Diamond Technologies
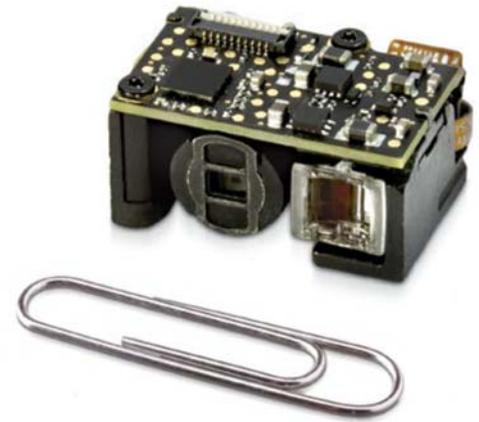Getting data where it needs to be.

Product Overview

DE01 Micro Embedded 1D Barcode Scan module

The DE01 provides the ultimate in compact form factors for OEM embedded decoded barcode scan modules. At just 11.4 H x 21.0 W x 15.2 D mm the DE01 is a perfect solution for hand held lab instruments, hand held medical devices, self serve kiosks, and other space limited applications.   The DE01 features a highly sensitive 1D CCD sensor. The sensor is capable of 600 frames per second which provides exceptional reading performance and motion tolerance.   The barcode scan module is capable of reading all 1D codes including high resolution codes such as found on microtiter plates and other lab sample carriers.

The DE01 has a wide viewing angle which facilitates close range reading on long barcodes.   The unit also includes a wide green aimer which simplifies alignment and engineering integration. The wide green aimer also makes operator interaction intuitive, improving the user experience.   Ease of use is also improved with the readers extended reading range making reading easy at close and far distances.

The DE01 embedded scan module supports both UART, and USB communications.

DE01

Features

- Extremely compact size
- Wide viewing angle and extended reading range
- Highly visible green aimer
- High response reading performance with high motion tolerance
- Excellent reading of all 1D codes on print or displayed on mobile device or computer screens
- Reading of high density barcodes
- Low power 3.0—5.0V

Applications

The DE01 is perfectly suited for OEM applications and specifically designed for embedded barcode requirements in:

- Medical devices
- Lab Automation systems
- Kiosks
- Vending machines
- Bedside point of care devices
- Lottery Machines
- Self Service Systems
- Loyalty reward programs

Technical Specifications

DECODING CAPABILITY

1D / LINEAR CODES	Auto discriminates all standard 1D codes including GS1 DataBar™ linear codes.

ELECTRICAL

CURRENT	Typical values @ 3.3 VDC ~ 23 °C
	Operating: < 160 mA
	Idle: < 35 mA
	Low power: < 0.5 mA
INPUT VOLTAGE	3.0 - 5.0 VDC

ENVIRONMENTAL

AMBIENT LIGHT	0 - 100,000 lux
HUMIDITY	5 - 95% (NON –CONDENSING)
SHOCK	2500 G at 23 °C at 0.85 m sec.
TEMPERATURE	Operating: -30 to 60 °C / -22 to 140 °F
	Storage/Transport: -40 to 70 °C / -40 to 158 °F

INTERFACES

INTERFACES	Decoded 10 pin ZIF connector, USB keyboard, Serial UART

PHYSICAL CHARACTERISTICS

DIMENSIONS	11.4 H x 21.0 W x 15.2 D mm / 0.45 H x 0.83 W x 0.59 D in
WEIGHT	9.0 g / 0.32 oz

READING PERFORMANCE

IMAGER SENSOR	Linear: 2500 pixels, 600 fps
LIGHT SOURCE	illumination Green LED
PRINT CONTRAST RATIO (MIN)	15%
FIELD OF VIEW	47°
READING ANGLE	Pitch: +/- 75°; Roll (Tilt): +/-45°; Skew (Yaw): +/- 70°
READING INDICATORS	Green Spot good read confirmation (optional),
RESOLUTION (MAXIMUM)	1D Linear: 0.0762 mm / 2.5 mils;

READING RANGES

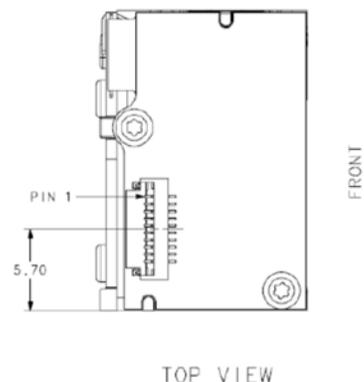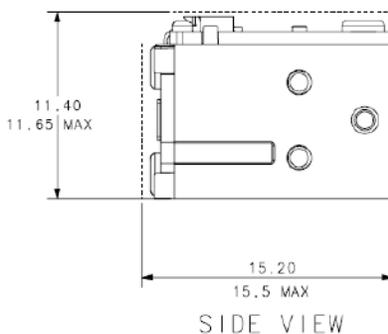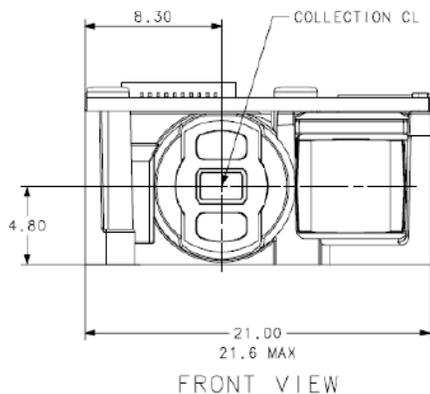|	
TYPICAL DEPTH OF FIELD	Minimum distance determined by symbol length and scan angle. Printing resolution, contrast, and ambient light dependent.
1D Codes	3 mils Code 39: 9.0 to 19.0 cm / 3.5 to 7.4 in
	5 mils Code 39: 6.5 to 34.0 cm / 2.5 to 13.3 in
	10 mils Code 128: 4.5 to 55.0 cm / 1.7 to 21.6 in
	13 mils EAN: 4.0 to 74.0 cm / 1.5 to 29.1 in
	20 mils Code 39: up to 132.0 cm / up to 51.9 in

SAFETY & REGULATORY

ENVIRONMENTAL COMPLIANCE	Complies to China RoHS; Complies to EU RoHS

UTILITIES

OPERATING SYSTEM SUPPORT	WinCE, Android, Windows, Linux
TOOLS	Datalogic Software Decoder for Engines (DSDE)

WARRANTY

WARRANTY	18-Month Factory Warranty

FRONT VIEW   SIDE VIEW   TOP VIEW

Base Models	Part Number
DE01 Embedded OEM 1D CCD decoded micro scan module UART interface	DE01-001
DE01 Embedded OEM 1D CCD decoded micro scan module USB interface	DE01-002
Accessories	
DE01 demo accessory test board includes DE01 module and USB interface	DE01-ACC-01