

XPi

Multiparameter Monitor

- Optical Particle Counter– PM1.0, PM2.5, PM4.25, PM10 & TSP
- Monitor 1 gas CO or VOC or NO2
- Heat Stress
- Ambient weather monitor
- Wind Speed and Wind Direction
- Sound Pressure Monitor (noise)
- On-board display
- 2 years of local datalogging

OVERVIEW

The XPi is a modular, fixed or transportable air-quality and dust-monitoring station that provides simultaneous real-time measurements of particulate matter and environmental parameters.

It measures key particulate mass fractions (PM1.0, PM2.5, PM4.25, PM10 and Total Suspended Particulates) and can be configured with optional gas sensors (e.g., CO, NO₂ or VOC), meteorological sensors (wind speed/direction, temperature, humidity, pressure), and other environmental measures for comprehensive air quality profiling.

Designed for use on a tripod or permanent mount, the XPi supports built-in Wi-Fi, Ethernet and cellular connectivity, a built-in web server, and protocols like Modbus, FTP and MQTT for remote data access and integration.

The XPi features 2 years of onboard datalogging, an onboard display, and optional solar/battery power systems for remote or off-grid deployment.



APPLICATIONS

- Factory Air Quality Audits
- Indoor Air Monitoring
- Outdoor environment monitoring
- Remote Monitoring
- Clustered Monitoring
- Quarry / Mining

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Power	12 VDC
Rated Power	8 Watts
Operating Temperature	0oC to 50oC
Operating Humidity	0-95% non-condensing

Particle Size Range	PM1.0, PM2.5, PM4.25, PM10 & TSP
Size categorisation (Standard)	0.35 to 40 um (RI of 1.5 +io) at 24 software bins
Sample flow rate	1.2L/min nominal
Max particle count rate	10,000 count/sec
Detection Limit	1 ug/m3
Detection range	0 - 30000 ug/m3
Sampling frequency	1 seconds
Particle density value	1.65 g/ml

Gas	Range	Resolution	T90 (s)
CO	0-1000 ppm	1	<25
NO2	0 20 ppm	0.1	<60
VOC	0-1000 ppm	1	<30

Parameter	Range	Resolution	Accuracy
Wind Speed	0-60 m/s	0.01 m/s	+0.3m/s
Direction	0-360o	0.1 o	+2o
Temperature	-40 to 60 oC	0.01 oC	+0.3 oC
Humidity	0-100% RH	0.01%	+3% RH
Pressure	300 - 1100 hPa		0.1 hPa
Globe Temperature	0 - 60 oC	0.1 o	+2o

Range	30-130 dB (A)
Resolution	0.1 dB
Sensitivity	12.6mV/Pa
Microphone	1/2 Inch
Directivity	Omnibearing

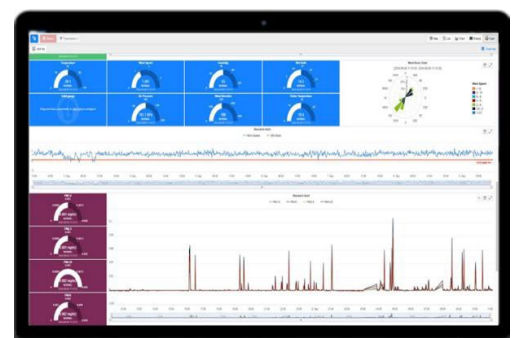
Connectivity	
SCADA integration	MODBUS TCP/IP, MODBUS - RTU
Upload	Cellular, WiFi and Ethernet
Upload Protocol	FTP, MQTT, MQTTs

DASHBOARD

Connectivity – Cellular, WiFi and Ethernet Data Transfer Protocol – FTP, MQTT, MQTTs

Upload interval – 1 minute to Eagle.io Server or Customer Server

Hierarchical User Management, three (3) classifications of alerts via SMS and/or e-mails, data download and automatic report generation using the Dustech Dashboard. (Access via subscriptions).



SOLAR / BATTERY KIT

Weatherproof Hard Case with wheels

All internal cabling/fuses/regulators/charge controller.
Secure cable for power, XP Series and Solar Panels
100Ah LiFePo4 Battery (Low weight, high capacity)
One person install.



ENCLOSURE DIMENSIONS

