# MSG50 VOC Gas Sensor volatile organic compounds

| IO PIN | Define |
|---|---|
| #1 | GND (-) |
| #2 | VCC (+) |
| #3 | A（ RX） |
| #4 | B（ TX） |

## UART DATA FLOW

| B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 |
|---|---|---|---|---|---|---|---|---|
| Module Add | Module Add | TVOC(high byte) | TVOC(Low byte) | CH2O(high byte) | CH2O(Low byte) | CO2(high byte) | CO2(Low byte) | checksum |
| 2Ch | E4h | 0XXh | 0XXh | 0XXh | 0XXh | 0XXh | 0XXh | 0XXh |

**Data Example**

2C E4 00 0A 00 03 01 68 86

When above data was read, then the calculation is：

checksum：86h=2CH+E4H+00H+0AH+00H+03H+01H+68H

TVOC Value：(B3*256+B4)*0.01=(00h*256+0Ah)*0.01=0.1mg/m³

CH2O Value：(B5*256+B6)*0.01=(00h*256+03h)*0.01=0.03mg/m³

CO2 Value：B7*256+B8=01h*256+68h=360PPM