

## Specifications

- Battery life minimum 10 days from fully charged
- Rugged casing IP67 waterproof
- Charging from AC mains power (can also be mains powered)
- Dust sensor measures Particle Matter (PM 1, 2.5, 10)
- Dimensions 414 x 345 x 129 mm
- Weight 5.5kg
- Laser classification as enclosed class 1
- Operational temperature range -10°C to 50°C
- Voltage range 4V - 5V 2A
- Sensor measures dust continuously and transmits data to the Adroit Platform every 15 minutes
- Mount via 5/8" tripod connection (tripod not included) or optional wall mount bracket
- Suitable usage for all construction, civil, worksites and heavy industry
- Automatic wireless connection via the Spark Cat-M1 network
- Humidity range % rh (continuous) 0 to 95 (non condensing)
- Particle range  $\mu\text{m}$  spherical equivalent size (based on RI of 1.5)
- Total flow rate (typical) 5.5 L/min
- Max particle count rate 10,000 particles per min

## Troubleshoot

### Do's & Dont's

- Do not cover the device dust inlet and exhaust port
- Do not submerge in water
- Do not use 3rd party power supplies to charge this device, failure to use an Adroit approved charger may result in damage to the kit.
- Do not unscrew and open panel inside the enclosure this will result in voiding warranty.
- Do not use the USB port for charging or charging external device
- Turn off the device when relocating or moving
- The device uses sensitive optical equipment handle with care
- Ensure the diffuser is unscrewed and stored inside the enclosure while not in use

### Trouble Shooting

- If device is not turning on, check battery percentage on the Adroit Platform
- If data is not coming to the Adroit Platform, check charge status
- If charge status is off, please recharge the battery
- If Adroit Platform widgets are grey, please relocate the device as it may have poor network connectivity
- Check internal temp is within operating range of -10°C to 50°C
- To clean the device use a damp cloth to wipe any dirt residue. Do not rinse with hose or tap.

## Warranty & Support

The Adroit Portable Monitoring Kit equipment includes a 24 month return to base warranty effective from shipment date to client.

The Adroit Portable Monitoring Kit monthly plan includes Adroit support covering the equipment, network and platform services.

Adroit support is available by phone, email and web portal, during the hours of 9am to 5pm, Monday to Friday (excluding public holidays).

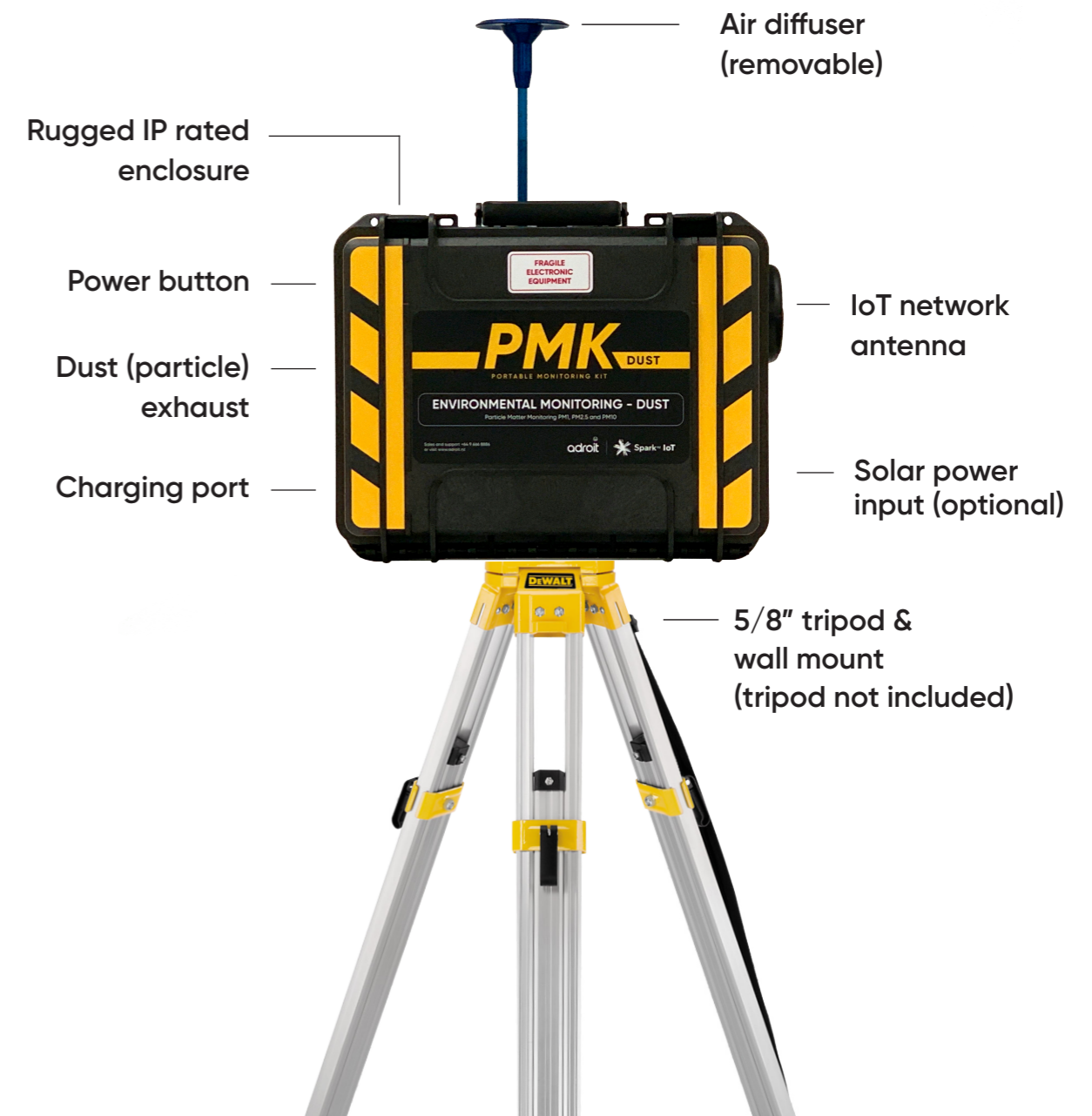
Adroit will use all reasonable means to resolve support issues in a timely manner, and may require the client to perform on-site troubleshooting such as power restarts.

## Particle Matter Monitoring Kit

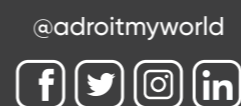
# PMK

DUST  
PORTABLE MONITORING KIT

### User Guide



For sales and support please contact the Adroit team.  
E: [service@adroit.nz](mailto:service@adroit.nz) P: +64 9 666 8889 W: [www.adroit.nz](http://www.adroit.nz)



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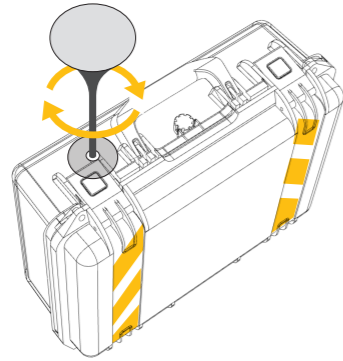
  
**adroit**  
Environmental IoT

## Quick Setup

### Step 1

#### Installing air diffuser

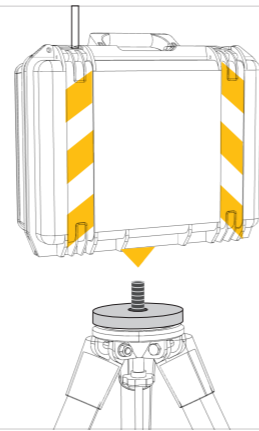
Remove stalk from inside enclosure. Screw threaded end into intake port on top of enclosure until tight being careful not to overtighten.



### Step 2

#### Tripod Mounting

screw 5/8" tripod mounting bolt into mount receiver located on underside of enclosure.



#### Wall Mounting sold separately

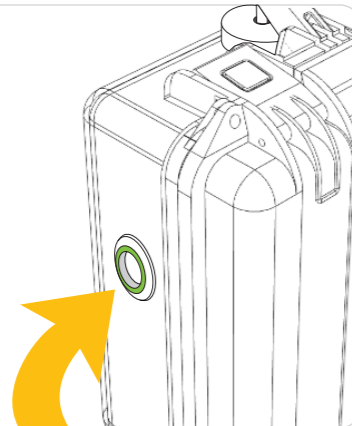
Secure wall bracket, screw 5/8" mounting bolt into mount receiver on underside of enclosure.

### Step 3

#### Turning on/off

Turning on, press button on left side of enclosure until it clicks in. Green flashing light indicates unit operating.

Turning off, press and release button on left side of enclosure. Button flush with enclose indicates unit off.



### Step 4

#### Access the Adroit Platform

To visualise your data scan the QR code on the side of the dust monitor or below to access the Adroit Platform login screen.



## adroit platform



Ready to go pre-configured dashboards



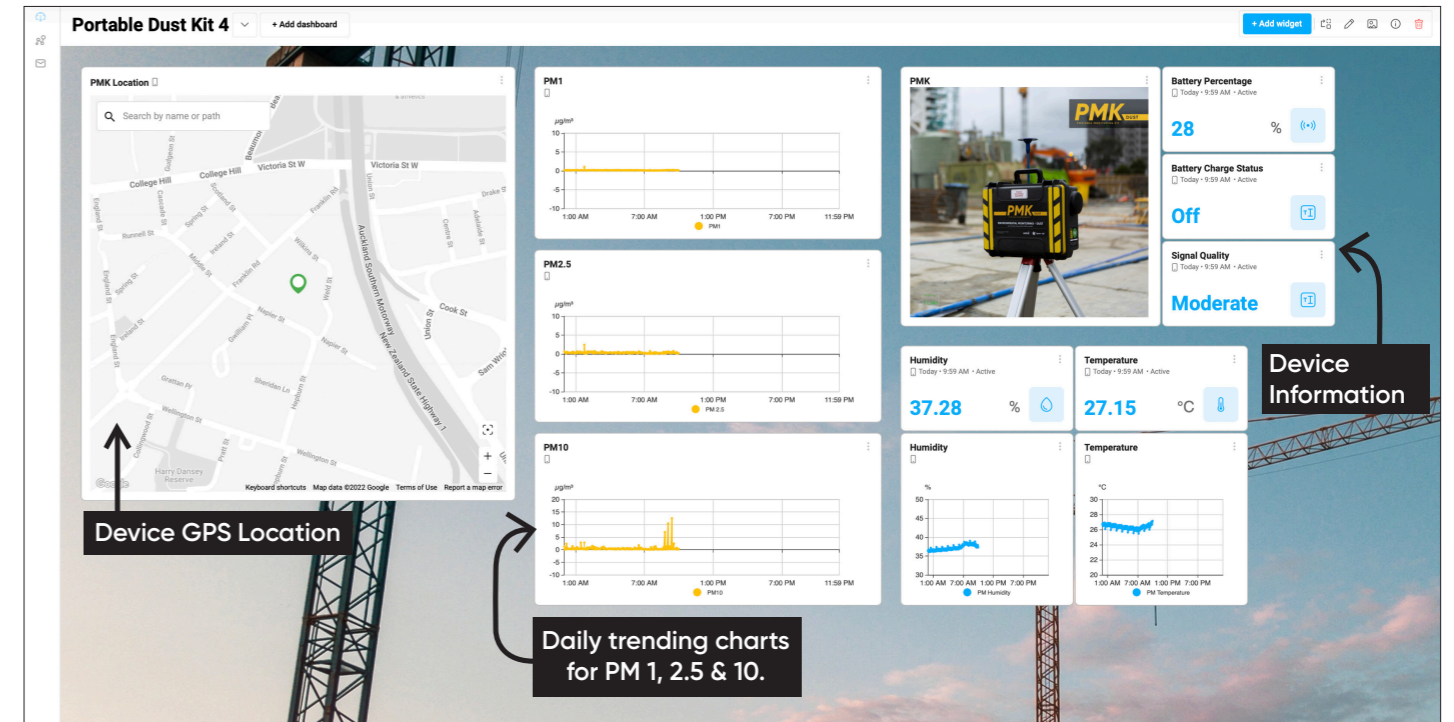
Set custom thresholds



Set custom alerts to notify users



App available for download on any mobile device



## General Operation

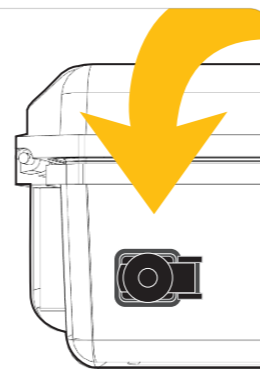
### Signal states

Constant on		Reading
Slow blink		Uploading
Pulse blink x 1		Battery low
Pulse blink x 3		Device error
Blink every 5s		Idle

### Charging

Locate the charging port on the side of the unit. Plug in the Adroit twist lock power supply provided inside the case.

A green light will illuminate to signify the device is charging.



### Locking

When site security is a concern use a padlock through the holes provided in the enclosure.

When wall mounting ensure the enclosure is secured to the wall you are mounting to.



### Transportation

Ensure diffuser is stored inside enclosure and device is powered off while transporting.

Kit contains sensitive electronic equipment handle with care.



### Dashboards

Create widgets and customise how you visualise data.



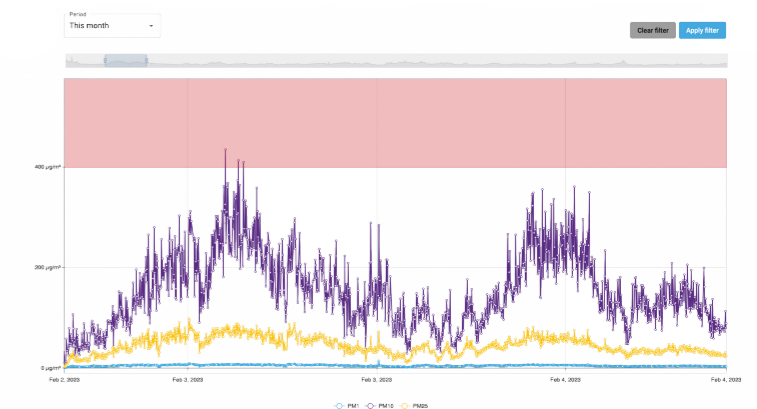
### Charts

Create charts to view historic data over days, weeks, months or a specific data range



### Notifications

View platform alerts from threshold breaches



## Resources

Particle Matter is a common proxy indicator for air pollution. It consists of a complex mixture of solid and liquid particles of organic and inorganic substances suspended in the air. The PMK measures particle matter at sizes of 1, 2.5 and 10 microns.

PM10



PM2.5



PM1.0



Smaller particle sizes have deeper and more damaging lung penetration



**World Health Organisation (WHO)** particle matter standards for human health  
[https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)



**NZ Site Safe standards**  
<https://www.sitesafe.org.nz/guides--resources/practical-safety-advice/dust/>

