

AS520

personal air quality monitor

Wearable air quality monitoring system providing complete and reliable assessment of the air quality in the immediate vicinity of the wearer



atmospheric
sensors



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A wearable air quality monitoring system that makes use of a complementary range of sensing technologies to provide a complete and reliable assessment of the air quality in the immediate vicinity of the wearer.

Electrochemical cells, a laser optical particle monitor, temperature and humidity sensors are included in the system, which also incorporates a highly-sensitive GPS receiver and 3 axis accelerometer. A microphone is fitted to monitor ambient noise. A basestation provides a docking unit to store the sensor unit at night and to allow access to a regulated 12V supply to power the battery charging circuit. The basestation is fitted with a GPRS modem, patch antenna and SIM card, which are used to transmit the data that are saved on the unit during the day to a central monitoring site.

Specification

- accurate electrochemical cells (Alphasense A4) monitoring CO, NO, NO₂, and O₃. Other sensors available on request.
 - optical particle counter (Alphasense).
 - temperature and relative humidity sensor (Atmospheric Sensors).
 - MEMS 3-axis accelerometer to detect movement.
 - GPS module with integrated antenna
 - microphone to detect ambient noise level.
 - high-capability 32-bit ARM microcontroller.
 - bi-colour LED to indicate battery state-of-charge and correct operation of the unit.
 - battery and compatible charger circuit to give 24 hours running and some contingency (two 18650 lithium-Ion cells).
 - SD Card storage up to 32GB.
 - supplied with a shoulder strap and belt clip so can be worn in different ways.
- Basestation:** 151 W x 178 D x 90 H. Weight 352g.
- Sensor unit:** 100 W x 83 D x 130 H. Weight 534g.
- Power supply:** 1.2A max off 12V power supply (during charging) Weight 180g.
- System includes: basestation, sensor unit, power supply, shoulder strap. A belt clip is fitted to the rear of the unit.

