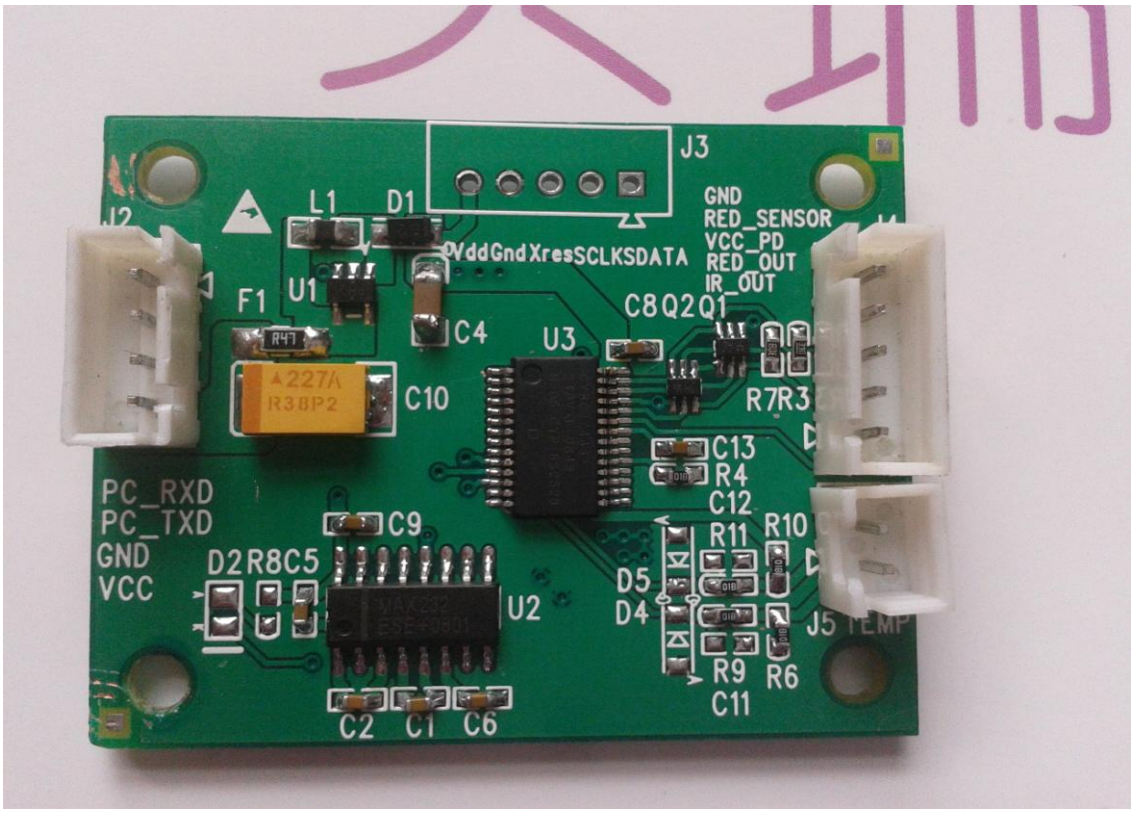
OEM SPO2 Module Manual

（Version V1.0）



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OEM SpO2 Module

Main Features

- ✧ Compact size (40x50x8mm), easy installation, high reliability and accuracy
- ✧ Enhanced signal processing to reduce the effect of random artifacts associated with motion and low perfusion
- ✧ Applicable to adult, pediatric and neonatal patients
- ✧ Powered by single 5V, low power consumption
- ✧ Graph includes plethysmogram, pulse strength bargraph and PR digits
- ✧ Communication protocol compatible with BCI
- ✧ Probe interface compatible with BCI probe
- ✧ Converting between RS232 and TTL level
- ✧ Enable all the values displayed in the evaluation software on personal computer

Functions

- ✧ Parameters: SpO2%, Pulse rate
- ✧ One channel plethysmogram
- ✧ Sensor status detection

1. Function

1.1 Measurement parameters

Spo2, Pulse rate

1.2 Units

Spo2: %

Pulse Rate: BPM

1.3 Communication

RS232: 4800/115200 Baut Rate

2. Specification

2.1 Measurement Range

Spo2:	0 -100%
Pulse Rate:	25 ~ 250 BPM

2.2 Resolution

Spo2:	1%
Pulse Rate:	1BPM

2.3 Accuracy

SPO2 Accuracy:	±2% (70-100%)
	3% (35-70%)
Pulse Rate	±2% (25-250BPM)

2.4 Physical dimensions (without connector)

Length:	5 cm
Width:	4 cm
Height:	1.5 cm
Weight:	20g

2.5 Connection

J1:

PIN1:	TXD
PIN2:	RXD
PIN3:	Gnd
PIN4:	+5V

J3: Probe connection

J3_1: R_LED;

J3_2: IR_LED;

J3_3: GND;

J3_4: Opto-;

J3_5: Opto+;

3. Power

Input Voltage:3-- 5V

Input Current: <50mA

4. Accessory

Adult finger SpO2 sensor

Adult soft sensor

5. Environment

5.1 Temperature

Working：0 ~ 45°C

Storage：-20~55°C

5.2 Humidity

Working：30~95%

Storage：10~100%

6. Standards

EN865	Calibration specification for pulse oximeters
EN60601-1	Safety for medical equipment
EN60601-1-4	General safety standard

7. Host connection

7.1 Serial communication

Communications: BCI protocol

BCI communication settings

- No parity
- 8 data bits
- 1 stop bit
- 4800/115200 baud rate

7.2 BCI communication protocol

Byte	Bit	Description
1	0~3	Signal strength (0~8)
	4	1＝no signal，0=OK
	5	1＝probe unplugged, 0=OK
	6	1＝pulse beep
	7	Sync bit=1
2	0～6	Pleth
	7	Sync bit=0
3	0～3	Bargraph
	4	Sensor off=1, 0=OK
	5	Pulse research=1, 0=OK
	6	Bit 6 of Byte 3 is bit 7 of the Pulse Rate
	7	Sync bit
4	0～6	Bits 0-6 of Byte 4 are bits 0-6 of the Pulse Rate
	7	Sync=0
5	0～6	SpO2 0-100%
	7	Sync=0