



2D Embedded barcode scanner module

KSK2 NW

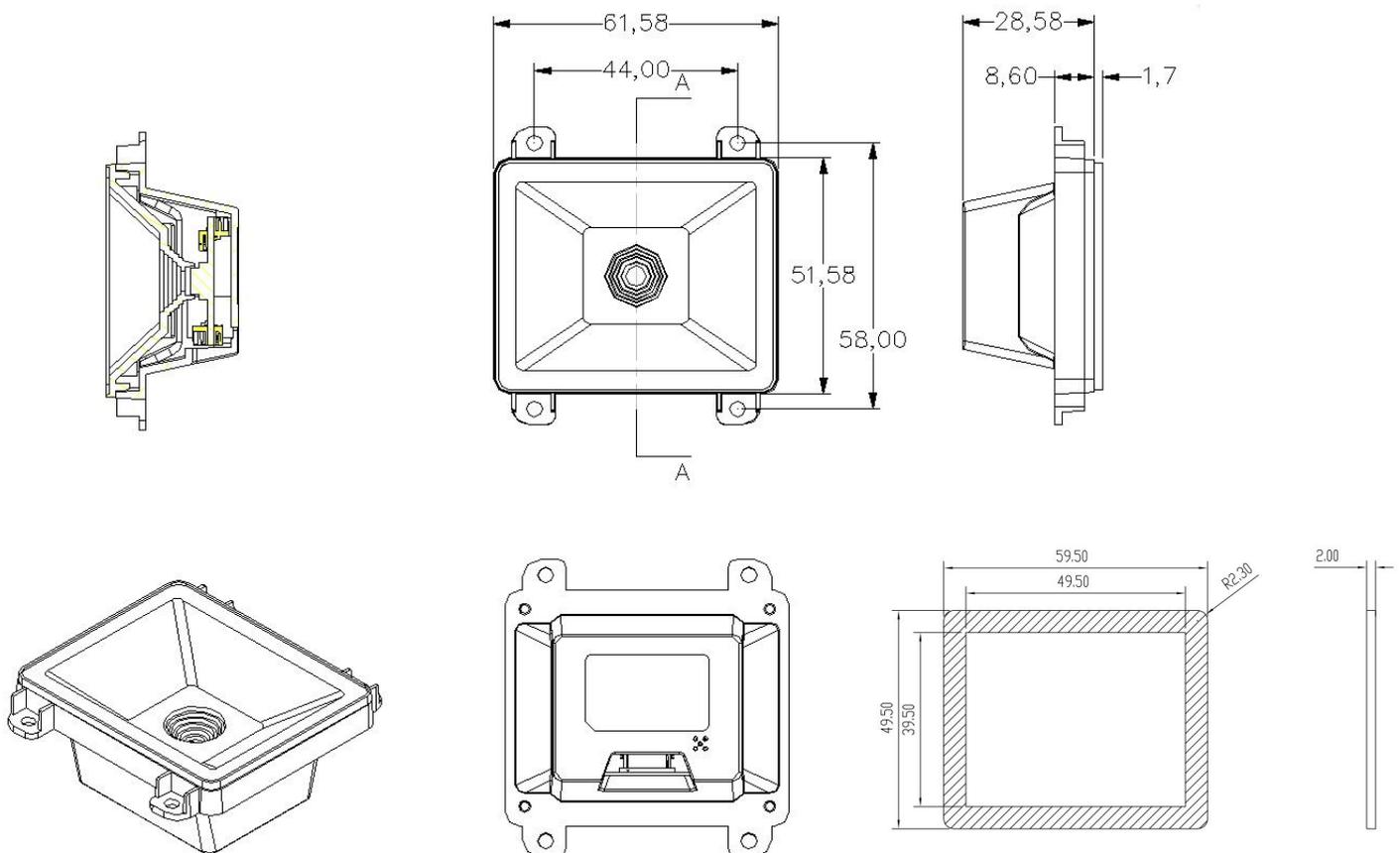
FEATURES & BENEFITS

- High performance CPU, 1GHz frequency
- Decoding min barcode density: 4mil
- Support 1D/2D barcode on paper and screen
- Motion tolerance > 50cm/s
- Interface USB (HID, COM), TTL, RS232
- Auto-sensing, Continuous, Host Mode
- Wide angle, small size, fast convenient installation



Installation Dimensions

Unit: mm

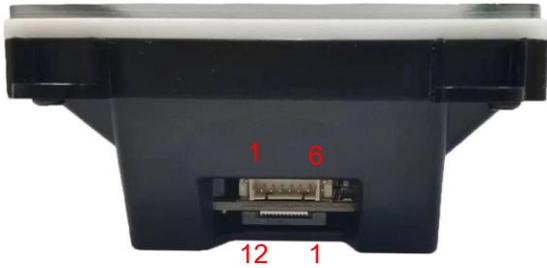


*The front cover dimensions

Interface Definitions

--. Connector spec: pitch 1.25mm/6pin/male or 0.5mm-12Pin FPC connector
 --. Default cable: client end connector is USB-A, Serial port cable can be DB9+USB-A for client end or open wire.
 CON1: pitch 1.25mm/6pin/male

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		VIN	5VDC Power
PIN 6	-	GND	Ground



CON2: 0.5mm-12Pin FPC connector

PIN	I/O	Definition	Description	PIN	I/O	Definition	Description
PIN 1	/	NC	/	PIN 7	-	USB D+	USB HID or USB COM
PIN 2	-	VIN	5VDC Power	PIN 8	-	GND	Ground
PIN 3	-	GND	Ground	PIN 9	Output	BEEP	Control buzzer, Compatible PWM &level
PIN 4	Input	RXD	TTL RX 3.3VDC or RS232 5VDC	PIN10	Output	LED-C	Control Indicator LED, low level valid
PIN 5	Output	TXD	TTL TX 3.3VDC or RS232 5VDC	PIN11	Input	RESET	Reset signal, low level valid
PIN 6	-	USB D-	USB HID or USB COM	PIN12	Input	KEY	Signal trigger, Low level start scanning



FFC cable	Serial port cable	USB port cable	RS232 cable
TTL OR USB signal port	TTL OR RS232 signal port	USB/USB COM signal port	RS232 signal port
12pin FFC	Client End open wire	Client End USB type A	Client End is DB9 for data USB type A for power

Application Scenario



Ticket on bus

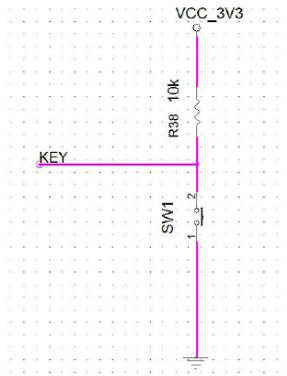


Turnstile



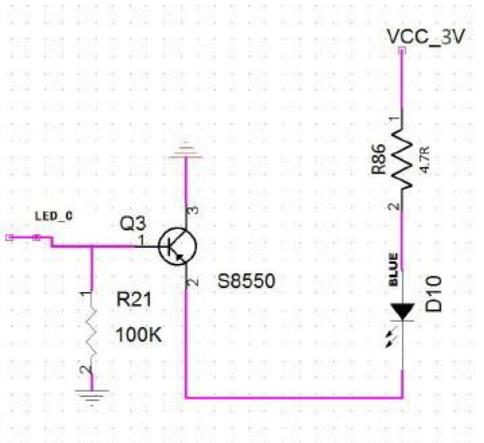
Vending machine

Trigger the scanning function: The KEY pin triggers scanning when the input is at a low level. You can refer to the following trigger 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:

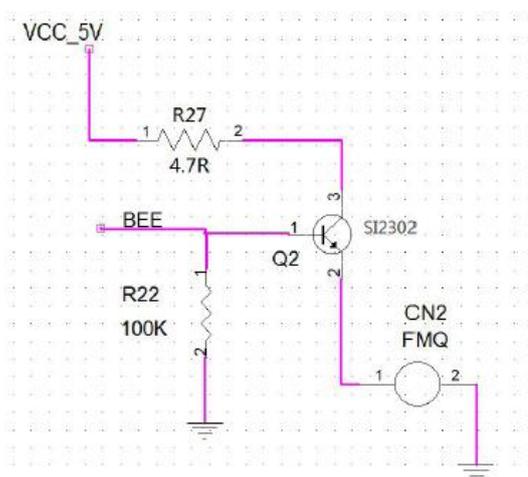
Circuit principle description: When the code scanning is successful, LED_C output low level, Q3 conduction, LED light on, after scanning, LED_C signal becomes high level, Q3 is cut off, and LED is off.



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

KSK2NW Parameters

	Image Sensor	CMOS
	Exposure	Roller shutter
	Resolution	0.3MP 640*480pixels
		Support paper and screen barcodes
		2D: QR, MICROQR, PDF417, MICROPDF417, DATAMATRIX, MAXICODE, AZTEC, HANXIN etc.
	Decoding capacity	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
Reading performance	Precision	4mil
	Light Source	White LED(630nm±10nm)
	View Angle	76.7° (H) x53.4° (V)
	Scan Angle	Rotation360° ,tilt±65° ,skew±65°
	Min Contrast	25%
	Motion tolerance	>50cm/s @EAN13 10mil
	Typical DOF	0-100mm(10mil EAN13) 0-150mm(10mil code39) 0-110mm(5mil UPCA) 0-120mm(10mil UPCA) 0-200mm(20mil QR) 0-80mm(10mil QR) 0-160mm(10mil PDF417) 0-70mm(10mil Data Matrix) Performance may be impacted by bar code quality and environmental conditions
	Interface	USB(HID, COM),TTL232,RS232(optional)
Mechanical and electrical	Working Voltage	DC 5V±5%
	Current	150mA(Max) 90mA(working) 1mA(standby)
	Dimensions	65*61*29mm
	Weight	35g(without cable)
	Indication	Buzzer & LED
Environment Request	Working Tem	-30~60℃
	Storage Tem	-40~70℃
	Humidity	5%-95%(Non-condensing)
	Light Immunity	0~100,000Lux
	Drop Test	1.8M(6ft)