



AQMS

AIR QUALITY MONITORING SYSTEM



PT Merapi Tani Instrumen

Sleman, DI Yogyakarta

MERTANI AIR QUALITY MONITORING SYSTEM (AQMS)

Tentang Air Quality Monitoring System (AQMS)

MERTANI AQMS merupakan perangkat untuk melakukan pemantauan terhadap kualitas udara secara online (dalam jaringan), realtime (terus-menerus), dan akurat.

Penerapan Air Quality Monitoring System (AQMS)

- Pemantauan udara di kota besar
- Pabrik dan zona industri
- Bandara
- Area pemukiman
- Situs konstruksi
- Pertanian dan kehutanan



Mertani Controller Box



Specification

- Industrial grade Ultra-Low Power MCU based on Cortex M4+
- Input digital sensor RS485 (Modbus), I2C, RS232, Serial TTL, one wire. Under development: SDI12
- Main material ABS
- Dimension 25x25x15 cm
- Operates from 2.7 V up to 5.5V
- Operational temperature 0°C to +85°C
- Weight 2 kg
- Internal memory 16 MB
- Extended industrial memory up to 256 MB
- Weather-resistant

Monitoring

- Realtime monitoring
- Data transmission interval (5 minutes, 10 minutes, 15 minutes, 30 minutes, 1 hour, 2 hours, and so on)

Connectivity

- GSM (2G, 3G, and 4G)
- WiFi and Bluetooth Low Energy (BLE)
- LoRa 920-923 MHz
- GPS/ GLONASS/ GALILEO

Number of Sensor Port

- 3 sensors (default)
- 10 sensors (extended)

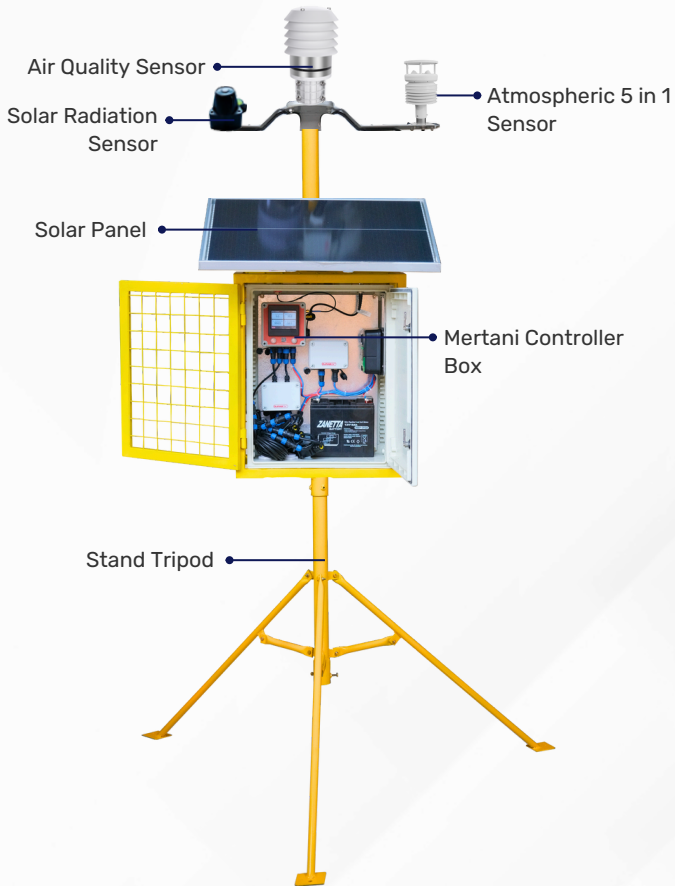
Battery

- Internal battery up to 17 Ah 12 Volt
- Solar panel 50 WP

LCD Touchscreen

- Interval and calibration setting
- Graphic or text display
- HMI LCD Display Colored TFT Industrial with Touchscreen

MERTANI AIR QUALITY MONITORING SYSTEM (AQMS)



Mertani AQMS



Air Quality Sensor

Spesifikasi Produk

General Conditions

- IP Class IP66
- Dimensions(HxΦ) 250x138mm(AQS) / 410x160mm(AWS)
- Weight 1.6kg(AQS) / 2.7kg(AWS)
- Power 12VDC
- Digital outputs(RS-485) baud rate 9600(Default)
- Operating voltage 12 ... 30VDC
- Operating temperature -40 ... +70oC
- Operating humidity 5% ... 100%RH
- Connector 4 Pin
- Cable PUR 5m

CO

- Principle Electrochemistry
- Measurement range 0 ... 200ppm
- Accuracy ± 0.02 ppm
- Resolution 0.01ppm

NO₂

- Principle Electrochemistry
- Measurement range 0 ... 20ppm
- Accuracy ± 0.001 ppm
- Resolution 0.001ppm

SO₂

- Principle Electrochemistry
- Measurement range 0 ... 20ppm
- Accuracy ± 0.001 ppm
- Resolution 0.001ppm

O₃

- Principle Electrochemistry
- Measurement range 0 ... 20ppm
- Accuracy ± 0.01 ppm
- Resolution 0.005ppm

PM2.5

- Principle Laser scattering
- Measurement range 0 ... 1000ug/m³
- Accuracy $\pm 10\%$
- Resolution 0.3ug/m³

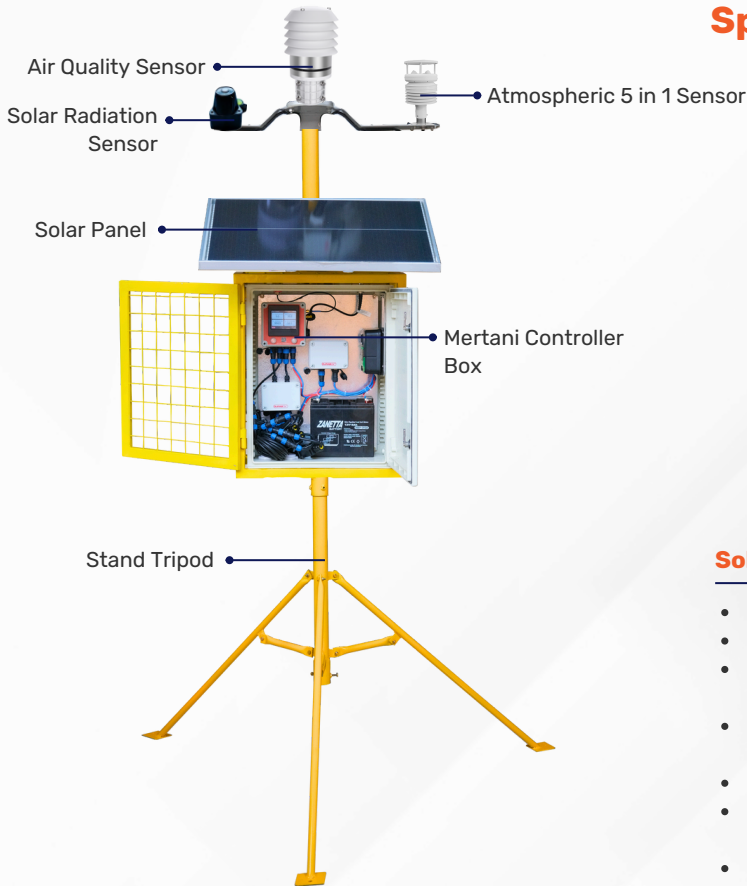
PM10

- Principle Laser scattering
- Measurement range 0 ... 1000ug/m³
- Accuracy $\pm 10\%$
- Resolution 0.3ug/m³

HC

- Principle electrochemical
- Measurement range 0 ... 20 ppm (0-64580 ug/m³)
- Maksimum overload 100 ppm
- Resolution 1 ppb
- Pemrosesan sinyal digital sensor

MERTANI AIR QUALITY MONITORING SYSTEM (AQMS)



Mertani AQMS



Atmospheric 5 in 1 Sensor

Spesifikasi Produk



Solar Radiation Sensor

Solar Radiation

- Output Interface SDI-12, V1.3
- Power Supply 4.5-28V/DC
- Power Consumption SDI-12 Interface: Quiescent Current : <10uA
Measuring Current : 10mA during 50ms measurement
- Solar Radiation Range:0-2000W/m2, Accuracy 5%,
Resolution:1W/m2
- Spectral Range 400-1100nm
- Direction Error Percent of reading: $\pm 3\%$ (0 - $\pm 70^\circ$); $\pm 10\%$ ($\pm 70 - \pm 85^\circ$)
- Operating Temperature: -40~80°C, Humidity: 0-100%
- IP Ratings IP68
- Installation Screw hole * 3

5 in 1

Ultrasonic wind speed

- Measuring range 0-70m/s
- Accuracy Start wind $\pm 0.8\text{m/s}$, $\pm(0.5+0.02V)\text{m/s}$
- Resolution 0.01m/s

Ultrasonic wind direction

- Measuring range 0-360°
- Accuracy ± 3
- Resolution 1°

Air Temperature

- Measuring range -40~100°C
- Accuracy $\pm 0.3^\circ\text{C}$
- Resolution 0.1°C

Air Humidity

- Measuring range 0-100%RH
- Accuracy $\pm 5\%$ RH
- Resolution 0.1%RH

Air Pressure

- Measuring range 300-1100hPa
- Accuracy $\pm 1\text{hPa}$ (25°C)
- Resolution 0.1 hPa