

# CASELLA

# Guardian2

## Guardian2 Multi-Agent Monitoring Station

Guardian2 is designed to help you remain compliant with site emission levels, using remote monitoring and reporting of noise, dust, vibration and VOCs.

Powered by AC, solar or battery, the Guardian2 is ideal for any location.

[www.casellasolutions.com](http://www.casellasolutions.com)



# Guardian2

## Key Features

- Real-time particulate, noise and ground vibration (PPV)
- Simultaneous PM10, PM2.5 and PM1.0 monitoring
- Web-hosted data with secure, password protected login
- Optional VOC sensor measures to 6000ppm
- Optional, maintenance free windspeed & direction sensor
- Email and text alerts to specified recipients
- Manual or automatic reports
- IEC 61672-1 Class 1 compliant sound level meter
- Wall or pole mounted
- AC-powered (100-250VAC), solar or battery

Guardian2 is a web-based remote monitoring system for noise, particulates and ground vibration, either as single 'agents' or in multiple combinations. It is ideal for construction & demolition sites plus many more fence-line applications. Where compliance with limits is required and good relationships with neighboring people and businesses are a must, Guardian2 can guarantee the smooth progress of your project or manufacturing operations.

## mHUB

With the new mHub, data can be streamed straight to your PC...



The Guardian2 advanced mHub datalogger and web connectivity allows data to be continuously sent to the cloud. Alerts and status reports can be seamlessly delivered to your PC or mobile device.

## Data Anywhere with [www.casella247.com](http://www.casella247.com)

The mHUB datalogger incorporates an electronic SIM which means that the system will search for the strongest cellular signal but in the event of a lack of connectivity, the mHUB will continue to log then push the stored data to the server when communication is re-established. The Casella 24/7 Data Management System is accessible via a secure log-in, giving organizational administrators and designated users access rights to data, reports and alerts.

## Plug In and Play

Integrated into a small, unobtrusive environmentally sealed housing, Guardian2 can be configured at the time of ordering for a variety of 'agents' depending upon the specific application or requirements. Installation couldn't be simpler; just bolt to a wall or mount on a pole, apply power and then within a few moments begin transmitting data using cellular connectivity to a secure server.

## Configure Reports

- For single or multiple agents at once e.g. noise and dust
- Automatic reports can be set to report daily, weekly or monthly data, direct to your inbox
- Graphical or tabular reports

## Alert Configuration

- Configure alerts by text or email
- Can be configured for any measured parameter
- Error alerts, e.g. for power loss

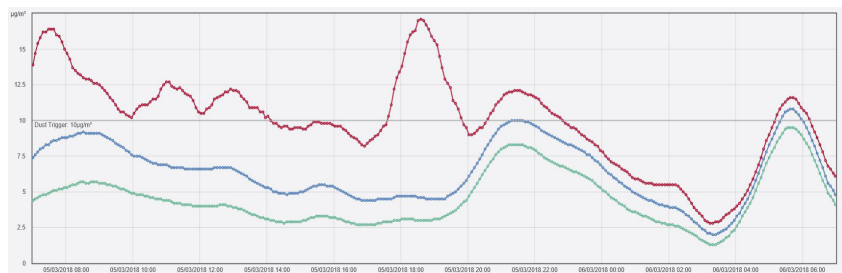
## User Configuration

- Different levels of access can be configured to casella247.com
- Specify who just receives reports, or administrator access to configure reports and Guardian2 units
- Configure Guardian2 units on different sites remotely

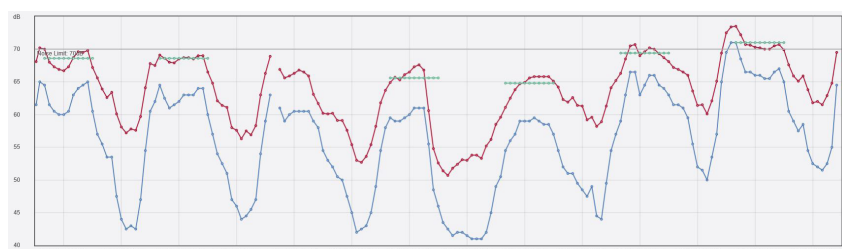
## Reporting and alerts

Administrators can choose the number of Users who have access to data and receive alerts while Users themselves can create and edit reports and because there can be multiple sites and Guardians they can easily switch between them. Reports can be created manually or automatically and can be sent by email to multiple recipients if required. Alerts can be generated when specified limits are exceeded as well as notification of power and communications outages should data not be received when expected by the system. Action can then be taken to investigate the causes of these exceedances to head off potential complaints or citations as well as checking for integrity of the Guardian2 itself. Site limits can be added to graphs to show when values have been exceeded.

Report showing PM10, PM2.5 and PM1.0 levels



Report showing noise data over two weeks



## Specification

### Noise:

Accuracy: Class 1 to IEC61672-1  
 Parameters:  $L_{Aeq}$ ,  $L_{Amax}$ ,  $L_{Amin}$ ,  $L_{A10\%}$ ,  $L_{A90\%}$ , 10 hour  $L_{Aeq}$   
 Measurement range: 20-140dB RMS  
 Calibration: Via optional acoustic calibrator

### Particulate:

Sensitivity:  $1\mu\text{g}/\text{m}^3$   
 Zero stability:  $\pm 2\mu\text{g}/\text{m}^3$   
 Size fractions: Simultaneous PM10, PM2.5 & PM1.0  
 Inlet: Heated to reduce moisture affecting measurements

### Vibration:

Transducer type: Geophone outputting PPV and Hz data  
 Number of channels: 3-axis  
 Frequency range: 2-250 Hz  
 Measurement Range:  $\pm 200$  mm/s  
 Resolution: 0.01 mm/s  
 Environmental rating: IP65

### Wind Speed:

0-60m/s  
 Accuracy:  $\pm 2\%$   
 Resolution: 0.01m/s  
 Threshold: 0.01m/s

### Wind Direction:

0-359° (No deadband)  
 Accuracy:  $\pm 3\%$   
 Resolution: 0.1 degrees

### Volatile Organic Compounds (VOC):

Range: 0-6000ppm  
 Detection Limit: 0.1ppm  
 T90 Response Time: 3 seconds

### General:

Enclosure Protection: IP65  
 Operating Humidity: <5% to 100%  
 Logger: Built-in logger data transmission via GPRS  
 Mains Power: 100-250VAC  
 Mounting: Wall or pole mounted (50mm pole).  
 Dimensions: 400mm x 300mm x 150mm  
 Weight: <13kg



## Ordering Information

### Guardian2 - Part Numbers

Part Number	Particulate (PM10 & PM2.5)	Noise	Vibration	Windspeed & Direction
208049D			●	●
208052D		●	●	
208054D		●		●
208057D		●		
208061D			●	
208063D		●	●	●
208170D	●	●	●	●
208171D	●	●		●
208172D	●		●	●
208173D	●			●
208174D	●	●	●	
208175D	●	●		
208176D	●			
208177D	●		●	

For VOC Sensor Assembly simply add /VOC to the end of the part number above

Optional Accessories	Part Number
Replacement windshield enclosure system	208041C
Windshield enclosure System extension kit (incl. 5m extension & bracket)	208104D
Spare 5m windshield extension cable	208083C
Replacement foam	208022C
Acoustic calibrator	CEL-120/1
VOC calibrator kit (gas not supplied)	208147A

Solar Power Parts	Part Number
Solar Controller & Battery Enclosure*	208500D
Single Solar Panel Array	208512D
Dual Solar Panel Array	208511D
Triple Solar Panel Array	208510D

For details of how many solar panels are required for a specific territory please visit the casella website. Solar panels come complete with mounts for scaffold poles.

Battery Power Parts	Part Number
<i>Will power a Guardian2 for between 5-9 days depending on configuration</i>	
Battery enclosure*	208503D

Battery Backup Parts	Part Number
<i>Battery will provide backup power in the event of AC power failure</i>	
AC Power/Battery enclosure*	208504D

\*Order battery separately

Battery	Part Number
12V Leisure Battery (130Ah)	B162

## Authorised distributor

### Order Placement:

For customer service, call 1300-735-292  
 To fax an order, use 1800-067-639  
 To email an order, [ordersau@thermofisher.com](mailto:ordersau@thermofisher.com)

### Contact Us:

For customer service, call 1300-735-292  
 For service and calibration, call 1300-736-767  
 To order online: [thermofisher.com](http://thermofisher.com)

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