

Streetbox indicative monitors may be configured in many ways, depending on the application and available services. This document describes three different configurations from the range and illustrates the flexibility of the product range in differing applications. A separate Streetbox configuration guide is available, which provides full details of the possible product variants.

**CONFIGURATION 1: BATTERY POWERED, SINGLE GAS SENSOR STREETBOX WITH RADIO COMMS**

In this configuration, power is supplied by an internal (non-rechargeable) battery pack, which lasts up to six months in normal operation. A single gas sensor (chosen from CO, NO, NO<sub>2</sub>) measures the component of interest by diffusion sampling (no pump), and the data is logged in internal memory prior to download to a radio base station. Multiple sensors may also be used in this configuration, subject to certain restrictions (see configuration guide). The small Streetbox enclosure is used, measuring 170 x 140 x 285 mm (w x d x h)



A separate radio base station is available to collect data onto a PC or laptop, and may be used for any number of Streetboxes within a local network. The base station typically has a range of several metres, which means that roadside data may be collected from a nearby parked vehicle.

**CONFIGURATION 2: MAINS POWERED, MULTIPLE GAS SENSOR STREETBOX WITH GSM COMMS**



Up to 3 gas sensors can be fitted to the Streetbox, using a larger case size. In this example, mains power has been used, along with an internal pump for sampling the air. Mains power has the advantage that no battery changes are required, but installation takes a little longer as power has to be taken from the lamppost or other mounting post. Additionally, mains power is a pre-requisite for certain parameters such as SO<sub>2</sub>. This configuration is housed in a medium size case, measuring 300 x 140 x 285 mm (w x d x h)

A GSM enabled sim card is fitted internally, which allows data collection from a remote site using the mobile phone network. Automatic polling and data collection is available using our own **AMBIDESK** software, as used on reference AQM stations worldwide.

**CONFIGURATION 3: COMBINED GAS SENSOR AND PM<sub>10</sub> MONITOR**

A common requirement is to measure a gaseous species along with particulates. The Streetbox range includes an optical particulate monitor which can be combined with up to three gas sensors to provide a fully featured pollution monitor. Housed in a larger case, and with a special protective cage covering the PM<sub>10</sub> sampling head, this Streetbox configuration is always mains powered and would normally be linked to a central data collection point using GSM communications. Case size is 240 x 160 x 620 mm (w x d x h).

The optical PM<sub>10</sub> monitor measures particulates using laser light scattering and outputs time stamped average data to the on board logger for storage along with the gas measurements. All downloaded data is stored in spreadsheet compatible files and may be stored, viewed and reported using a range of packages, including **AMBIDESK** software.



*Please note that these are just three examples from the wide range of possible configurations. For full details of available options, please refer to the Streetbox configuration guide or contact Signal Ambitech at the address given below.*