



1D Scan Engine

DE1400 Specification

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Product Description



DE1400 is a practical embedded barcode scanner module with leading CCD image recognition technology and intelligent image recognition system. It can scan universal 1D codes, support USB, TTL, PS2 multiple interfaces, read the paper, goods, screens, other media barcodes. Easily embedded in a variety of OEM products handheld, portable, fixed and barcode collector, etc.

Features

- ☆ Simple structure, can be used in various types of mechanical equipment.
- ☆ Read all the mainstream 1D codes in the market easily.
- ☆ High-performance processor, fast decoding , high-precision reading ability. (3mil)
- ☆ Simple configuration, support upgrade online.
- ☆ Support interfaces: USB, TTL, PS2.
- ☆ Support multiple systems and languages.
- ☆ Support secondary development and customization.

Application

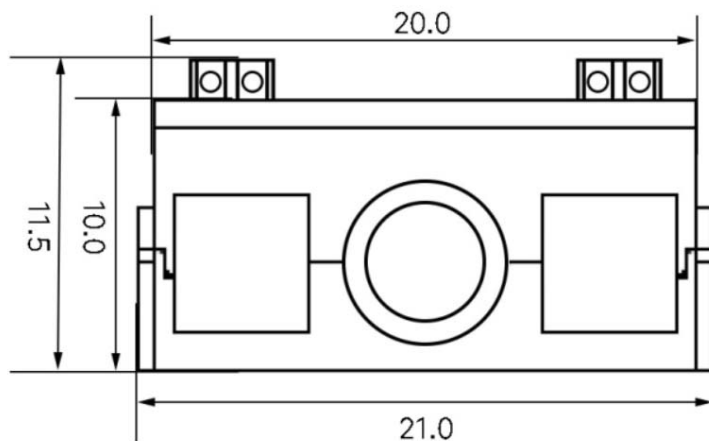
- Lockers
- Medical research
- Lottery machines
- Queuing calling equipment
- Microcontroller development
- Mobile coupons, tickets
- Mobile payment barcode scanning
- Self-service terminals
- Self-service vending machines



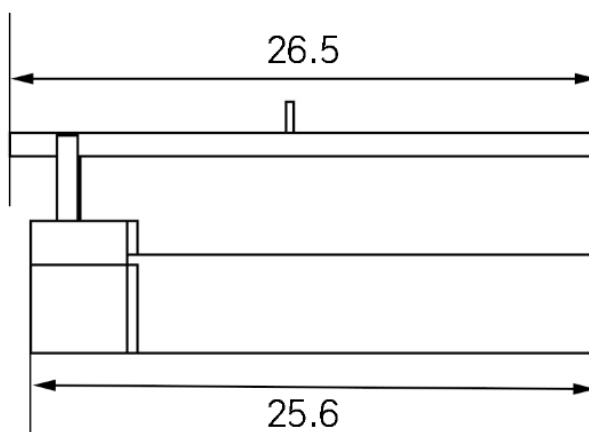
Mounting

The illustrations below show the mechanical mounting dimensions for the DE1400. The structural design should leave some space between components.

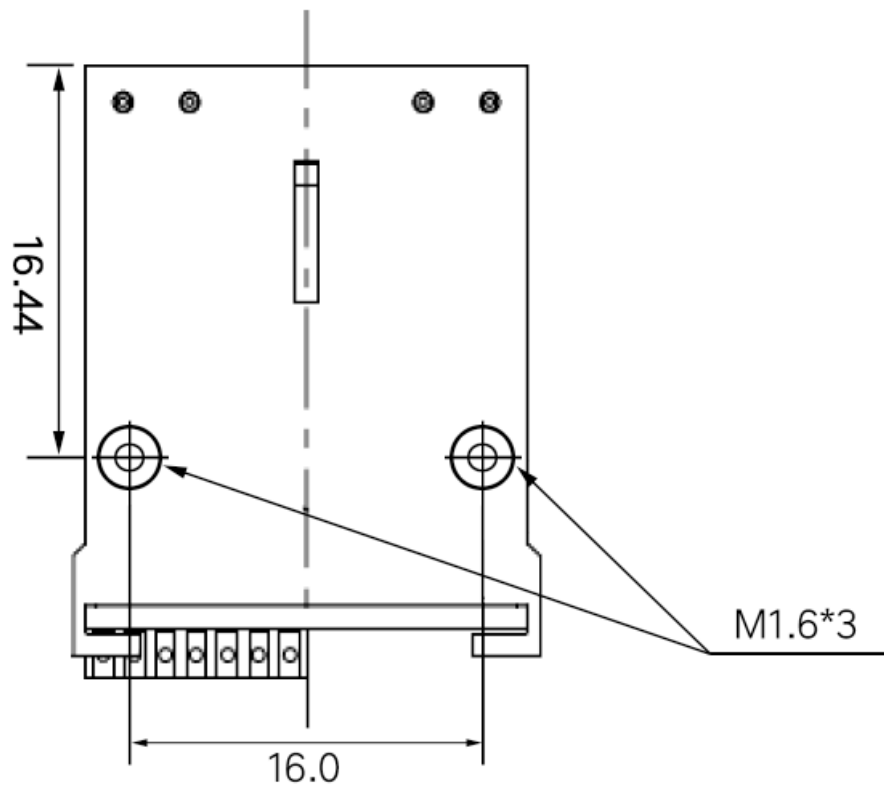
Front View (unit: mm)



Side View (unit: mm)

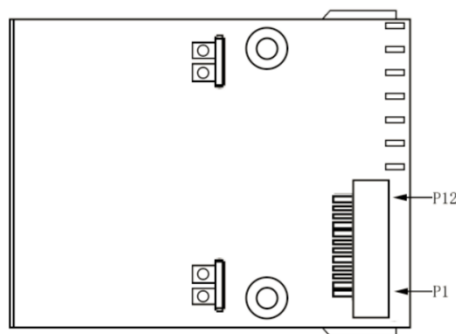


Top View (unit: mm)



Host Interface Connector

The following table lists the pin functions of the ffc 12pin pitch 0.5,host interface connector on the DE1400



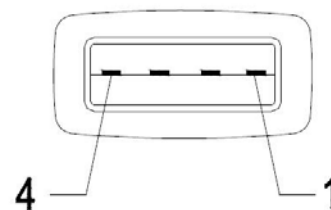
PIN#	Signal	Type	Definition
1	N/C	-	Hang
2	VCC	P	DC 3.3-5V
3	GND	P	Ground
4	RX	Input	TTL receive
5	TX	Output	TTL transmission
6	D-/HOST DATA	Input/Output	USB_D-/PS2_HOST DATA
7	D+/HOST CLK	Input/Output	USB_D+/PS2_HOST CLK
8	KB DATA	-	PS2_KB DATA
9	BUZ	Output	Buzzer output signal
10	LED	Output	LED output signal
11	KB CLK	-	PS2_KB CLK
12	TRIGGER	Input	Trigger pin, keep low power level more than 20ms can trigger decoding.

Cable Interface

DE1400 scanner must be connected with terminals, PC host, POS and Android host etc.

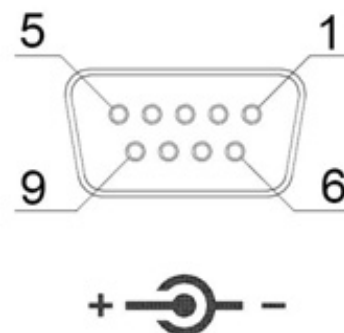
USB

Pin No.	Function
1	Vcc
2	D-
3	D+
4	GND



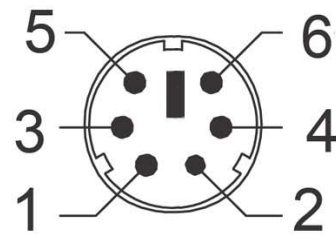
TTL/RS232

Pin No.	Function
2	TXD
3	RXD
5	GND
9	Vcc/+5V
Power Lead	Vcc/+5V

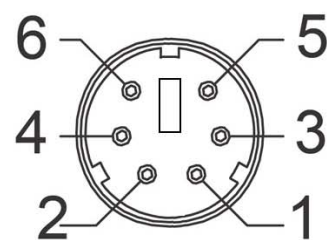


PS2**Mini DIN HOST MALE**

Pin No.	Function
1	HOST DATA
3	GND
4	Vcc(+5V)
5	HOST CLK

**Mini DIN KB FEMALE**

Pin No.	Function
1	KB DATA
3	GND
4	Vcc(+5V)
5	KB CLK



Performance

Scan Type	Linear CCD
Light Source	Visible red light, 625±10nm
CPU	32-bit
Resolution	2500
Reading precision	≥3mil/0.076mm(PCS90%,Code 39)
Decoding speed	300times/s
Depth of field	30mm-700mm
Scan Mode	Manual ,Continuous, Auto Sense, Fashing
Scan angle	<i>Test Conditions: CODE39,10mil/0.25mm,PCS90%</i>
	Pitch:±60°
	Roll: ±30°
	Skew: ±60°
Print Contrast Signal	≥20%
Ambient Light	Dark environment, indoor natural light
Symbologies	UPC-A, UPC-E, EAN-8, EAN-13, ISSN, ISBN, Code 128, GS1-128, ISBT 128, Code 39, Code 93, Code 11, Interleaved 2 of 5, Matrix 2 of 5, Industrial 2 of 5, Standard 2 of 5 (IATA) , Codabar (NW-7) , Plessey, MSI Plessey, RSS, China Post, etc.

Physical Parameter

Weight	<6g
Dimension	(L)26.5mm * (W)20.0mm *(H)11.5mm
Communication	USB(USB-KBW、 USB-COM) , TTL, PS2
Interface Type	FFC 12PIN Pitch 0.5
Power Supply	DC 3.3-5V@50mA(work)

Environmental

Operating	-20°C to 50°C
Storage	-40°C to 70°C
Humidity	5% to 95% (non-condensing)
Drop Height	1.2m
Temp. Test	30 minutes for high Temp., 30 minutes for low Temp.,
	<i>High Temp.</i> 60°C
	<i>Low Temp.</i> -20°C
Transport	10H@125RPM

Accessories List

Cable (Optional)	USB Cable, used to connect the DE1400 to a host device.
	RS232 Cable, used to connect the DE1400 to a host device, with USB supply cable.
	PS2 Cable, used to connect the DE1400 to a host device and keyboard input device.
Test board (Optional)	With trigger button and buzzer, it has USB or RS232 output function.
Power Adaptor	Output: DC5V 1A, input: AC100~240V 50~60Hz (serial port optional).

Depth of field

Barcode	Precision	near	far
Code 39	0.076(3mil)	80mm	120mm
Code 39	0.1mm(4mil)	70mm	140mm
Code 39	0.127mm(5.0mil)	60mm	150mm
Code 39	0.5mm(20mil)	30mm	450mm
Code 39	1.0mm(40mil)	130mm	700mm
EAN-13	0.33mm(13.0mil)	30mm	320mm

Test Condition: T=25°C, Illumination=200LUX, PCS=0.9