



2D Scan Engine

DE2100 Specification

***Company:** DongGuan DYscan Technology Co., Ltd

***Web:** www.dyscan.com

***Tel:** 86-755-21032537

***Add:** 21st floor, Longsheng Times Building, Industrial Road, Longhua District,
Shenzhen, 518000, China

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Product Description



DE2100 is a practical embedded barcode scanner module with leading CMOS image recognition technology and intelligent image recognition system. It can scan universal 1D 2D codes, support USB, TTL 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

- ☆ Mini size, widely used in wireless machine, self-service terminal.
- ☆ Read all mainstream 1D 2D barcodes in the market easily. (4mil)
- ☆ Support USB barcode information transmission. (languages customization)
- ☆ High brightness, dark environment scanning, low power consumption.
- ☆ Interface: USB, TTL.
- ☆ Support multiple systems and languages, secondary development.

Application

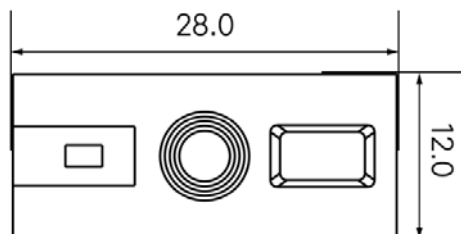
- Lockers
- Medical research
- Lottery machines
- Queuing calling equipment
- Microcontroller development
- Mobile coupons, tickets
- Mobile payment barcode scanning
- Self-service terminals
- Self-service vending machines



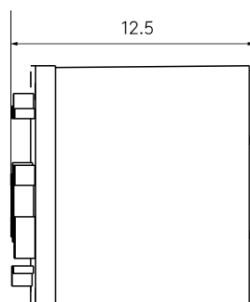
Mounting

The illustrations below show the mechanical mounting dimensions for the DE2100. The structural design should leave some space between components.

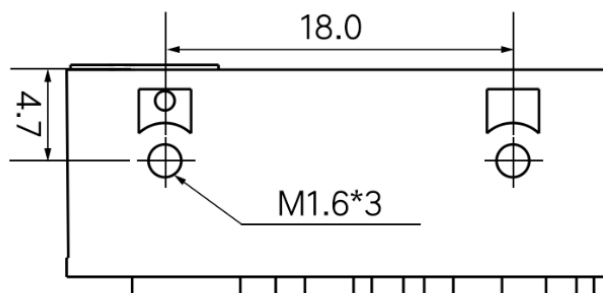
Front View (unit: mm)



Side View (unit: mm)

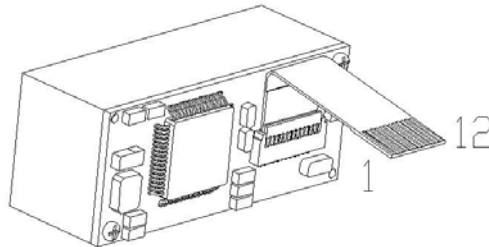


Top View (unit: mm)



Host Interface Connector

The following table lists the pin functions of the ffc 12pin pitch 0.5,host interface connector on the DE2100



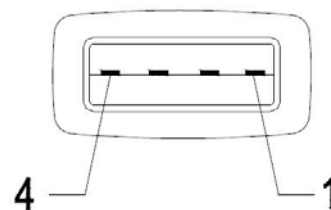
PIN#	Signal	Type	Definition
1	VCC	-	-
2	VCC	P	Power supply 3.3
3	GND	P	Ground
4	RXD	Input	TTL-RS232 receive
5	TXD	Output	TTL-RS232 send
6	D-	Input/Output	USB D- signal
7	D+	Input/Output	USB D+ signal
8	-	-	N/A
9	BUZ	Output	Buzzer Output, free High level
10	LED	Output	Decoding LED input signal, free Low level
11	RESET	Input	Reset the input signal and maintain a low level of 0.1s to reset the engine.
12	TRIG	Input	Trigger pin, keep low power level can trigger decoding.

Cable Interface

DE2100 scanner must be connected with terminals, PC host, POS and Android host etc.

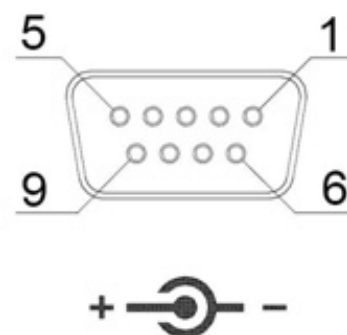
USB

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



Performance

Scan Type	CMOS
Light Source	Red Light LED 625±10nm (aim), 5600K LEDs (Lighting)
CPU	32-bit
Resolution	640*480
Reading precision	≥4mil/0.1mm(PCS90%,Code 39)
Decoding speed	25CM/S
Depth of field	30mm-500mm
Scan Mode	Manual ,Continuous, Auto Sense
Scan angle	<i>Test Conditions: CODE39,10mil/0.25mm,PCS90%</i>
	Pitch:±40°
	Roll: ±360°
	Skew: ±35°
Print Contrast Signal	≥25%
Ambient Light	Dark environment, indoor natural light
Symbologies	1D: UPC-A, UPC-E, EAN-8, EAN-13, Code 128, Code 39, Codabar (NW-7) , GS1 Databar(RSS), etc. 2D: QR Code, PDF417, Data Matrix, etc

Physical Parameter

Weight	≈4g
Dimension	(L)12.5mm * (W)28.0mm *(H)12.0mm
Communication	USB(USB-KBW、 USB-COM) , TTL
Interface Type	FFC 12PIN Pitch 0.5
Power Supply	DC 3.3V@120mA(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 DE2100 to a host device.
	RS232 Cable, used to connect the DE2100 to a host device, with USB supply cable.
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	0.1mm(4mil)	45mm	80mm
Code 39	0.127mm(5mil)	65mm	130mm
Code 39	0.5mm(20mil)	80mm	360mm
Code 39	1mm(40mil)	180mm	500mm
UPC/EAN	0.33mm(13mil)	50mm	230mm
QR Code	20.0mil	30mm	200mm
Data Matrix	10mil	45mm	120mm
PDF 417	6.8mil	60mm	110mm

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