

## ET TrafficBOx

### ENVIRONMENTAL AIR QUALITY MONITOR

*The ET TrafficBOx ultra compact air quality monitor fills the gap between full reference monitoring stations and simple diffusion samplers.*

*The new benchmark in cost-effective Air Quality Monitoring*

Utilising proprietary high performance gas sensor technology, ET's TrafficBOx delivers precise measurement data for a wide range of airborne pollutants, including up to five gases plus PM<sub>10</sub> (or PM<sub>2.5</sub>) and environmental parameters such as temperature, humidity, wind speed and direction and noise. Data is stored internally and available in real-time or short-term resolution to a PC via GSM modem, ethernet or other communication options.

#### FEATURES

- Analytical GSS Technology®
- Multiple Gas Sensors (up to six)
- Factory Certified with NIST Traceability
- Temperature and Humidity Sensors
- Particulate Monitor PM<sub>10</sub> or PM<sub>2.5</sub> (optional)
- Wind Speed and Wind Direction (optional)
- Active Air Sampling System
- Real-time or Short-term Resolution
- Data Storage Capacity >15 years\*
- RS 232 with PC Data Logging Software
- Auto-Zero and Manual-Span Calibration
- GSM, Ethernet and RF Modem (optional)
- Weatherproof Enclosures
- Solar Panel (optional)

\* 10 sensor inputs logging at 5 minute intervals



#### APPLICATIONS

- Urban Air Quality Monitoring
- Industrial Air Quality Monitoring
- Tunnel and Roadside Monitoring
- Trend Analysis and Hotspot Screening
- Fence Line and Point Source Emissions Monitoring
- Landfill, Wastewater and Petrochemical Plant Monitoring



## Specifications

GAS SENSOR MODULES	Range	LDL	Accuracy	Precision	Resolution
Ozone	0 - 150 ppb	1 ppb	<± 0.005 ppm	0.002 ppm	0.001 ppm
Nitrogen dioxide	0 - 200 ppb	1 ppb	<± 0.010 ppm	0.005 ppm	0.001 ppm
Nitric oxide	0 - 2 ppm	0.01 ppm	<± 0.5 ppm	0.01 ppm	0.01 ppm
Carbon monoxide	0 - 100 ppm	0.5 ppm	<± 5 ppm	1 ppm	0.1 ppm
Sulphur dioxide	0 - 10 ppm	0.2 ppm	<± 0.5 ppm	0.4 ppm	0.01 ppm
Non-methane hydrocarbon	0 - 25 ppm	0.1 ppm	<± 5 ppm	0.2 ppm	0.1 ppm
VOC (isobutylene)	0 - 25 ppm	0.1 ppm	<± 10%	0.2 ppm	0.1 ppm
Hydrogen sulphide	0 - 10 ppm	10 ppb	<± 0.5 ppm	0.02 ppm	0.01 ppm
Carbon dioxide (NDIR)	0 - 2000 ppm	6 ppm	< 40 ppm + 3%	6 ppm	10 ppm
PID (isobutylene)	0 - 20 ppm	10 ppb	< 10%	0.02 ppm	0.01 ppm

TEMPERATURE & HUMIDITY	Range	Sensitivity	Resolution
Temperature sensor	-20°C to 100°C	0.01°C	0.01°C
Relative humidity sensor	0 - 100% RH	1% RH	1% RH

PARTICULATE MONITOR (OPTIONAL)	Range	Sensitivity	Precision
Forward light scatter (laser-diode precise optical engine)	0 - 2 mg/m <sup>3</sup>	0.001 mg/m <sup>3</sup>	0.003 mg/m <sup>3</sup>

  

	Particle size	Accuracy	LT Stability
Available cut points (cyclones) TSP, PM <sub>1</sub> , PM <sub>2.5</sub> , PM <sub>10</sub>	0.1-100 micron	8% NIOSH 0600	5% reading

SONIC ANEMOMETER (OPTIONAL)	Range	Accuracy	Resolution
Wind speed	0 - 60 m/s	± 2% (12 m/s)	0.01 m/s
Wind direction	0 - 359°	± 3° (20 m/s)	1°

### SENSOR OPERATIONAL RANGE

(subject to configuration)  
-5°C to 50°C, 5 to 95% RH  
(non condensing)

### MAINTENANCE CHECKS ROUTINE

6-monthly and 12-monthly

### ZERO AIR SCRUBBER

Hopcalite; activated carbon; alumina

### SAMPLING SYSTEM

Brushless DC diaphragm pumps  
Valcor Scientific solenoid valves  
PFA Teflon; PTFE; Kynar connections  
Particulate inlet filter (5 micron)

### ZERO CALIBRATION

Auto-program or external activation

### SPAN CALIBRATION

External-protocol provided

### COMMUNICATION

RS 232 / RS 485; DB 9 connection  
Data polling or pushing

### DATA STORAGE

Removable SD card 1GB  
<15 yr for 10 sensors @ 5-min freq.

### DATA SAMPLING RATE

Programmable (min. 2 minutes)

### DISPLAY

4 x 20 vacuum florescent display

### POWER REQUIREMENTS

24VDC / 1A (subject to configuration)

### POWER MODULE

Switching 100 - 250 VAC

### OUTDOOR ENCLOSURE

Fibre reinforced polycarbonate  
515H x 415W x 230D (mm)  
IP66 (NEMA type 4)

### WEIGHT

< 15 Kg (subject to configuration)

### OPTIONAL COMMUNICATIONS

GSM modem 900/1800 MHz;  
RF modem or 802.11 wireless

### OTHER OPTIONS

Auxiliary I/O module or PC / PLC  
Enclosure heater or cooling system  
Noise sensor; Solar power system

### APPROVALS

Part 15 of FCC Rules  
EN 61000-6-3: 2001  
EN 61000-6-1: 2001



 **Enviro Technology Services plc**



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