CEREX
MONITORING SOLUTIONS, LLC.
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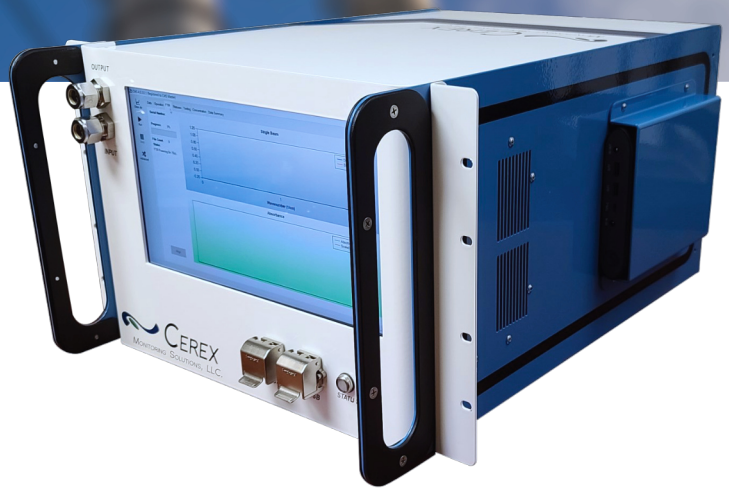
# Cerex UV3000C-RM

## UV DOAS Multi-Gas Analyzer




Designed to provide high performance analysis for a variety of applications such as **Process, Ambient, and Continuous Emission Monitoring** in a rack mount configuration

## Key Features

- Multi-gas analysis with real-time data output; rates 15 sec. to 2 min.
- Parts per billion (ppb) to percent (%) volume configurable dynamic ranges
- Instant analysis with integrated Windows® PC touchscreen; or remote control from anywhere with integrated networking
- MODBUS TCP/IP, RTU, Serial Outputs
- User-configurable alarms that auto-send data to e-mail, website or control room within seconds
- Internal Sample Pump - inherent fixed calibration

## Optional

- Heated Sample Cell
- Fiber Coupled Remote Sample Cell
- Sample Bundle Temperature Controller
- Touchscreen Delete
- Programmable Zero / QA Span Multiplexer
- External Sample Pump
- Wheels for portability
- Automated Calibration Check

PRODUCT QUALITY ASSURANCE

Cerex Monitoring Solutions places customer service and support as its highest priority and commits to long standing relationships that do not end after the sale of an analyzer.

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INDOOR MONITORING | CONTINUOUS EMISSION MONITORING | PROCESS MONITORING

As a stand-alone multi-gas analyzer or component of an array of analyzers, **the Cerex UV3000C-RM provides flexibility in target compounds, dynamic range, integration, alarming, and remote control** while delivering uptime typically greater than 99%.

The basic model is suitable for continuous ambient monitoring and cool/dry continuous emissions monitoring. **Configured for hot/wet continuous emissions monitoring, or process monitoring,** the Cerex UV3000C-RM includes options for complete quality assurance automation and sample temperature control.


## General Specifications

| | | | |
|---|---|---|---|
| **Analyzer Model** | UV3000C-RM | | |
| **Technology** | Multi-compound UV-DOAS | | |
| **Applications** | Continuous Emission Monitoring, Process Monitoring, Ambient Monitoring, DeSOx, DeNOx, Ammonia Slip Monitoring | | |
| **Maintenance** | **UV Lamp** | Deuterium Bulb (4000 hour half life warranty)<br>6+ months continuous operation (typical) | |
| | Replace sample air filters and cooling air filters as needed | | |
| **Installation** | **Weight** | 11kg (24lbs) | |
| | **Measurements** | 26.7 x 48.3 ≤ 61.0 cm (10.5" x 19" x ≤ 24") | |
| **Operating Conditions** | **Temperature** | 0°C to 45°C | |
| **Sample Conditions** | **Temperature** | Unheated | 45°C max |
| | | Heated | 180°C max |
| | **Volume** | 1.2L | |
| | **Flow Rate** | 1 LPM - 20 LPM | |
| | **Gas Inlet** | 1/4" - 3/8" Swagelok or equivalent | |
| | **Gas Outlet** | 3/8" -1/2" Swagelok or equivalent | |
| **Software & Interface** | Integrated touchscreen PC with MS Windows™ 10/11 OS<br>RJ-45 LAN, Type C USB<br>MODBUS TCP/IP, RTU, Serial, VNC | | |
| **Data Output Rate** | User configurable, TYP 15 seconds to 2 minutes | | |

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# UV-DOAS Multi-Gas Analyzer

## Estimated Minimum Detection Limits (4.88m Cell)

| Compound Name | Chemical Formula | Average Minimum Detection Limits | |
|---|---|---|---|
| | | Default Mode | CMS REV 4.1.352.1 |
| 1-3 Butadiene | $C_4H_6$ | 0.245 ppb | 0.028 ppb |
| Acetaldehyde | $C_2H_4O$ | 623 | Not tested |
| Acrolein | $C_3H_4O$ | 2258.97 | 245.1995 |
| Ammonia | $NH_3$ | 22.54 | 2.324 |
| Benzene | $C_6H_6$ | 24.745 | 2.73 |
| Carbon Disulfide | $CO_2$ | 6.825 | 0.7315 |
| Chlorine* | $Cl_2$ | 3500 | 3500 |
| Cyanogen* | CO | 87.5 | Not tested |
| Ethylbenzene | $C_8H_{10}$ | 37.765 | 4.3645 |
| Formaldehyde | $CH_2O$ | 20.055 | 2.2155 |
| Hydrogen Sulfide* | $H_2S$ | 5.88 | 0.735 |
| Mercury | Hg | 0.07 | 0.0105 |
| m-Xylene | $C_8H_{10}$ | 4.55 | 0.5565 |
| Naphthalene | $C_6H_{14}$ | 3.325 | 0.3535 |
| Nitric Oxide | NO | 13.51 | 1.5435 |
| Nitrogen Dioxide | $NO_2$ | 115.57 | 12.25 |
| o-Xylene | $C_8H_{10}$ | 44.94 | 5.005 |
| p-Xylene | $C_8H_{10}$ | 11.76 | 1.2845 |
| Phenol* | $C_6H_6O$ | 63 | Not tested |
| Styrene | $C_8H_8$ | 16.03 | 1.7745 |
| Sulfur Dioxide | $SO_2$ | 17.745 | 1.918 |
| Toluene | $C_7H_8$ | 20.125 | 2.317 |

* May not be detectable in all mixtures
** Units of Percent Volume

Each UV3000C-RM is calibrated for the specific project and optimized for simultaneous monitoring of the compounds of interest. A standard library for general purpose monitoring is presented above.

Cerex manufactures a full line of UVDOAS and FTIR multi-gas analyzers for CEMs, process monitoring, fenceline monitoring, leak detection, zone monitoring, indoor air quality monitoring, and custom solutions. Contact us for a demonstration of our technology.