

DUST MASTER PRO

REAL-TIME PARTICULATE MONITOR



- ▶ Made in Australia
- ▶ Near reference measurement
- ▶ PM10, PM2.5, PM Total and more
- ▶ Easy to use
- ▶ Remote connectivity & telemetry
- ▶ Local and genuine support



HOW IT WORKS

The QAMS Dust Master Pro particle counter uses laser technology for simultaneous real-time PM monitoring of up to 5 PM fractions: PM₁₀, PM₄, PM_{2.5}, PM₁ and Total PM.

The advanced pump system provides accurate data with quiet operation due to consistent 5LPM flow rate and pulsation dampening technology.

The quick deploy design, graphical display, and dedicated keypad with intuitive menu simplifies on-site operation, while the new Visual Master Pro Software gives remote users unprecedented capabilities.

PERFECT FOR:

- ▶ Governments & Authorities
- ▶ Consultants & Engineering
- ▶ Civil & Construction
- ▶ Mining & Quarries
- ▶ Logistics, Ports & Terminals



KEY FEATURES AND HIGHLIGHTS:

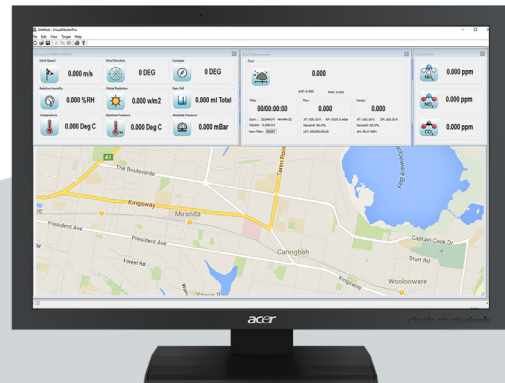
- **Real-time** measurement of up to 5 PM fractions **simultaneously**
- Capable of measuring **PM10** and **PM2.5** (the most common fractions for measuring dust that is harmful to health) as well as **PM4, PM1** and **Total PM**
- **Manufactured in Australia** with premium quality and service you can trust
- Advanced pump system with high **5LPM** flow rate and quiet operation
- Easy field calibration available via **Automatic Field Calibration Mode**
- RH controlled heated inlet along with a unique in-line water trap **eliminates moisture interference**
- Annual factory service recommended. **No other maintenance required**
- Mains, battery or solar power options
- **In-built** data logging capability
- **Remote data access** via 3G modem
- Easy to set alarm capabilities through **SMS messaging to mobile phone**, external siren or visual beacon.



Weather & Meteorological Sensors

The Dust Master Pro has Plug 'n' Play integration with up to 3 Lufft Meteorological Sensors, which means no additional costly data loggers for your weather monitoring requirements. The DMP has the capability to record up to 47 distinct parameters, including:

- Wind Speed and Direction
- Air Temperature
- Relative Humidity
- Barometric Pressure
- Precipitation Type, Intensity and Quantity
- Solar Radiation
- Lightning Strikes
- and more



Visual Master Pro Data Logging Software

VMP Software (valued at \$1,799) comes **included** with your Dust Master Pro purchase. The remote interface software requires no coding and makes it simple for both non-technical and expert users to access data and adjust instrument setting at an advanced level.

- Live data display allows you to access first-hand information
- Real-time data display, real-time decision making
- Remote access for data downloading and configuration
- Synchronised data set for ease of download
- Unique EPA mode allows user to simply set up the system to meet EPA requirements
- Operating on Windows 7 through to Windows 10
- Compatible with QAMS Dust Master Pro and Met Master Pro
- Format available in CSV, HTML and ASCII.

Proudly Manufactured in Australia by Thomson Environmental Systems

We developed the QAMS range specifically for outdoor monitoring in Australia's harsh conditions. We built QAMS for ease-of-use, robustness and suitability for a diverse number of applications.

Since the first QAMS monitor launched in 2008, we have continually strived to improve the product and make it the highest quality instrument on the market. With years of field operation and a strong positive response from our users, we are proud that the QAMS range has become a leader in monitoring, construction, mining and industrial monitoring applications.



DUST MASTER PRO DATASHEET

Particle Size Range	0.2um to 18um	Relay Contacts	3 relay contacts (NC/COM/NO), Alarm 1 set point, Alarm 2 set point, Instrument fault alert, Max. contact switching 5A for Alarm Capabilities
Dust Measurement Range	0.001 to 10mg/m ³ (internal dilution available)	Alarm Capabilities	SMS messaging to mobile phone, external siren, visual strobe light and email alerts. Carrier charges may apply.
Simultaneous PM Fraction Measurements	Simultaneously measures all 3 popular PM fractions; PM _{2.5} , PM ₁₀ and Total PM with option to add PM ₁ and PM ₄ . Other PM fractions available upon request.	Enclosure Type	NEMA4 / IP66 rated, excluding heated inlet and exhaust Display Type 128 x 64 bit low energy graphical LCD display
Measurement Resolution	0.001mg/m ³ (1ug/m ³)	Keypad / User Interface	12 button function with keys
Flow Rate Flow Accuracy Single Pump System	5.0 litre per minute (default), user adjustable from 3 to 8 lpm Precision automatic flow control to within +/- 1% With internal solenoid valve to control internal purge cycle every 30 minutes as standard	Tripod or Post Mounting	May be easily mounted on a 50mm diameter post or on a TES transportable heavy duty tripod
Barometric Pressure	Built in barometer for ambient static pressure measurements for precise flow control	Optional Inlet Jets	PM _{2.5} , PM ₁₀ , Total PM - supplied with unit
Data Download	Data is polled or, upon special request, automatically and continually pushed to your server. Ability to fully synchronise data with the use of Visual Master Pro Software	Heated Inlet	Precision heated inlet controls inlet temperature to ensure sampling at 45% Relative Humidity max.
Gravimetric Filter Sampling	Integrated filter holder, 37mm filter cartridge	Calibration Method	Fully calibrated to ISO12103-1 international standards by TES
Data Logging Interval and Internal Memory	Fully user adjustable from 5 to 999s Ability to store over 2 years of time and date stamped 10 minute data captures from a single PM channel. Note, actual storage depends on the application as it will vary depending on additional parameters	Power Options	Mains Power - Operates from 80 to 260 VAC and is fully weatherproof. Battery Power - Standard or Portable. Includes rechargeable battery, regulator and battery box. 'Standard Battery System' provides approx 210 hours of operation with the inlet heater OFF or 70 hours with the inlet heater ON. Solar Power System provides continuous operation based on average of >4.5 hours of sunlight per day, and will continue for up to 3 days no sun. System includes Solar Panel & Stand, Battery & Battery box, Regulator
NIOSH 5040 Capable Sampling	Yes, using 37mm filter cassette	Weight	System 7Kg Heated inlet 1.5Kg
Web Based Data Collection	Optional	Dimensions - System	Width 300mm Depth 200mm Height 350mm
Meteorological Inputs	Up to 3 Lufft instruments can be integrated - each with multiple channels including wind speed, wind direction, humidity, temperature, precipitation, barometric pressure, solar radiation, evaporation, sigma theta, lightning & more.	Dimensions - Heated Inlet	Length 500mm Width 48mm
Digital Inputs/Inputs	3 optically isolated inputs, voltage free 1 x RS232, 2 x Analogue (0 to 2.5 volt standard, 0 - 5 volt optional, or 4-20mA [jumper selectable]), 2 x Counter Channels, 2 x PT100 & 1 x SHT75X inputs included.	Operating Conditions	-10 to 50°C temperature range 0 to 95% humidity range
Communications	1 x RS232 digital port Analogue Modbus TCP (optional)	Annual Calibration	TES' unique design gives you a low-cost for calibration. Instead of returning the entire monitor, you can choose to return only the optical engine for annual calibration. The calibrated optical engine will be returned to you with a new pump and a replacement internal filter. You can then perform temperature, pressure and flow calibrations to complete the process. Alternatively, TES can perform the entire calibration.
Outputs	3 x Analogue Outputs (0 to 2.5 volt standard, 0 - 5 volt optional, or 4-20mA [jumper selectable]), 1 x RS232 Output, Ethernet Module Optional, 3 x Solid State Relays for Audio and Visual Alarms		