

SPECIFICATION

Customer :

Customer's Model No. :

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

Date :

Sample Serial No. :

Version & Revision Date: V05

2020.08.03

Received/Approved by

CHAMPTEK[®]

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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 is a brand new general purpose gun-type Area Image 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 has most modern design with rugged casing and supports IP42 sealing protection, with its auto-shuttle-emulation alike smart detection, for the majority of 1D/2D bar codes and GS1 DataBar™ codes. An optional stand can be ordered to facilitate hand-free reading application.

With its auto-sense mode, it will automatically turns off and senses a object in front of it to switch on reading, can extend its lifespan.

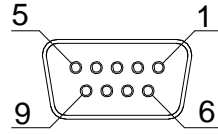
In short, IG820 provides customer with the most cost-effective solution in the market. It is perfectly suitable and definitely the best choice for any retail and logistic environment.

b. Pin Assignment

(1) RS-232 Interface

DB 9 Female

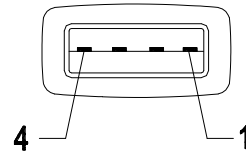
| Pin No. | Function |
|------------|----------|
| 2 | TXD |
| 3 | RXD |
| 5 | GND |
| 7 | CTS |
| 8 | RTS |
| 9 | Vcc/+5V |
| Power Lead | Vcc/+5V |



(2) USB Interface

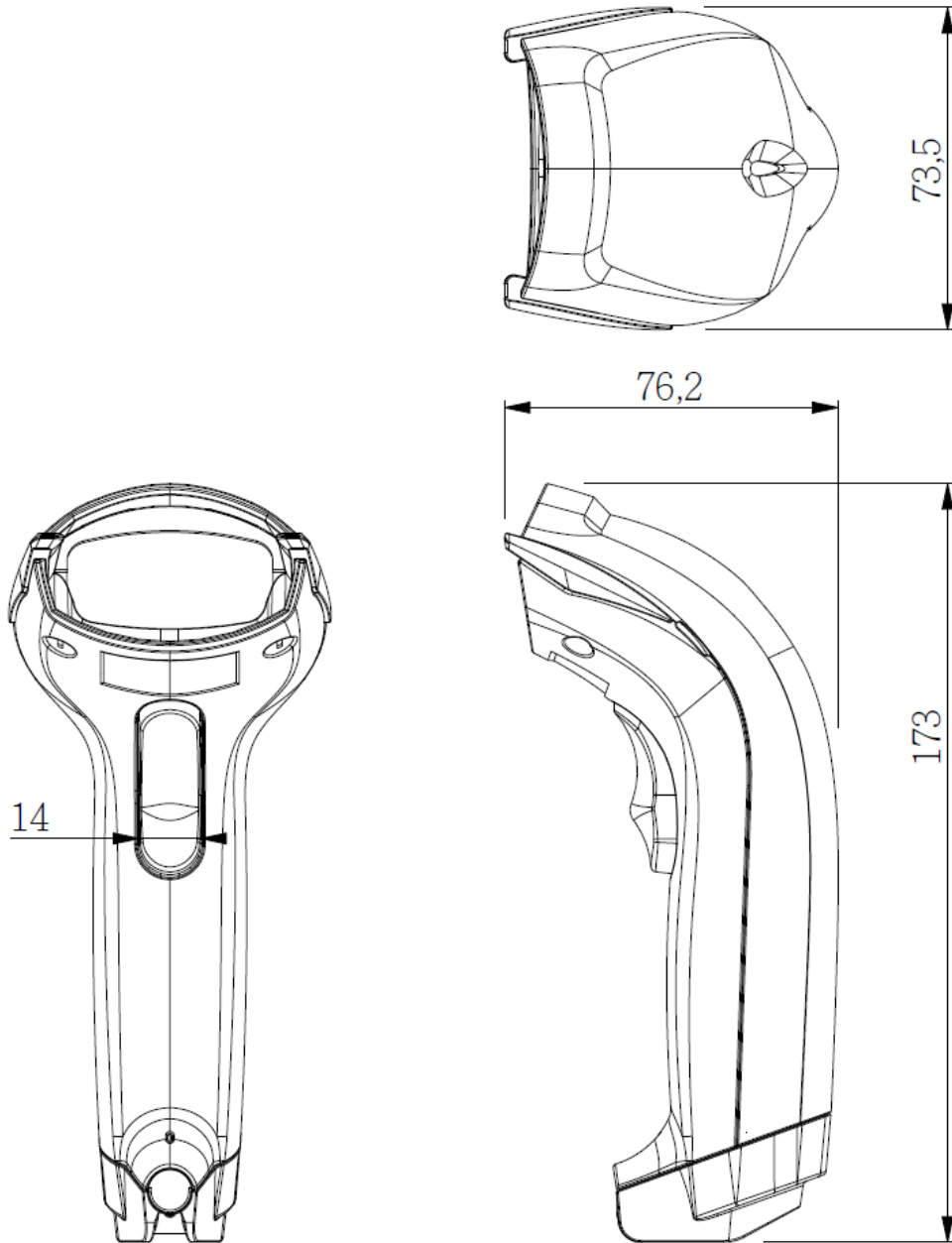
USB A Type Male

| 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 | |

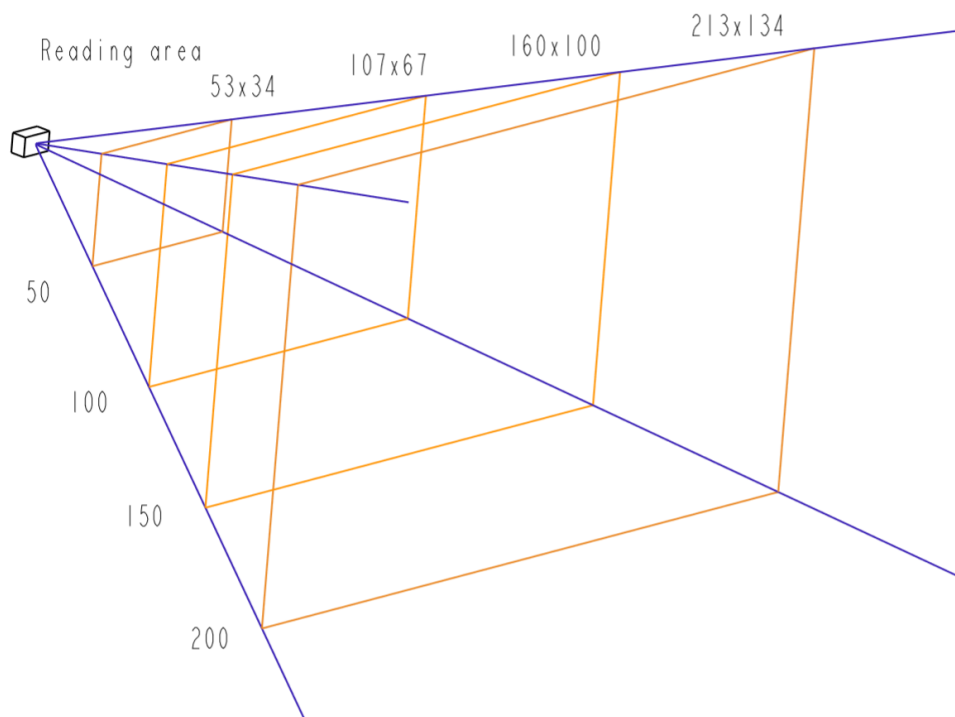
| 2D Symbologies | Readable | Default Enable |
|----------------|----------|----------------|
| Aztec | V | |
| Data Matrix | V | V |
| PDF 417 | V | V |
| Micro PDF 417 | V | |
| QR Code | V | V |
| Micro QR Code | V | |
| Dotcode | V | |
| Maxicode | Optional | |
| Han Xin Code | Optional | |

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