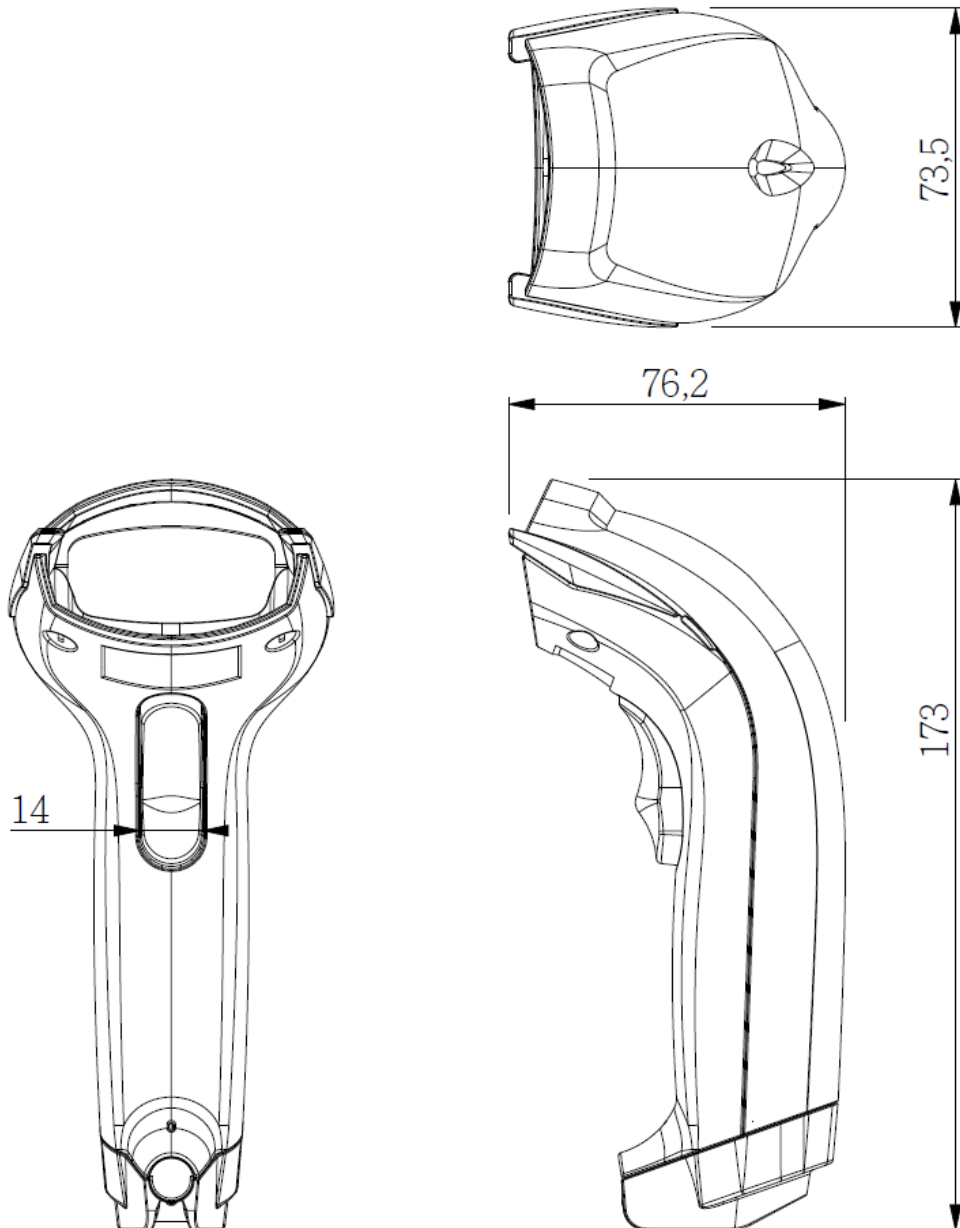
USB A Type Male

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



Mechanical drawing

Unit: mm



C. Electrical Characteristics

Interface	RS232	USB
Supply Voltage		
Output Voltage (Typ.)	±9V	+5V
Current Draw		
Stand by (Typ.)	45 mA	40 mA
Operation (Typ.)	440mA	370 mA

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	<i>Test Conditions : Code 39, 10mil/0.25mm, PCS90%</i>
Pitch Angle	±5°~60°
Skew Angle	±5°~60°
Ambient Light	0~100,000 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
ISSN	V	
UCC Coupon Extended Code	V	
Code 39	V	V
Code 39 Full ASCII	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	

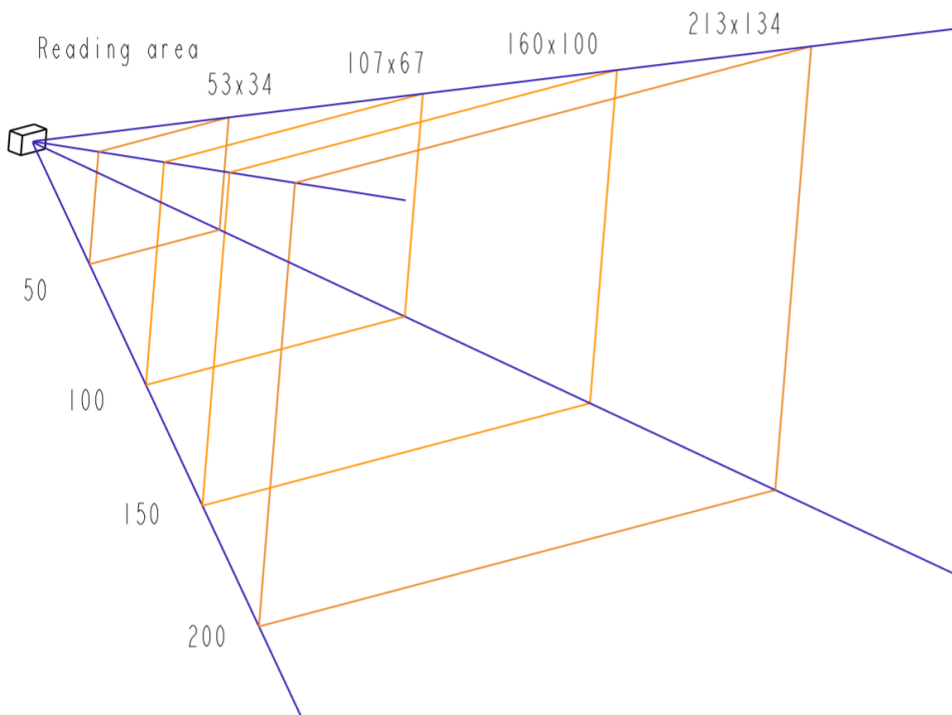
2D Symbologies	Readable	Default Enable
Aztec	V	
Data Matrix	V	V
PDF 417	V	V
Micro PDF 417	V	
QR Code	V	V
Micro QR Code	V	
Dotcode	V	
Maxicode	Optional	
Han Xin Code	Optional	

G. Scan Map

Barcode	Depth of field
3mil Code39	30 ~ 70 mm
4mil Code39	20 ~ 80 mm
5mil Code39	20 ~100 mm
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: the test is under ambient light 700 ~ 800 Lux.

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

Sealing IP42 water and dust protection