The Code Reader 2.0 (CR2) can read and decode all existing bar code symbols. Whether you are reading smaller, high density two-dimensional codes, or larger, low density linear codes, the CR2 will outperform all other devices in its class. The CR2 incorporates a unique dual path optical system, a 1.3 million pixel CMOS sensor and a 400 MHz processor. The CR2 reader features a beep and vibrate mode, multifunction LED indicators and two top control buttons. While it can be further ruggedized for high-volume use case scenarios, the CR2 reader is lightweight with a unique ergonomic design. CR2 operates efficiently in batch, cabled or wireless modes with accessories to further enhance use-case functionality.

Wireless readers are available with a Bluetooth® Class I radio (with a range of 300 feet/ 100 meters) or Class II radio (30 feet/ 9.5 meters) with Bluetooth firmware V2.0; the firmware is easily upgradeable in the field. The CodeXML Bluetooth Modem enables simplified wireless transmission of captured data to a host computer or system. Code’s JavaScript Software Development Kit provides programming tools for integrating captured data in enterprise software.

The CR2 can be accompanied by a variety of accessories, making it the only product available in: batch, cabled or wireless formats; hand-held, ruggedized cabled, or battery handle use-case scenarios; and lanyard hook attachment or presentation stand form factors. Code’s full line of reader accessories tailor the reader’s use to best meet your needs.
Code Reader 2.0™ Specifications

**Physical Characteristics**

- **Reader Dimensions:** 1.3” H x 4.3” L x 1.8” W (3.3cm H x 10.9cm L x 4.6cm W)
- **Reader Weight:** 2.5 oz (71.5 g)
- **Battery Weight:** 2.1 oz (59.5 g)
- **Battery Blank Weight:** 0.5 oz (13.6 g)

**Performance Characteristics**

- **Field of View:**
  - Near: 21.5° horizontal by 16.2° vertical
  - Far: 22.9° horizontal by 11.6° vertical
- **Focal Point:**
  - Near: approximately 4”
  - Far: approximately 9”
- **Sensor:**
  - CMOS 1.3 Megapixel
  - (1024x1280) 256 level gray scale
- **Optical Resolution:**
  - Near Field: 1024 x 640
  - Far Field: 1024 x 640
- **Pitch:**
  - ± 60° (from front to back)
- **Skew:**
  - ± 60° from plane parallel to symbol (side-to-side)
- **Rotational Tolerance:** ± 180°
- **Print Contrast Res.:** 25% (1-D symbologies) or 35% (PDF417) absolute dark/light reflectance differential, measured at 650 nm
- **Target Beam:**
  - Class 2M Visible Laser Diode at 630nm
- **Ambient Light Immunity:**
  - Sunlight: Up to 9,000ft-candles/96,890 lux
- **Shock:**
  - Withstands multiple drops of 6 feet (1.8 Meters) to concrete
- **Power Requirements:**
  - Reader @ 5vdc (mA) - Typical = 140; Peak = 310; Idle = n/a;
  - Sleep = 3; Bluetooth Radio @ 90m away (mA) Typical = 280
  - Peak = 350; Idle = 96; Sleep = 3
  - 1950 mAH Battery in reader with radio will support 11,000+ reads/transmits per charge.
- **Optional Cable Interfaces:**
  - USB (Full Speed V1.1), RS232 & PS/2

**User Environment**

- **Operating Temperature:** 0° to 50° C / 32° to 122° F
- **Storage Temperature:** -20° to 65° C / -4° to 150° F
- **Humidity:** 5% to 95% non-condensing
- **Decode Capability:**
  - **1D:** UPC/EAN/JAN, Code 39, Code 128, Interleaved 2 of 5, Codabar, GS1 DataBar (RSS), MSI Plessey, Code 11, Code 93, NEC 2 of 5, Matrix 2 of 5, Trioptic Code, Telepen, Hong Kong 2 of 5, Pharmacode, Composite Codes
  - **Stacked 1D:** PDF417, Micro PDF417, Codablock A & F
  - **2D:** Data Matrix, QR Code, Micro QR Code, Aztec Code, Maxicode
  - **Proprietary 2D:** GoCode (Requires Additional Licensing)
  - **Postal:** USPS OneCode (4CB), POSTNET, PLANET, Japanese Post, Australian Post, Royal Mail, KIX Code
  - **OCR:** OCR-A and OCR-B Fonts
- **Image Output Options:**
  - Formats: JPEG, Raw (Uncompressed)
- **Field Selection:**
  - Near or Far
- **Resolution Selection:**
  - 1024 x 640 (Multiple Window Options)
- **Time Stamp:**
  - Interval Logging
- **Data Editing:**
  - JavaScript (Additional License Required) / CodeXML Rules

**Working Ranges**

<table>
<thead>
<tr>
<th>Code Reader 2.0 Performance</th>
<th>Near Field</th>
<th>Depth of Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3 mil Data Matrix</td>
<td>63 mm - 99 mm</td>
<td></td>
</tr>
<tr>
<td>20.8 mil Data Matrix</td>
<td>46 mm - 113 mm</td>
<td></td>
</tr>
<tr>
<td>5.8 mil PDF417</td>
<td>55 mm - 97 mm</td>
<td></td>
</tr>
<tr>
<td>7.5 mil Code39</td>
<td>78 mm - 108 mm</td>
<td></td>
</tr>
<tr>
<td>10.5 mil GS1 DataBar Stacked</td>
<td>38 mm - 108 mm</td>
<td></td>
</tr>
<tr>
<td>12.5 mil Code128</td>
<td>101 mm - 131 mm</td>
<td></td>
</tr>
<tr>
<td>Far Field</td>
<td>Depth of Field</td>
<td></td>
</tr>
<tr>
<td>6.3 mil Data Matrix</td>
<td>135 mm - 178 mm</td>
<td></td>
</tr>
<tr>
<td>20.8 mil Data Matrix</td>
<td>109 mm - 237 mm</td>
<td></td>
</tr>
<tr>
<td>7.5 mil Code39</td>
<td>114 mm - 245 mm</td>
<td></td>
</tr>
<tr>
<td>10.5 mil GS1 DataBar Stacked</td>
<td>89 mm - 276 mm</td>
<td></td>
</tr>
<tr>
<td>12.5 mil Code128</td>
<td>67 mm - 306 mm</td>
<td></td>
</tr>
</tbody>
</table>

All samples were high quality codes and were read along a physical center line at a 10° angle. Default AGC settings were used. Accuracy = +/- 10%.

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