



# 2D Scan Engine

## DE2608 Specification

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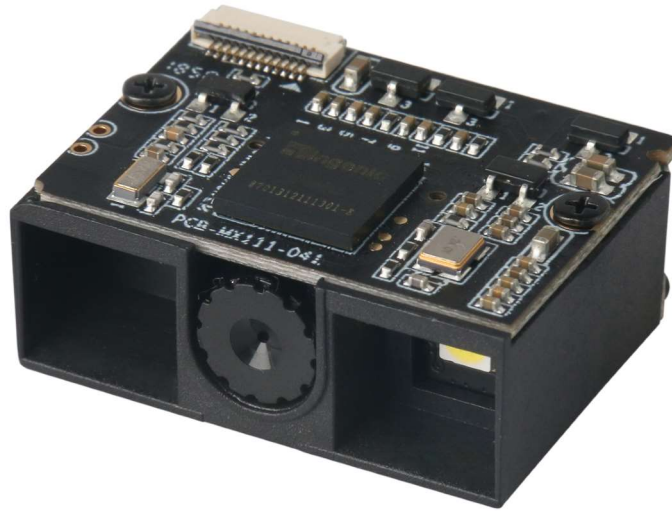
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## Product Description



DE2608 is a high-performance 1 mega pixel embedded 2D image module with advanced CMOS image recognition technology, intelligent image recognition system.

With excellent reading performance, you can easily read barcodes on media such as paper, merchandise, and screen.

The integrated compact design allows for easy insertion into a wide range of equipment.

Widely used in various types of self-service machines, price checking machines, lockers, etc.

## Features

1. Small size, self-contained fixing holes for easy integration into other equipment.
2. Optional multiple interfaces {USB (KBW, COM), TTL}, suitable for different application.
3. Good reading performance, easy to read both screen and paper barcodes.
4. High-definition camera, can read smaller and complicated 1D 2D barcodes. (ID card)
5. Support multiple working modes (manual, continuous, Auto sense, command control).

## 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

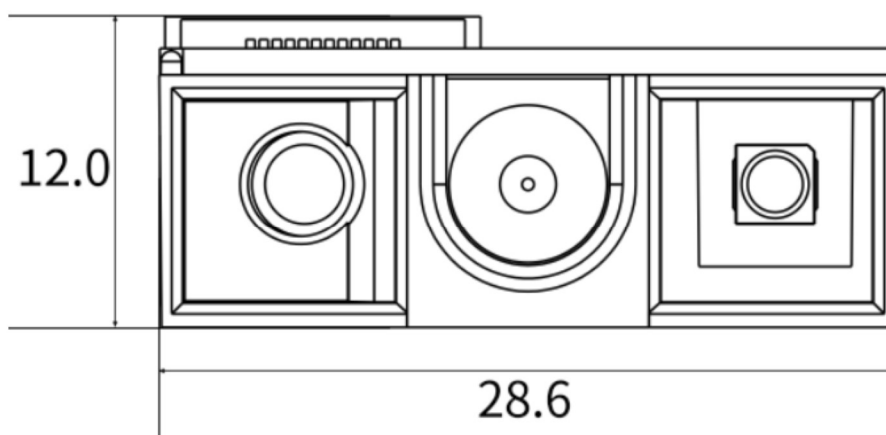




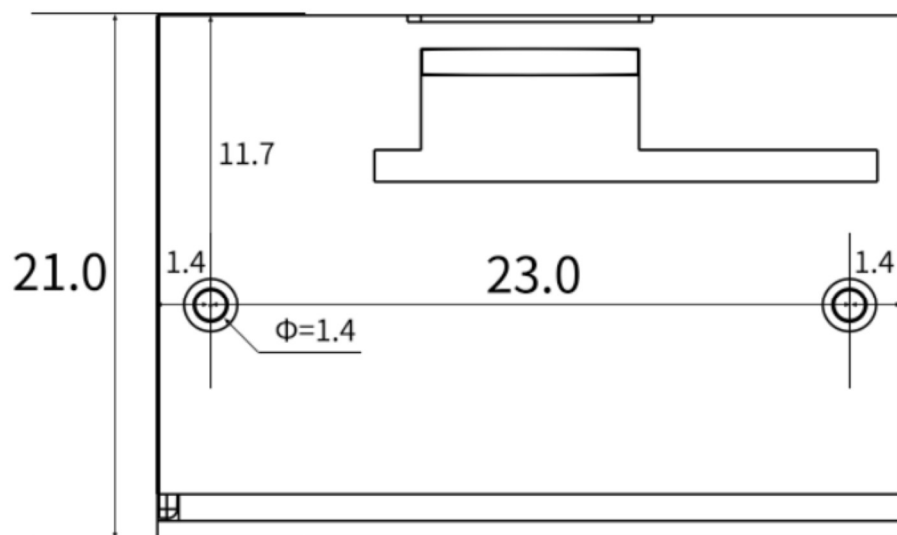
## Mounting

The illustrations below show the mechanical mounting dimensions for the DE2608. The structural design should leave some space between components.

### Front View (unit: mm)

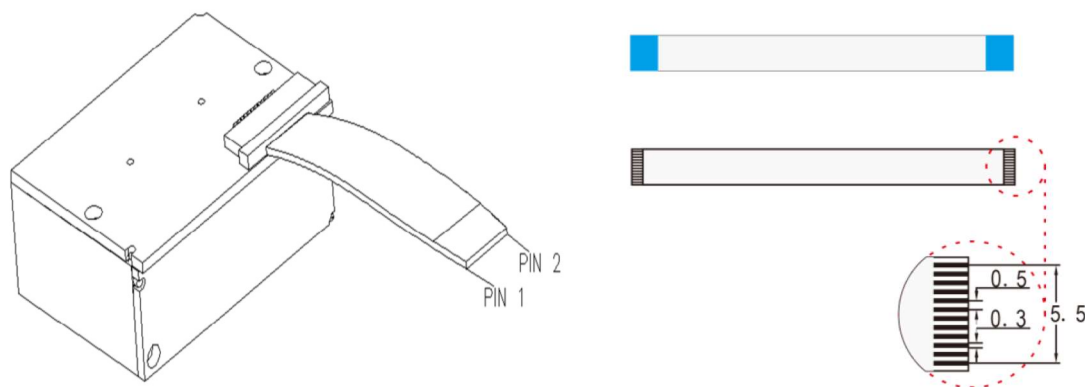


### Top View (unit: mm)



## Host Interface Connector

The following table lists the pin functions of the ffc 12pin pitch 0.5,host interface connector on the DE2608.



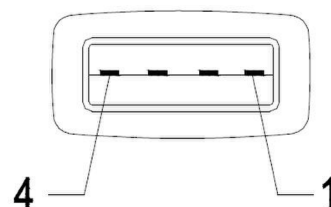
PIN#	Signal	Type	Definition
1	NC	-	Hang in
2	VCC	Power	Power input +3.3V
3	GND	Ground	Ground
4	RX	Input	TTL Serial receiver signal
5	TX	Output	TTL Serial sender signal
6	D-	Input/Output	USB D- signal
7	D+	Input/Output	USB D+signal
8	NC	-	-
9	BEEPER	Output	output passive buzzer output signal, idle low level
10	LED	Output	Successful decoding indication light, idle low level
11	NC	-	-
12	TRIG	Input	Weak pull-up, keep low level 10MS trigger

## Cable Interface

DE2608 module must be connected with terminals, PC host, POS and Android host etc.

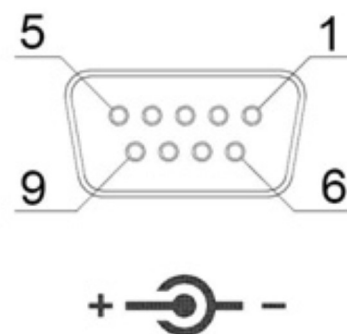
### USB

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>	1MP (1280*800)
<b>Reading precision</b>	≥4mil/0.1mm(PCS90%,Code 39)
<b>Decoding speed</b>	1M/S
<b>Depth of field</b>	30mm-600mm
<b>View</b>	54° * 34°
<b>Scan Mode</b>	Manual ,Continuous, Auto Sense, command control
<b>Scan angle</b>	Test Conditions: CODE39,10mil/0.25mm,PCS90%
	Pitch:±70°
	Roll: ±360°
	Skew: ±65°
<b>Print Contrast Signal</b>	≥20%
<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 32, Code 93, Code 11, Interleaved 2 of 5, Matrix 2 of 5, Industrial 2 of 5(Straight 2 of 5), Standard 2 of 5 (IATA) , Codabar (NW-7) , MSI, GS1 Databar(Omnidirectional, Limited, Expanded), China Post, etc.</p> <p>2D: QR Code, Micro QR Code, Data Matrix, PDF417, Micro PDF 417, Maxicode, Aztec, etc.</p>

## Physical Parameter

<b>Weight</b>	6g
<b>Dimension</b>	28.6mm L*21mm W* 12.0mm H
<b>Communication</b>	USB(USB-KBW、 USB-COM) , TTL
<b>Cable length</b>	1.5m
<b>Interface Type</b>	FFC 12PIN Pitch 0.5
<b>Power Supply</b>	DC 3.3V 260mA(Work)

## Environmental

<b>Operating</b>	-20°C to 50°C
<b>Storage</b>	-40°C to 60°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.,
<b>High Temp.</b>	60°C
<b>Low Temp.</b>	-20°C
<b>Transport</b>	10H@125RPM

## Accessories List

<b>Cable (Optional)</b>	USB Cable, used to connect the DE2608 to a host device.		
	RS232 Cable, used to connect the DE2608 to a host device, with USB supply cable.		
FFC cable	12 Pin, Pitch 0.5, 5CM		
Test board (Optional)	With trigger button and buzzer, it has USB or RS232 output function.		
Power (Optional)	Adaptor	Output: DC5V 1A, input: AC100~240V 50~60Hz (can be used for serial port power).	

## Depth of field

Barcode	Precision	nearest	farthest
Code 39	0.1mm(4mil)	50mm	110mm
Code 39	0.127mm(5mil)	50mm	150mm
Code 39	0.5mm(20mil)	30mm	450mm
Code 39	1mm(40mil)	70mm	600mm
UPC/EAN	0.33mm(13mil)	30mm	320mm
QR Code	20.0mil	30mm	270mm
Data Matrix	10mil	30mm	100mm
PDF 417	6.8mil	30mm	200mm

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