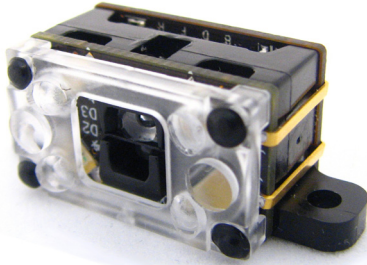


# Code Reader 8000™ Scan Engine



(actual size is smaller)

## Features & Benefits

- Dual field optics, both high density and wide field in the same unit
- Ultra fast microprocessor platform with world-class decoding platform
- Connectivity for Code's glare reduction technology
- Attachable illumination blocks for different applications
- Bright LED aiming mechanism
- Compact size fits any application
- Simple to setup and configure
- Customizable parsing routines using JavaScript
- On-board 128MB Flash ROM available for data/program storage
- Built in TTL RS232 or USB interface



## Overview

The Code Reader 8000 (CR8000) is a patented, high performance, miniature bar code imaging engine. The CR8000 continues Code's legacy of dual optical fields – while most devices have a single field enhanced for a specific application, Code's CR8000 has both a high density field for reading the smallest of bar codes, and a wide angle field for reading oversized bar codes giving you two readers in one.

The CR8000 includes connectivity for Code's Glare Reduction Technology. Bar codes printed on shiny or reflective surfaces have typically been problematic for imaging based bar code readers. Code has overcome this challenge with a patented process that significantly reduces the reflections thus making the bar codes easily identifiable. In addition, Code has designed in functionality to allow the integration and control of additional illumination blocks or elements. Applications includes document scanning, direct parts marking, or other applications that require expanding lighting.

For integration, a variety of mounting options are available including: tabs, blind through holes, and mounting brackets for both the scan engine and the decode board. The CR8000 draws significantly less current and gets into and out of its low power state faster than any other imager based scan engine. These 2 items are critical when integrating the engine into a mobile device, better power management from the imager equates to longer battery life for mobile devices. The CR8000 communicates via RS232 or USB protocols and runs Code's JavaScripts. A Software Developer's Kit and Integration Manual can be downloaded, free of charge, from Code's website.

Applications for the CR8000 include Medical Devices, ATMs, Price-lookup, Lottery, Age Verification, Direct Parts Marking and more.

# Code Reader 8000™ Specifications

## Physical Characteristics

<b>CR8000 Dimensions:</b>	0.81" W x 0.57" D x 0.47" H (20.6 mm W x 14.5 mm D x 11.9 mm H)
<b>CR8000 with Tabs Dimensions:</b>	1.25" W x 0.57" D x 0.47" H (31.7 mm W x 14.5 mm D x 11.9 mm H)
<b>Decode PCB:</b>	1.54" W x 0.98" D x 0.30" H (39.0 mm W x 25.0 mm D x 7.5 mm H)
<b>CR8000 with Tabs Weight:</b>	0.10 oz. (3.0 g)
<b>CR8000 and Decode PCB Weight:</b>	0.17 oz. (5.0 g)
<b>CR8000 Reader without Tabs Weight:</b>	0.09 oz (3.0 g)

## Performance Characteristics

<b>Field of View:</b>	High Density Field: 30° horizontal by 20° vertical Wide Field: 50° horizontal by 33.5° vertical
<b>Focal Point:</b>	High Density Field: approximately 100 mm Wide Field: approximately 115 mm
<b>Sensor:</b>	CMOS 1.2 Megapixel (1280 x 960) gray scale
<b>Optical Resolution:</b>	High Density Field: 960 x 640 Wide Field: 960 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% (1D symbologies) or 35% (2D symbologies) absolute dark/light reflectance differential, measured at 650 nm
<b>Target Beam:</b>	Single, blue targeting bar
<b>Ambient Light Immunity:</b>	Sunlight: Up to 9,000ft-candles/96,890 lux
<b>Shock:</b>	Withstands multiple drops of 6' (1.8 Meters) to concrete in an enclosed housing
<b>Power Requirements:</b>	Reader @ 5vdc (mA): Typical = less than 350 mA; Idle = less than 50 mA; Sleep = less than 1 mA
<b>Memory Capacity:</b>	128MB Flash ROM, 32MB RAM
<b>Communication Interfaces:</b>	TTL-RS232, USB (full speed)

## Accessories

- Available Ribbon Cables: 50 mm (2"), 150 mm (6") and 300 mm (12")
- Horizontal Decode PCB Mounting Bracket
- Custom Mounting Brackets available upon request

## 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, Pharmacode <b>Stacked 1D:</b> PDF417, Micro PDF417, Codablock A & F, Composite Codes <b>2D:</b> Data Matrix, QR Code, Micro QR Code, Aztec Code, Maxicode <b>Proprietary 2D:</b> GoCode® (Additional License Required) <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, Passports <b>Image Output Options:</b> Formats: JPEG, PGM, Raw (Uncompressed) <b>Field Selection:</b> High-Density or Wide Field <b>Data Editing:</b> JavaScript (Additional License Required)



## Working Ranges

CR8000 Performance		
Test Code	Min Inches (mm)	Max Inches (mm)
3 mil Code 39	3.9" (100 mm)	4.7" (120 mm)
7.5 mil Code 39	2.0" (50 mm)	8.0" (205 mm)
13 mil UPC	2.0" (50 mm)	10.8" (275 mm)
4.2 mil Data Matrix	3.7" (95 mm)	4.7" (120 mm)
5 mil Data Matrix	3.7" (95 mm)	5.5" (140 mm)
6.3 mil Data Matrix	3.3" (85 mm)	6.3" (160 mm)
10 mil Data Matrix	1.6" (40 mm)	7.9" (200 mm)
20.8 mil Data Matrix	1.6" (40 mm)	12.2" (310 mm)

Note: working ranges are a combination of both the wide and high density fields

**code**

14940 S Pony Express Rd. #500  
Bluffdale, UT 84065

phone: (801) 495-2200 fax: (801) 495-2202

web: www.codecorp.com

Specifications subject to change without notice.