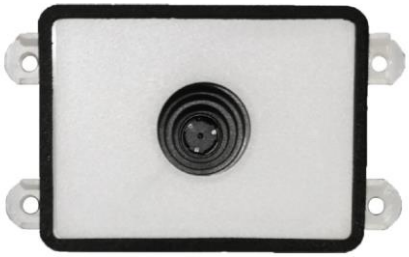
2D Embedded barcode scanner module

HW-1560g

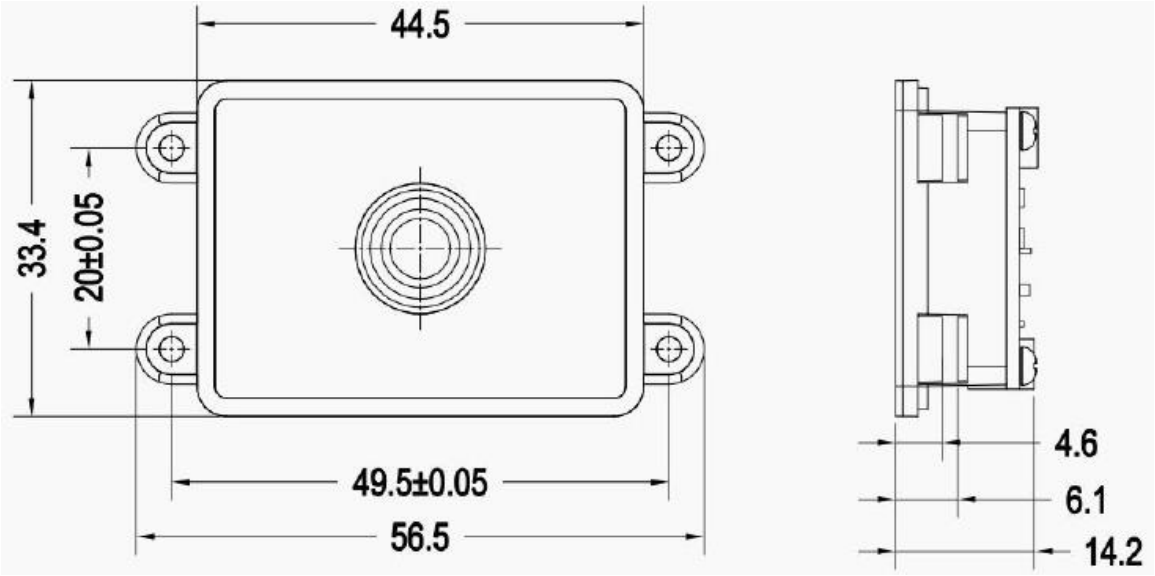
FEATURES & BENEFITS

- Global shutter sensor
- 32-bit high performance CPU,1GHz frequency
- Decoding min barcode density:4mil
- Support 1D/2D barcode on paper and screen
- Interface RS232 and USB(HID,COM),TTL
- **Anti-glare, can work under sunshine directly**
- Manual, Auto-sensing, Continuous, Host Mode
- Large window, small size, fast convenient installation



Installation Dimensions

Unit: mm



Note:

1. There is no glass on the front surface , normally integrator will have a glass panel at the front.
2. The back of scanner is PCBA directly, has no back cover, should do protection when integration.

Application Scenario

Ticket on bus

Tablet

Outdoor vending machine

Interface Definitions

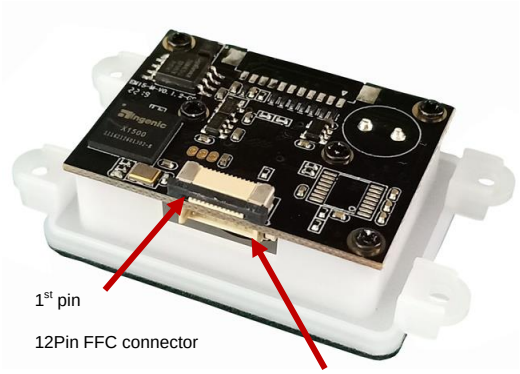
--. Connector spec: pitch 1.25mm/6pin/male

--. Optional cable: client end connector is USB-A, Serial port cable can be DB9+USB-A for client end or open wire.

--. Default cable: 12pin FFC cable, 0.5mm pitch.

12pin FFC connector definition:

PIN	I/O	Definition	Description
PIN 1	/	NC	/
PIN 2	-	+5V	5VDC Power
PIN 3	-	GND	Ground
PIN 4	Input	RXD	TTL RX 3.3VDC or RS232 5VDC
PIN 5	Output	TXD	TTL TX 3.3VDC or RS232 5VDC
PIN 6	-	USB D-	USB HID or USB COM
PIN 7	-	USB D+	USB HID or USB COM
PIN 8	-	GND	Ground
PIN9		BEE	Control buzzer, high level valid
PIN 10	Output	LED-C	Control Indicator LED, low level valid
PIN11	Input	RESET	Reset pin, low level valid
PIN12	Input	KEY	Low level→start to decode, high level→ no operation



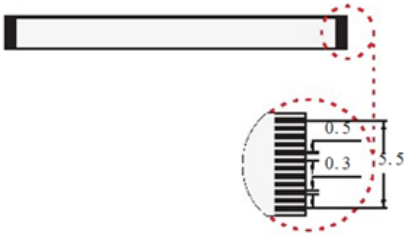
1st pin

6Pin UART connector

6pin UART connector definition:

PIN	I/O	Definition	Description
PIN 1	Output	TXD	TTL TX 3.3VDC or RS232 5VDC
PIN 2	Input	RXD	TTL RX 3.3VDC or RS232 5VDC
PIN 3	-	USB D-	USB HID or USB COM
PIN 4	-	USB D+	USB HID or USB COM
PIN 5	-	+5V	5VDC Power
PIN6	-	GND	Ground

12Pin FFC cable:



Serial port cable

TTL OR RS232 signal port

Client End is wire

USB port cable

USB/USB COM signal port

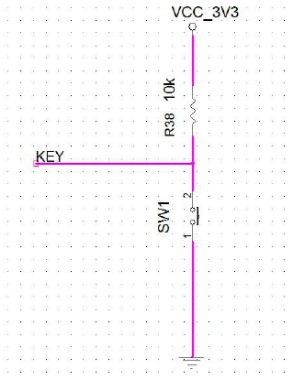
Client End is USB type A

Serial port cable

RS232 signal port

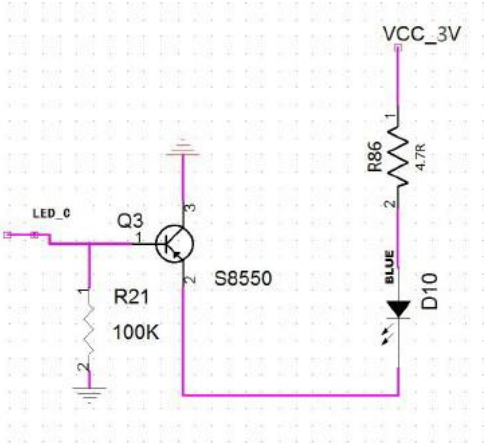
Client End is DB9 CON for data ;
USB type A for power

KEY pin reference circuit design:



LED_C on the motherboard interface in case of successful code scanning ,The pin will output a low level control signal and finally return to the high level, LED_ C signal output pin needs to use circuit to drive LED. Refer to the following LED drive circuit design:

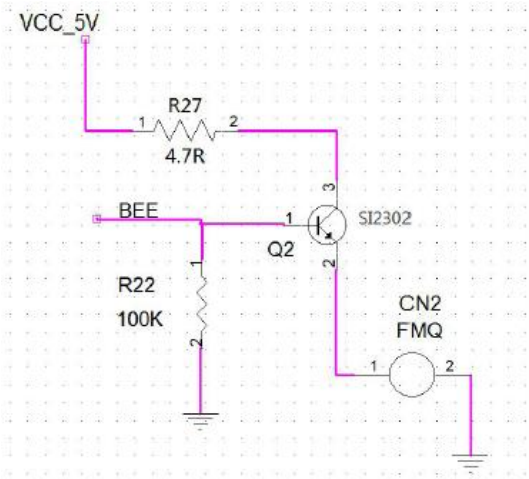
Circuit principle description: When the code scanning is successful, LED_ C output low level, Q3 conduction, LED light on, after scanning, LED_ C signal becomes high level, Q3 is cut off, and LED is off.



The BEE pin of the motherboard interface has two signal output modes: PWM and level; In PWM output mode, passive buzzer shall be used and the same working frequency as passive buzzer shall be selected. In level output mode, active buzzer shall be used. The load capacity of BEE pin is limited, so it is not allowed to drive the buzzer directly to sound, so as to avoid damaging the chip on the motherboard.

Circuit principle description: level output mode: when BEE outputs high level, Q2 is on, and the buzzer sounds; when BEE outputs low level, Q2 is off, and the buzzer does not sound.

Refer to the following figure for the buzzer drive circuit:



Technical Specification

HW-1560g Parameters

Reading performance	Image Sensor	CMOS
	Exposure	Global shutter
	Resolution	300 thousand 752*480pixels
	Decoding capacity	Support paper and screen barcodes
		2D: QR, MICROQR, PDF417, MICROPDF417, DATAMATRIX, MAXICODE, AZTEC, HANXIN etc.
		1D: UPC-A, UPC-E, EAN-13, ISBN10, ISBN13, EAN-8、CODE39, CODE 11, CODE 93, CODE128, INTERLEAVED25, INDUSTRIAL25, MATRIX25, S25, CODE 32, TRIOPTIC39, GS1_128, CODABAR, MSI, CHINA POST, TELEPEN, RSS, GS1_DATABAR, GS1_DATABAR_LIM, GS1_DATABAR_EXP etc. all normal 1D
	Precision	4mil
	Light Source	LED(630nm±10nm)
	View Angle	76.7°(H) x53.4°(V)
	Scan Angle	Rotation360°,tilt±55°,skew±55°
	Min Contrast	25%
	Anti-sunshine	Support
	Typical DOF	15-100mm(5mil code39) 15-150mm(10mil code39) 15-110mm(5mil UPCA) 15-120mm(10mil UPCA) 25-150mm(15mil QR) 15-150mm(8mil QR) 12-110mm(5mil PDF417) 11-130mm(8mil Data Matrix) Performance may be impacted by bar code quality and environmental conditions
Mechanical and electrical	Interface	RS232(DB9), USB(HID, COM),TTL232
	Working Voltage	DC 5V
	Current	250mA(Max) 100mA(standby) 1mA(sleep)
	Dimensions	56*33*14mm
	Weight	15g(without cable)
	Indication	Buzzer & LED
Environment Request	Working Tem	-30~65℃
	Storage Tem	-40~70℃
	Humidity	5%-95%(Non-condensing)
	Light Immunity	0~100,000Lux
	Drop Test	1.3M(6ft)