

Solution Brief: Omni-2100 VOC Analyzer



Introduction

Autonomous VOC analyzer providing real-time air quality measurements



Deployment

Fast and easy deployment without the need of an operator or carrier gas



Data Access

Worldwide data access and remote management via cellular and Wi-Fi connectivity

Introduction: The Omni-2100 is an autonomous high-performance Volatile Organic Compound (VOC) analyzer that provides real-time air quality measurements. The highly integrated design - proprietary MEMS sensor, data logger and communication module – eliminates the need of a field operator and carrier gas. The Omni-2100's low level detection (ppb), short sampling and analysis time, speciation capability, and cellular and Wi-Fi connectivity make it an ideal solution for both indoor and outdoor applications. Multiple Omni-2100s can also be networked together to monitor a geographic region. The diagram in figure 1 shows a typical oil refinery installation where sensors are placed several hundred meters apart and monitor the perimeter of the facility. Other use cases include refineries, cities, buildings, and automotive.

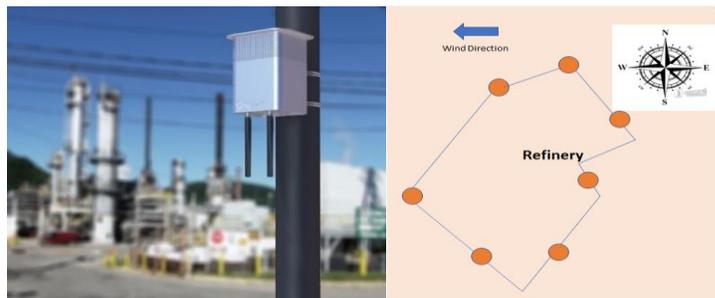


Figure 1: Typical refinery installation

Deployment: Deployment is fast and easy. Simply take the unit to the desired location and power it up. The Omni-2100 will connect to the internet via Wi-Fi or cellular LTE and enable the user to remotely manage the unit. Ease of field installation, remote management, and the use of polluted air (i.e., no carrier gas) reduce installation costs and eliminate frequent maintenance visits and associated costs. Deploying multiple sensors in a given area and capturing time lapsed data enables users to generate pollution gradient maps. For example, a user can program each analyzer to conduct up to 100 back-to-back samples at desired intervals. The results are available in a tabular or raw chromatograph format (Table 1, Figure2).

Table 1: Tabulated results

Chemical Name	Concentration (ppb)
benzene	519.58
toluene	254.62
m-xylene	257.18
O-xylene	246.7

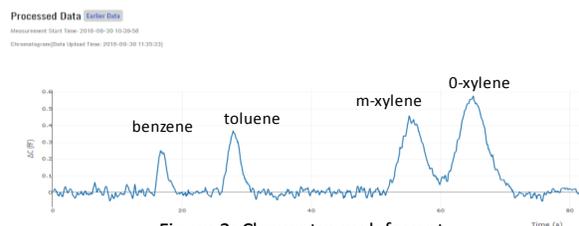


Figure 2: Chromatograph format

Date Access: Data access and remote management is available to users worldwide via an internet access. Multiple users can access the same unit simultaneously from different locations. Data resides on Omniscent servers but can be redirected to customer specific servers. If the internet connection is disrupted, data will be stored on the analyzer. Upon reconnection to the network, the Omni-2100 will upload the data to the portal. All historical data is maintained for further review. A FedRAMP option is available for customers requiring government compliance.

