

# CS2190

## Cordless Laser Scanner



USB



RS-232



PS/2



433MHz

### Features

- Stylish and ergonomic design, small base saves installation space
- Read all common 1D barcodes from paper labels
- Working range reaches up to 100 meters
- Support point-to-point and multi-point data transmission
- Support batch mode capability (3,000 EAN-13 barcodes)
- Built-in rechargeable & replaceable battery, one full charge supports scanning for 21 hours
- Brand-new, easy wireless communication setting method guarantees convenient operation
- Support vibration mode, ideal for both noisy and quiet environment



# CS2190 Specifications

| Communication Characteristics |                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Working Range                 | 100 meters (open air)                                                                                                                                                                                                                                                                                                                           |
| Radio Link                    | 430.0 ~ 431.9 MHz , 433.3 ~ 434.7 MHz with adaptive frequency hopping                                                                                                                                                                                                                                                                           |
| Mechanical Characteristics    |                                                                                                                                                                                                                                                                                                                                                 |
| Dimensions (L × W × D)        | Handheld unit: 90.2 mm × 70 mm × 180 mm; Cradle: 118 mm × 89.5 mm × 74 mm                                                                                                                                                                                                                                                                       |
| Weight                        | Handheld unit: 207 g; Cradle: 140 g (without cable)                                                                                                                                                                                                                                                                                             |
| Indicator                     | Handheld unit: LED, beeper, vibration; Cradle: LED                                                                                                                                                                                                                                                                                              |
| Programming Method            | Manual (reading special barcode)                                                                                                                                                                                                                                                                                                                |
| Firmware Upgrade              | Using Flash Utility software, while a cradle is required.                                                                                                                                                                                                                                                                                       |
| Interface                     | USB Keyboard, USB Virtual COM, RS232, PS/2 Keyboard                                                                                                                                                                                                                                                                                             |
| Electrical Characteristics    |                                                                                                                                                                                                                                                                                                                                                 |
| Input Voltage                 | DC 5 ± 0.25 V                                                                                                                                                                                                                                                                                                                                   |
| Current                       | Handheld unit: 4 mA (standby), 150 mA (working)<br>Cradle: 60 mA (working), 500 mA (charging, maximum)                                                                                                                                                                                                                                          |
| Battery                       | 1400 mAh Lithium-ion battery                                                                                                                                                                                                                                                                                                                    |
| Charge Time                   | 4 hours                                                                                                                                                                                                                                                                                                                                         |
| Standby Time                  | 5 days                                                                                                                                                                                                                                                                                                                                          |
| Operating Time                | 21 hours (1 scan per 5 seconds)                                                                                                                                                                                                                                                                                                                 |
| Performance Characteristics   |                                                                                                                                                                                                                                                                                                                                                 |
| Light Source                  | 650 nm visible laser diode                                                                                                                                                                                                                                                                                                                      |
| Decoding Rate                 | 200 times per second                                                                                                                                                                                                                                                                                                                            |
| Scanning Angle                | ±60°, ±65°, ±42° (skew, pitch, roll)                                                                                                                                                                                                                                                                                                            |
| Print Contrast                | 20% minimum reflection difference                                                                                                                                                                                                                                                                                                               |
| Minimum Resolution            | 3 mil                                                                                                                                                                                                                                                                                                                                           |
| Decoding Capability           | UPC-A, UPC-E, UPC-E1, EAN-13, EAN-8, ISBN (Bookland EAN), ISSN, Code 39, Code 39 full ASCII, Code 32, Trioptic Code 39, Interleaved 2 of 5, Industrial 2 of 5, Matrix 2 of 5, Codabar (NW7), Code 128, UCC/EAN 128, ISBT 128, Code 93, Code 11 (USD-8), MSI/Plessey, UK/Plessey, China Post, China Finance, GS1 DataBar (formerly RSS) variants |
| Decoding Depth                | 3 mil Code 39 (3 chars): 20 - 70 mm<br>5 mil Code 39 (3 chars): 0 - 120 mm<br>10 mil Code 39 (3 chars): 0 - 280 mm<br>13 mil UPC-E (6 chars) : 0 - 350 mm<br>20 mil Code 39 (3 chars): 25 - 480 mm<br>30 mil Code 39 (2 chars): 15 - 650 mm                                                                                                     |
| Environmental Characteristics |                                                                                                                                                                                                                                                                                                                                                 |
| Temperature                   | 0° to 50°C (32° to 122°F), operating; -40° to 60°C (-40° to 140°F), storage                                                                                                                                                                                                                                                                     |
| Humidity                      | 5% to 95% (non-condensing)                                                                                                                                                                                                                                                                                                                      |
| Safety                        | Laser safety: EN60825-1, Class 1   EMC: EN55022, EN55024<br>Electrical Safety: EN60950-1   Sealing: IP51<br>Drop Resistance: Multiple 1.5 m (4.9 ft.) drops to concrete                                                                                                                                                                         |

[Notice]: Specifications are subject to change without notice.



## 2 Get Started

### 2-1 Cable connector pin-outs descriptions for cradle

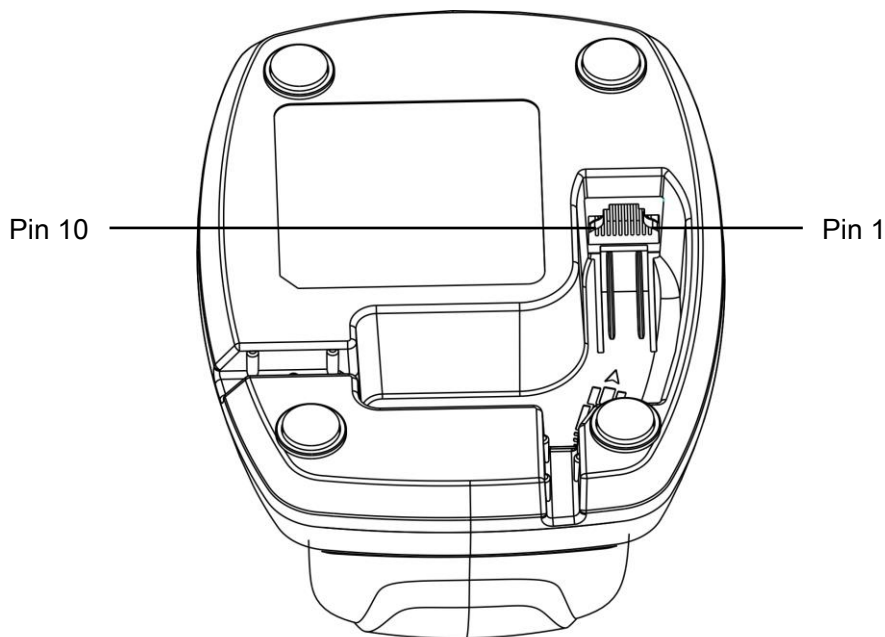


Figure 2-1 Cable connector interface pin-outs

The pin-outs descriptions in Table 1 apply to the cable connector on the cradle and are for reference only.

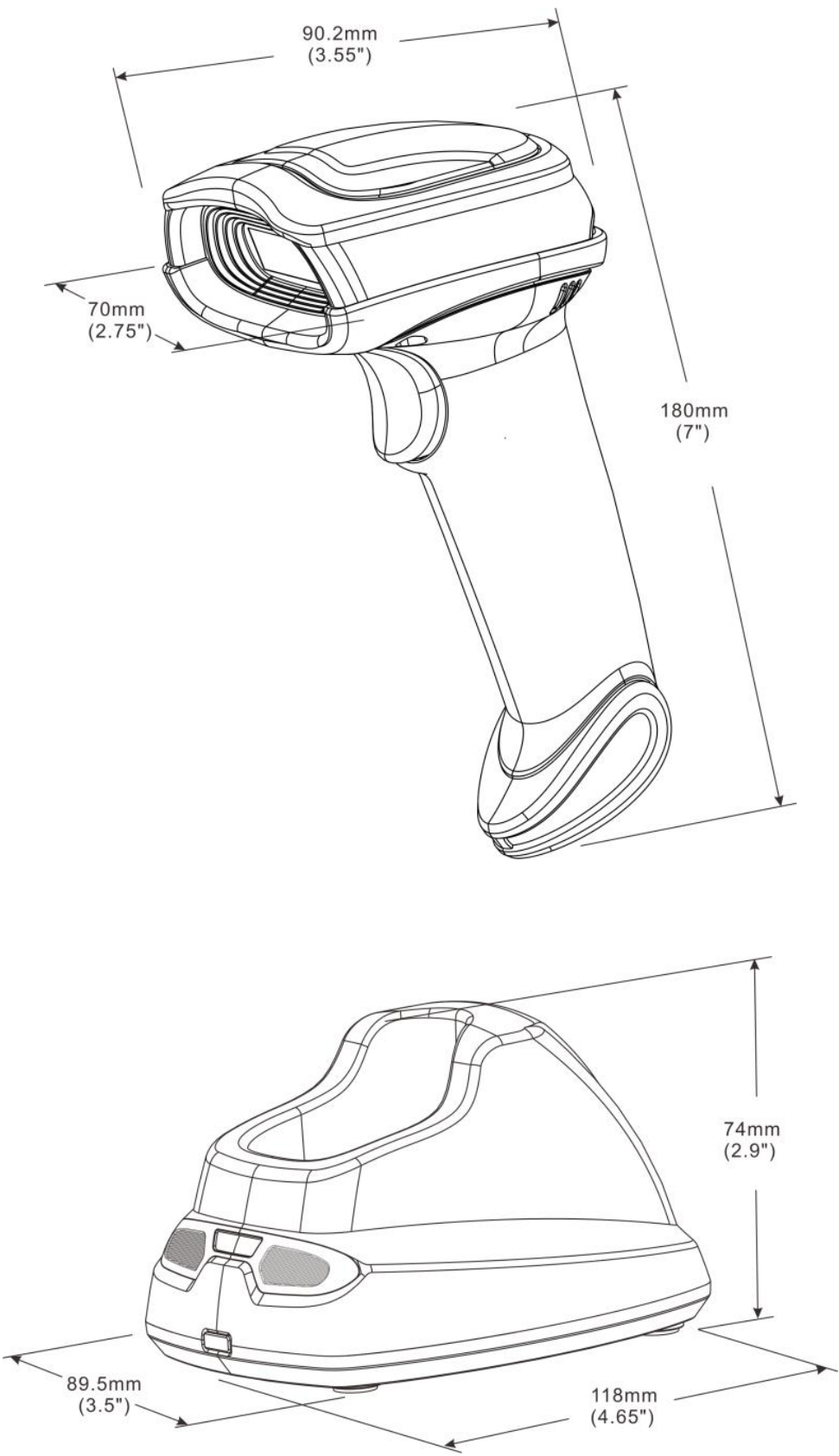
Table 2-1 Cable connector pin-outs descriptions

| Pin | RS232                                         | Keyboard (PS/2)                               | USB                                           |
|-----|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| 1   | Power (+5V)                                   | Power (+5V)                                   | Power (+5V)                                   |
| 2   | +3.3V ( for interface auto selection purpose) | Ground (for interface auto selection purpose) | +3.3V ( for interface auto selection purpose) |
| 3   | Ground                                        | Ground                                        | Ground                                        |
| 4   | +3.3V ( for interface auto selection purpose) | Reserved                                      | Ground (for interface auto selection purpose) |
| 5   | TxD                                           | KeyClock                                      | Reserved                                      |
| 6   | RxD                                           | KeyData                                       | Reserved                                      |
| 7   | Reserved                                      | TermClock                                     | Reserved                                      |
| 8   | Reserved                                      | TermData                                      | Reserved                                      |
| 9   | CTS                                           | Reserved                                      | D-                                            |
| 10  | RTS                                           | Reserved                                      | D+                                            |

Note: Voltage level of all RS232 Pin-outs (RxD, TxD, CTS and RTS) is 0V for logic low and 3.3V for logic high.



## 2-2 Dimensions



## 2-3 Parts of the scanner



Figure 2-2 Handheld unit

- ① Exit window
- ② Trigger (Press to trigger / Long press 2 seconds to turn on)
- ③ Beeper
- ④ Power indicator (Blue LED)
- ⑤ Successful decoding indicator (Green LED) / Communication fail indicator (Red LED) / Charging indicator (Red LED)



Figure 2-3 Cradle

- ⑥ Power indicator (Blue LED)
- ⑦ Communication indicator (Green LED)
- ⑧ Key (Long press 2 seconds to restore factory default setting of cradle)

