Dolphin SD500

CCD Barcode Scanner

User Manual Ver.00

We Value Your ID's

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1. PREFACE

Introduction

Thank you for purchasing SD500 CCD Barcode Scanner. SD500 is a cutting edge handheld extra-slim CCD scanner which is coupled with ergonomic design to ensure high quality, high performance.

SD500 supports contact mode and also middle range mode. For specification of SD500 which supports the reading depth from contact to 8cm, reading width up to 5cm on window and swift scan rate is up to 300 scans /per second. In addition to that, the guarantee of approximately 1,000,000-life-time trigger switch test is our promise to fulfill your satisfaction.

In short, SD500 is absolutely a performance CCD handheld scanner, which provides the customer with the most cost-effective solution in the market. It is perfectly suitable for any point of sale environment. Because of the scanner's compact design, it is ideal to be used in the following applications:

- Receiving in retail
- Product labeling and tracking
- Point of sale systems (POS)
- Order picking and staging
- Work flow tracking
- Material flow control
- Transportation and distribution
- Warehousing
- Inventory management

Features

- Plug & Play for user-friendly design
- CCD Sensor adopted
- Multiple interface design: USB, PS/2, RS232
- Able to read a wide range of linear barcodes
- Scan speed: 300 scans per second
- Scanning distance: 0 - 80 mm ± 10%
- Extremely Low Power Consumption
- Most popular barcode symbologies are supported.

Safety Instructions

- Please read the following safety statement carefully.
- Please preserve this user manual for reference sometime.
- Please handle the scanner with care. Do not drop it.
- DO NOT expose the scanner to any flammable sources.
- Keep the scanner away from excessive heat and heaters.
- Keep the scanner away from water or moisture.
- Do not storage SD500 at the temperature lower then -20°C (-4°F) or over 70°C (158°F).
- Please do not target the scanning light at people's eyes.
- Do not attempt to self-service the scanner.

Trademarks

2. GETTING STARTED

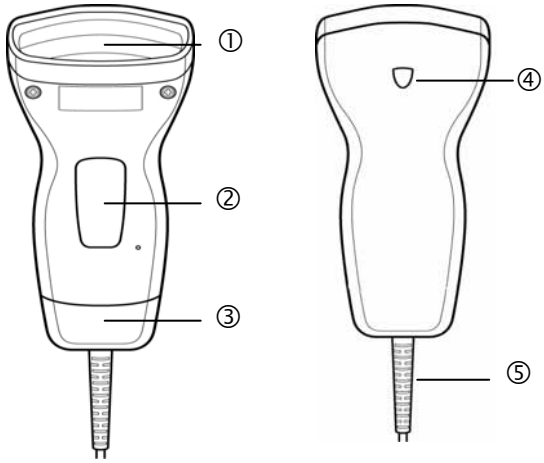
Package Contents

Please check if your package comes with the following items. If any of them is missing, please contact your retailer.

- Scanner
- Interface cable (PS/2, RS232, USB)
- Programming Menu
- User Manual

A Quick View of SD500

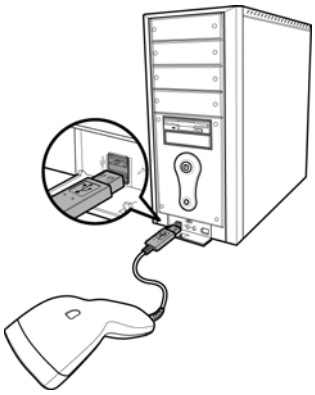
Front View Back View



①	**Sensor:** Use to aim at the target barcode.
②	**Trigger:** Use to activate scan.
③	**Lid:** Use to cover the cable socket.
④	**LED Indicator:** Indicates the mode of scanner.
⑤	**Cable:** Use to connect to PC.

Installation

- Turn off the host system.
- Connect the power if needed.
- Plug the connector of the cable to the host system.
- Turn on the host system.
- For RS232 scanner, there are 3 ways to supplying the power, use external +5V power supply, use optional power cable (KBDC) which taking the power from KB wedge, or if the host supports +5V power from pin 9.



- When connected, the scanner will emit three short beeps twice and the indicator flash green light.
- If the defaults value is not fit your demand, please configure the selection depended by programming menu.

Changing the cable

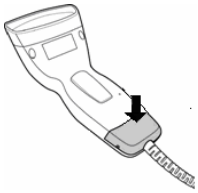
The interface cable will be connected up the scanner before packing. In case you need to change the Interface cable, please refer to the instructions as below.

1. Inject a needle into the hole and remove the Lid.

2. Remove the cable.

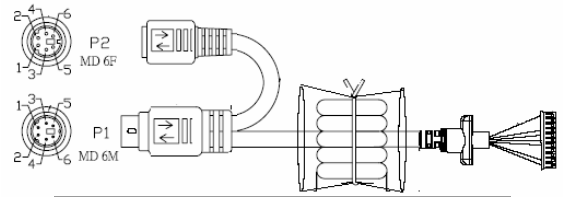
3. Plug in the cable you need and push the string relieve into the slot.

4. Place the Lid back and you will hear a “click” when the Lip connect strictly.



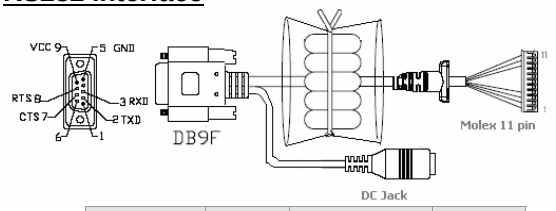
Output Interface

Keyboard wedge interface



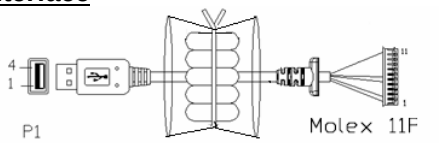
P1 Mini DIN 6M	P2 Mini DIN 6F	Function	Cable Color
3	3	GND	Brown
4	4	VCC	Red
1		HOST DATA	Green
5		HOST CLK	Blue
	1	KB DATA	Yellow
	5	KB CLK	Orange
Iron Case	Iron case	Shielding	Spiral

RS232 interface



DB9F	Function	Cable Color	DC Jack
5	GND	Brown	Case
9	POWER	Red	Core
2	TXD	Orange	
3	RXD	Yellow	
8	RTS	Green	
7	CTS	Blue	
Iron case	Shielding	Spiral	

USB interface



P1 USB Type A	Function		Cable Color
4	GND	GND	Brown
3	D+	HC	Blue
2	D1	HD	Green
1	VCC	VCC	Red
Iron case	Shielding		Spiral

3. USING THE SCANNER

1. Connect the scanner to the host system by the Interface cable.
2. Aim the sensor on the target barcode to read.
3. The scanner gives feedback to users in two ways: the Green color LED Indicator and the Scanner Beep.

LED INDICATOR：The LED indicator on top of the scanner is used to provide user with feedback.

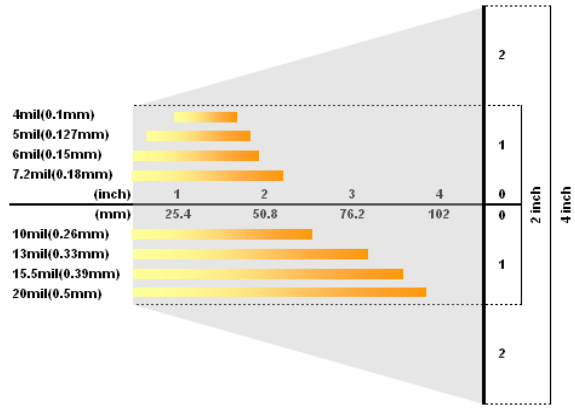
Condition	Green color LED
Connect to the host successfully	Three short flashes, twice.
Scanned successfully	One flash
Power off	Off

SCANNER BEEP：The scanner buzzes to provide user with feedback while using the scanner.

Condition	Buzzer
Connect to the host successfully	Three short beeps, twice
Scanned successfully	One short beep high tone
No barcode detected	No beep

4. Scan barcode at a distance not beyond 80mm.

SCAN MAP：



4. APPENDIX

Product Specification

Physical Specification	
Dimension	70mm x 160mm x22mm
Weight	Scanner: Approx. 858g Cable: Approx. 75g
Material	ABS
Connector	Molex 11 pins
Interface	PS/2, RS232, USB
Light Source	635 nm
Sensor	Linear CCD Sensor
Operating Freq.	16 MHz
Performance	
Scan Rate	300 scans/sec ± 10%
Reading Distance	80mm ± 10%
Width of Field	50mm @Window
Print Contrast Ratio	PCS 0.45 @ 0.127mm
Resolution	0.1mm @ PCS 0.9
Environmental	
Operating Temp.	0°C to 50°C (32°F to 122°F)
Storage Temp.	-20°C to 70°C(-4°F to 158°F)
Relative Humidity	20% to 95% (Non-condensing)
Ambient Light	100,000 Lux Max @ Direct sunlight
Life Time	
Light Source	40,000 hours
Trigger Switch	1,000,000 times
MTBF(Calculated)	24,000 hours
Operating Temperature	0°C to 50°C (32°F to 122°F)
Thermal Shock	
High Temp.	60 °C (140 °F)
Low Temp.	-20 °C (-4 °F)
Cycle time	20 minutes for high temp. 20 minutes for low temp.
Cycles	5 cycles

Readable Symbology

Items	Readable	Default Enable
All UPC/EAN/JAN	●	●
EAN128 Code	●	●
Code 39	●	●
Code 39 Full ASCII	●	
Code 32/Italian Pharmacy	●	
Code 128	●	●
CODABAR/NW7	●	●
Interleave 25	●	●
Industrial 25	●	
Matrix 25	●	
MSI/PLESSEY	●	
Telepen	●	
Code 93	●	
Code 11	●	
China Postage	●	
RSS	●	

Note: The symbologies marked by an asterisk are enabled by default. Each can be enabled or disabled the user.