

# Code Reader 2.0™



## Features & Benefits

- Lightweight, ergonomic, fully-mobile modular design (hand held, handle, presentation stand)
- User feedback with vibration and/or audible tones
- Equally efficient in batch, cabled or wireless modes
- Reads all linear stacked and 2D matrix symbologies
- Data output via Bluetooth, USB , RS232 or Keyboard options
- Powerful data management capability via JavaScript
- Firmware is field upgradeable
- Accessories available to further ruggedize reader for high-volume use scenarios



## Overview

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 is 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

<b>Reader Dimensions:</b>	1.3" H x 4.3" L x 1.8" W (3.3cm H x 10.9cm L x 4.6cm W)
<b>Reader Weight:</b>	2.5 oz (71.5 g)
<b>Battery Weight:</b>	2.1 oz (59.5 g)
<b>Battery Blank Weight:</b>	0.5 oz (13.6 g)

## Performance Characteristics

<b>Field of View:</b>	Near: 21.5° horizontal by 16.2° vertical Far: 22.9° horizontal by 11.6° vertical
<b>Focal Point:</b>	Near: approximately 4" Far: approximately 9"
<b>Sensor:</b>	CMOS 1.3 Megapixel (1024x1280) 256 level gray scale
<b>Optical Resolution:</b>	Near Field: 1024 x 640 Far Field: 1024 x 640
<b>Pitch:</b>	± 60° (from front to back)
<b>Skew:</b>	± 60° from plane parallel to symbol (side-to-side)
<b>Rotational Tolerance:</b>	± 180°
<b>Print Contrast Res.:</b>	25% (1-D symbologies) or 35% (PDF417) absolute dark/light reflectance differential, measured at 650 nm
<b>Target Beam:</b>	Class 2M Visible Laser Diode at 630nm
<b>Ambient Light Immunity:</b>	Sunlight: Up to 9,000ft-candles/96,890 lux
<b>Shock:</b>	Withstands multiple drops of 6 feet (1.8 Meters) to concrete
<b>Power Requirements:</b>	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.
<b>Optional Cable Interfaces:</b>	USB (Full Speed V1.1), RS232 & PS/2

## Accessories

- Single-Bay or Two-Bay Battery Charger
- Cabled or Wireless Handles
- Battery Handle Charger or Universal Mountable Charger
- CodeXML Router Software
- CodeXML Bluetooth® Modems
- Software Development Kits
- Reader Stand
- Elastomer Boot
- USB, PS/2, or RS232 Cables
- 1950 and 3900 mAh Li-Ion Batteries
- Battery Blank
- US, Europe/South America, or UK Power Supply

## User Environment

<b>Operating Temperature:</b>	0° to 50° C / 32° to 122° F
<b>Storage Temperature:</b>	-20° to 65° C / - 4° to 150° F
<b>Humidity:</b>	5% to 95% non-condensing
<b>Decode Capability:</b>	<b>1D:</b> 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, Pharmacoode, Composite Codes <b>Stacked 1D:</b> PDF417, Micro PDF417, Codablock A & F <b>2D:</b> Data Matrix, QR Code, Micro QR Code, Aztec Code, Maxicode <b>Proprietary 2D:</b> GoCode (Requires Additional Licensing) <b>Postal:</b> USPS OneCode (4CB), POSTNET, PLANET, Japanese Post, Australian Post, Royal Mail, KIX Code <b>OCR:</b> OCR-A and OCR-B Fonts
<b>Image Output Options:</b>	Formats: JPEG, Raw (Uncompressed)
<b>Field Selection:</b>	Near or Far
<b>Resolution Selection:</b>	1024 x 640 (Multiple Window Options)
<b>Time Stamp:</b>	Interval Logging
<b>Data Editing:</b>	JavaScript (Additional License Required) / CodeXML Rules



## Working Ranges

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

*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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Specifications subject to change without notice.