



2D Scan Engine

DE2290D Specification

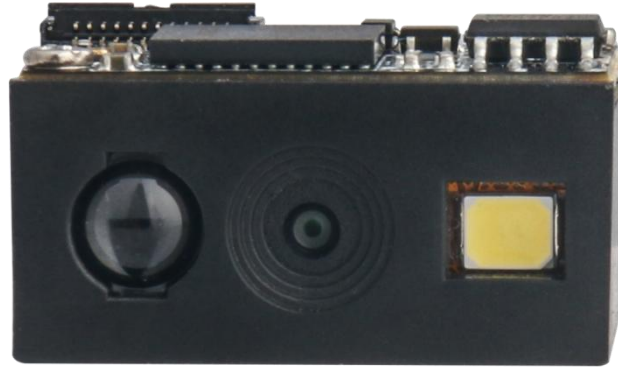
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Product Description



DE2290D is a high-performance 300,000 global 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.
5. Support multiple working modes (Manual, Auto sense, Continuous).

Application

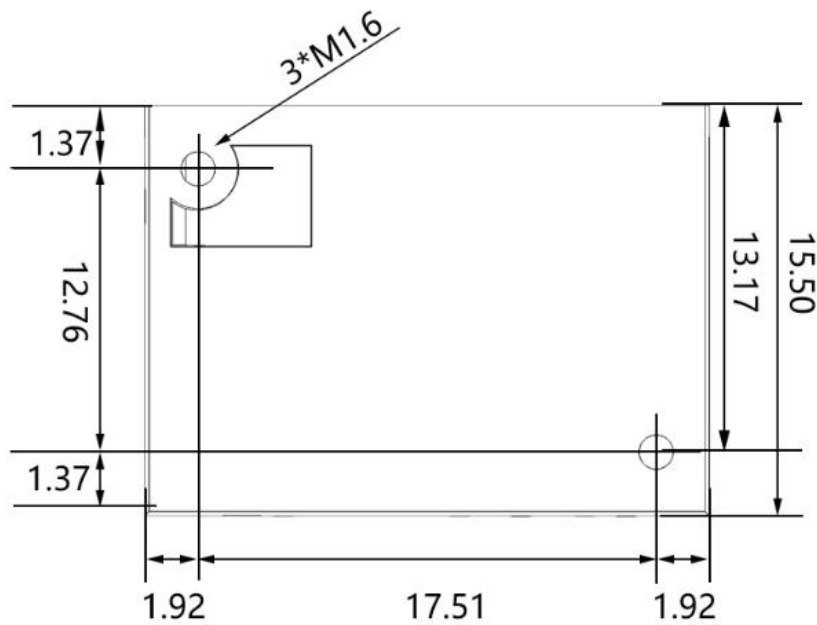
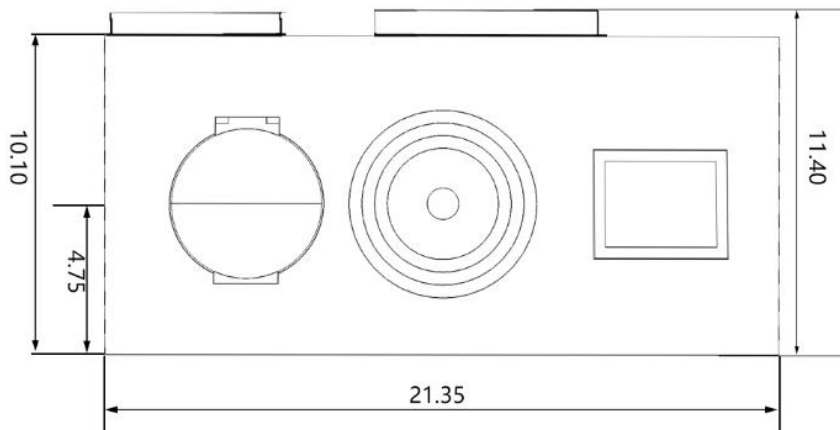
- Lockers
- Medical research
- Lottery machines
- Queuing calling equipment
- Microcontroller development
- Mobile coupons, tickets
- Mobile payment barcode scanning
- Self-service terminals
- Self-service vending machines



Mounting

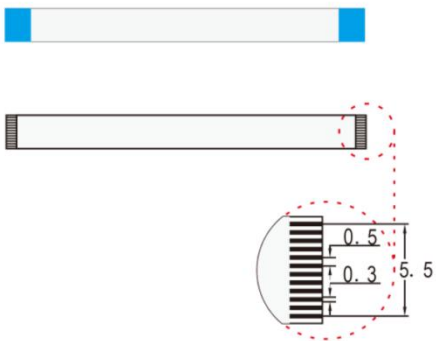
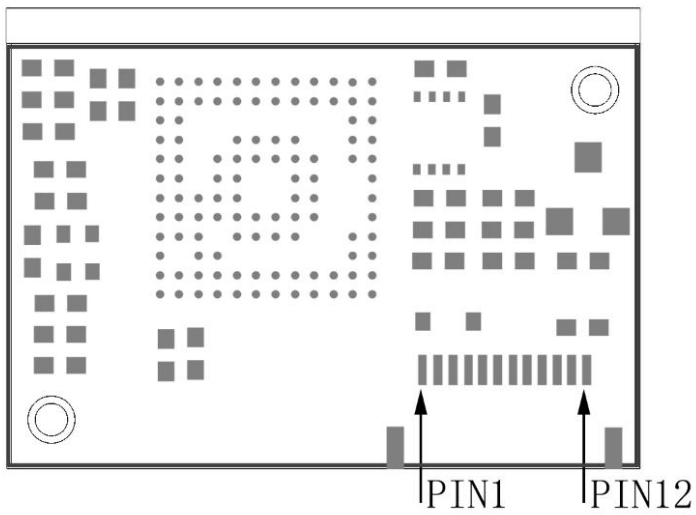
The illustrations below show the mechanical mounting dimensions for the DE2290D. The structural design should leave some space between components.

unit : mm)



Host Interface Connector

The following table lists the pin functions of the ffc 12pin pitch 0.5,host interface connector on the DE2290D.



Special Note: The signal TRIGGER pin cannot be connected to the pull-up resistor, nor can it be connected to the capacitor.

Definition

Pin Number	Signal Name	I/O	Functional description	Note
1	NC	-	--	
2	VIN	POWER	Power input	DC 3.3V \pm 5%
3	GND	POWER	Ground	
4	UART_RX	IN	TTL Serial receive signal	3.3V level
5	UART_TX	OUT	TTL Serial send signal	3.3V level
6	USB_DM/D-	I/O	USB D- signal	
7	USB_DP/D+	I/O	USB D+ signal	
8	NC	-	NC	
9	BEEPER_OUT	OUT	Passive buzzer output signal, idle low level	
10	LED_EN	OUT	Decoding success indication signal output, idle low level	
11	NC	-	NC	
12	TRIGGER	IN	Low level trigger, keep the low level for more than 20ms to trigger code reading (external pull-up resistors or capacitors cannot be connected)	

Performance parameter

Communication	USB (USB-KBW , USB-COM , HID-POS) , TTL
Scan Type	CMOS , Global shutter
Resolution	300,000 pixel, 640*480
Reading precision	≥3mil/0.076mm (PCS90%,CODE 39)
Depth of field	30mm~550mm (Different barcode range)
Decoding speed	65CM/S
Scan Mode	Manual , Continuous, Auto Sense, Command control
Prompt method	LED indicator light, buzzer (external circuit)
Field of view	41° * 31°
Scan angle	<i>Test Conditions : CODE39,10mil/0.25mm,PCS90%</i> Roll: ±360° , Pitch:±60° , Skew: ±55°
Print Contrast Signal	≥20%
Ambient Light	Dark environment, indoor natural light
Symbologies	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 2 of 5) ,Codabar (NW-7) , MSI , GS1 Databar(Omnidirectional, Limited, Expanded) , China Post, Tepepen, Febraban Brazil Bank Code , GS1 Composite, etc. 2D: QR Code, Micro QR Code, Data Matrix , PDF417, Micro PDF 417 , MaxiCode, Aztec ,HanXin Code, Japan post, Postnet,

etc.

Mechanical/Electrical Performance

Weight	About 3.5g
Dimension	21.35mm L *15.50mm W * 11.40mm H
FPC cable length	5CM (FPC single-sided cable)
Interface Type	FPC 12PIN Pitch 0.5
Power Supply	DC 3.3V
Current	200mA (Average Work) , 95mA(Standby) , 38mA(Sleep)

Note: DE2290D uses a global exposure camera, the lighting brightness will automatically adjust the brightness according to different reading distances, and the working current will change dynamically.

Working Environment

Operating	-20°C to 50°C
Storage	-40°C to 60°C
Humidity	5% to 95% (No condensation)
Transport	10H@125RPM

Accessories List

Cable (optional)	Used to connect the development board and the communication host. USB, TTL, RS232 is optional
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