



# 2D Scan Engine

## DE2120 Specification

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\***Web:** [www.dyscan.com](http://www.dyscan.com)

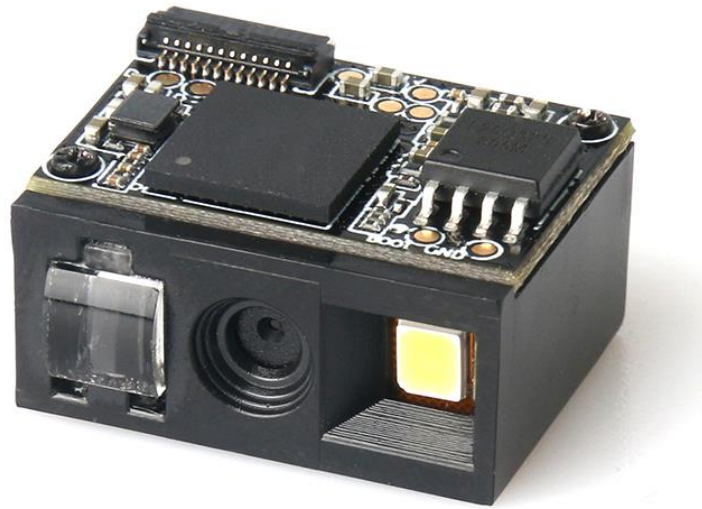
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## Product Description



DE2120 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

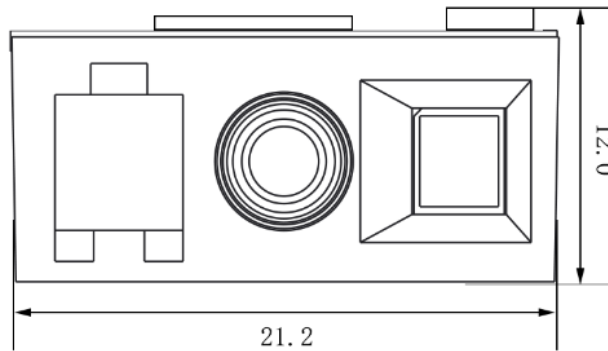
- Lockers
- Medical research
- Lottery machines
- Queuing calling equipment
- Microcontroller development
- Mobile coupons, tickets
- Mobile payment barcode scanning
- Self-service terminals
- Self-service vending machines



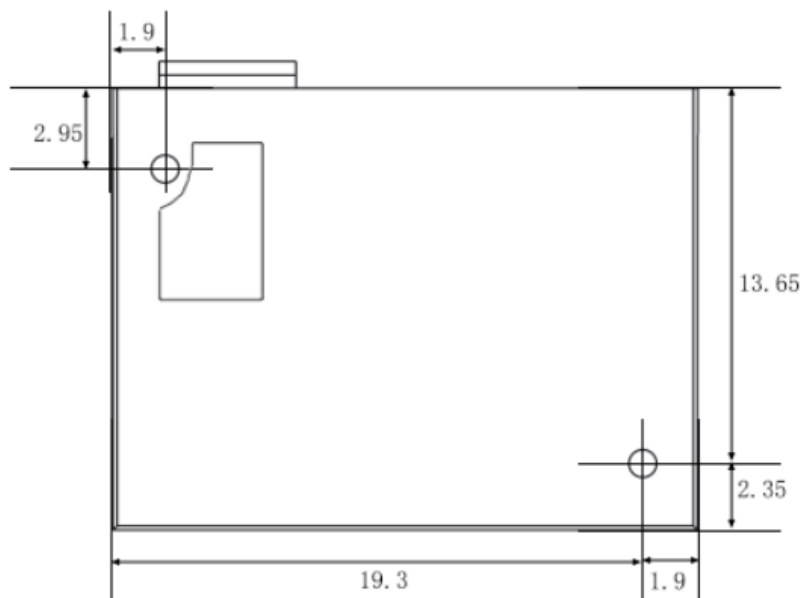
## Mounting

The illustrations below show the mechanical mounting dimensions for the DE2120. The structural design should leave some space between components.

### Front View (unit: mm)

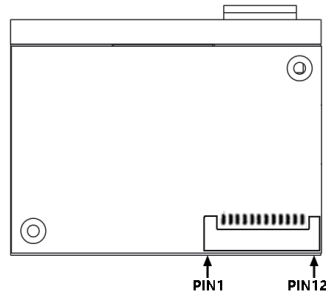


### Top View (unit: mm)



## Host Interface Connector

The following table lists the pin functions of the ffc 12pin pitch 0.5,host interface connector on the DE2120



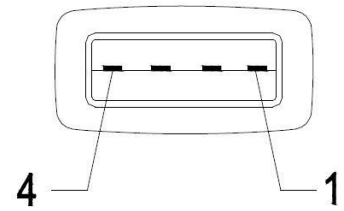
PIN#	Signal	Type	Definition
1	-	-	N/A
2	VCC	P	Power supply 3.3
3	GND	P	Ground
4	RXD	Input	TTL-RS232 receive
5	TXD	Output	TTL-RS232 send
6	D-	Input/Output	USB D- signal
7	D+	Input/Output	USB D+ signal
8	-	-	N/A
9	BUZ	Output	Buzzer Output, free Low level
10	LED	Output	Decoding LED input signal, low level instruction reading codes
11	-	-	N/A
12	TRIG	Input	Trigger pin, keep low power level can trigger decoding.

## Cable Interface

DE2120 scanner must be connected with terminals, PC host, POS and Android host etc.

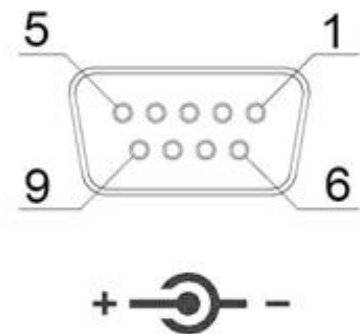
### USB

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

<b>Scan Type</b>	CMOS
<b>Light Source</b>	Red Light LED 625±10nm (aim), 5600K LEDs ( Lighting)
<b>CPU</b>	32-bit
<b>Resolution</b>	640*480
<b>Reading precision</b>	≥4mil/0.1mm(PCS90%,Code 39)
<b>Decoding speed</b>	25CM/S
<b>Depth of field</b>	25mm-400mm
<b>Scan Mode</b>	Manual ,Continuous, Auto Sense, command control
<b>Scan angle</b>	<i>Test Conditions: CODE39,10mil/0.25mm,PCS90%</i>
	Pitch:±45°
	Roll: ±360°
	Skew: ±40°
<b>Print Contrast Signal</b>	≥25%
<b>Ambient Light</b>	Dark environment, indoor natural light
<b>Symbologies</b>	<p>1D: UPC-A, UPC-E, EAN-8, EAN-13, Code 128, GS1-128, Code 39, Code 93, Code 11, Interleaved 2 of 5, Matrix 2 of 5, Industrial 2 of 5, Strande 2 of 5, Codabar (NW-7) , MSI Plessey, GS1 Databar(RSS), China Post, etc.</p> <p>2D: QR Code, Data Matrix, PDF417, Micro PDF 417, Aztec, etc.</p>



## Physical Parameter

<b>Weight</b>	<4g
<b>Dimension</b>	(L)16.0mm * (W)21.2mm *(H)12.0mm
<b>Communication</b>	USB(USB-KBW、 USB-COM) , TTL
<b>Interface Type</b>	FFC 12PIN Pitch 0.5
<b>Power Supply</b>	DC 3.3V <190mA(Work)

## Environmental

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

## Accessories List

<b>Cable (Optional)</b>	USB Cable, used to connect the DE2120 to a host device.
	RS232 Cable, used to connect the DE2120 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)	30mm	70mm
Code 39	0.127mm(5mil)	25mm	100mm
Code 39	0.5mm(20mil)	45mm	250mm
Code 39	1mm(40mil)	110mm	400mm
EAN-13	0.33mm(13mil)	50mm	200mm
QR Code	20.0mil	30mm	210mm
Data Matrix	10mil	45mm	75mm
PDF 417	6.8mil	25mm	100mm

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