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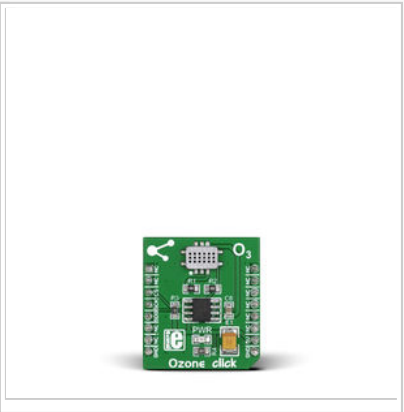
Ozone click

From MikroElektonika Documentation

Ozone click carries a MiCS-2614 compact MOS sensor for ozone (O3) detection. Its detection range is from 10-1000ppb.

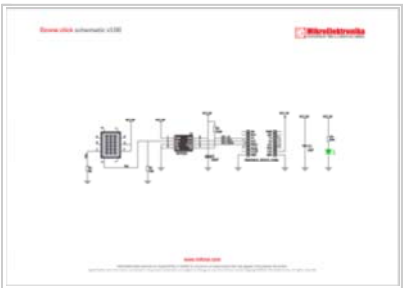
Ozone click



Ozone click

IC/Module	MiCS-2614 (https://sgx.cdistore.com/datasheets/e2v/1087_Datasheet-MiCS-2614.pdf)MCP3201 (http://ww1.microchip.com/downloads/en/DeviceDoc/21290D.pdf)
Interface	SPI
Power supply	5V
Website	www.mikroe.com/click/ozone (http://www.mikroe.com/click/ozone)

Features and usage notes



Schematic also available in PDF (http://cdn-docs.mikroe.com/images/c/c9/Ozone_click_schemati

Ozone click is a small(5 x 7 x 1.55mm) MEMS sensor consisting of a micro machined diaphragm with an embedded heating resistor and the sensing layer on top.

The sensor outputs an analog voltage, which is converted by the onboard MCP3201 12-bit ADC converter. The MCP3201 is typically used as a sensor interface for data acquisition. It's capable of outputting sample rates of up to 100 ksps at a clock rate of 1.6 MHz.

The click communicates with the target MCU through the mikroBUS™ SPI interface (CS, SCK, MISO). The board is designed to use a 5V power supply only.

Note that the sensing layer is sensitive to various external factors. For example, it must not be exposed to high concentrations of organic solvents, silicone vapours or cigarette-smoke. Otherwise it might damage the sensitive layer and diminish the accuracy of the sensor.

Programming

The following code snippet reads off the sensor data every 500 milliseconds.

```
void main()
{
    system_init();
    display_init();

    while( 1 )
    {
        measurement();
        calculation();
        display_result();
        delay_ms( 500 );
    }
}
```

Code examples that demonstrate the usage of Ozone click with MikroElektronika hardware, written for mikroC for ARM, AVR, dsPIC, FT90x, PIC and PIC32 are available on Libstock (http://libstock.mikroe.com/projects/view/1859/ozone-click).

Resources

- Vendor's data sheet (https://sgx.cdistore.com/datasheets/e2v/1087_Datasheet-MiCS-2614.pdf)

- mikroBUS standard specifications (http://download.mikroe.com/documents/standards/mikrobus/mikrobus-standard-specification-v200.pdf)

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