

AQSync Air Quality Monitoring Station: Detailed Specifications

Instrument/Sensor Specifications (per manufacturer)	
<p>Ozone (O₃)</p> <p>Measurement Method: UV Absorbance at 254 nm Instrument: 2B Technologies Model 108-L (FEM) Linear Range: 0-20,000 ppb Precision: 1.5 ppb or 2% of reading for 10-s avg Accuracy: 1.5 ppb or 2% of reading Response Time: 4 s for 2-s avg, 20 s for 10-s avg</p>	<p>Nitrogen Dioxide (NO₂)</p> <p>Measurement Method: Direct Absorbance at 405 nm Instrument: Based on 2B Tech Model 405 nm NO₂/NO/NO_x Monitor (FEM for NO₂) Linear Range: 0-10,000 ppb Precision: 0.5 ppb Accuracy: 2 ppb or 2% or reading Response Time 20 s</p>
<p>Nitric Oxide (NO)</p> <p>Measurement Method: Oxidation to NO₂ with O₃ followed by Absorbance of NO₂ at 405 nm Instrument: 2B Tech Model 405 nm NO₂/NO/NO_x Monitor Linear Range: 0-2,000 ppb Precision: 0.5 ppb Accuracy: 2 ppb or 2% of reading Response Time: 20 s</p>	<p>Particulate Matter (PM₁, PM_{2.5}, PM₁₀)</p> <p>Measurement Method: Optical Particle Counter, right angle light scatter detection with sheath flow and heated inlet Instrument: Met One Instruments Model 83214 Range: 0-320,000 particles per liter Minimum Particle Size: 0.3 μm Accuracy: 10% Response Time: minimum 1 s</p>
<p>Methane</p> <p>Measurement Method: Tunable-Diode Laser Sensor: Axetris LGD Compact-A CH₄ Measurement Range: 0 to 100 ppm Precision: up to 100 ppm, < 0.8 ppm Resolution: 0.01 ppm Sampling Rate: 2 Hz</p>	

Weather Station Specifications

(per manufacturer)

Gill Instruments MaxiMet 500GMX	Range	Accuracy
Temperature	-40 to +70 °C	±0.3 °C (at 20 °C)
Pressure	300 – 1100 hPa	±0.5 hPa (at 25 °C)
Relative Humidity	0 – 100% RH	±2 %RH (10 to 90 %RH)
Wind Speed (2-D Sonic Anemometry)	0.01-60 m/s (134 MPH)	±2% (0-30 m/s) ±3% (>30 m/s)
Wind Direction (2-D Sonic Anemometry)	0-360 degrees azimuth	±3 degrees (to 40 m/s) ±5 degrees (40-60 m/s)

System Specifications

Weight	54.7 lb, 24.9 kg (varies with modules chosen)
Size	25.5 H x 25.5 W x 10.3 D in (65 x 65 x 26.2 cm); height with weather station is 49 in (124.5 cm)
Power	35-60 watt (53-78 watt max during warmup) (varies with modules chosen)
Data Transmission	Cellular or WiFi to the Cloud; Ethernet option
Sample Flow Rate	~4 L/min (varies with modules chosen)
Certification	CE