



# AMBIENT AIR QUALITY MONITORING SYSTEM



Air Quality Monitoring...  
Easier. Faster. Better.

[www.chemtrols.com](http://www.chemtrols.com)

# AMBIENT AIR QUALITY MONITORING FROM CHEMTROLS

Chemtrols is a leading solution provider in the field of Environmental Monitoring & Process Analysis specializing in design, engineering, supply, maintenance and operation of Integrated Systems for Process, Environment and Emission monitoring. More than 3 decades of engineering ingenuity and impeccable service, makes the Environment Monitoring and Management solutions from Chemtrols one of the most sought after in the Process Industry.



Chemtrols provides Air Quality Monitoring Systems to measure various ambient parameters under single point responsibility. These systems provide reliable, high quality air pollution and metrological data and are designed to suit the ever changing ambient conditions of the Indian subcontinent with due consideration for minimizing maintenance time and maximizing uptime. The highly sensitive analyzers give precise, reliable and repetitive measurements with every instrument and associated components in the system meeting rigorous quality and performance standards.

Chemtrols has successfully executed and delivered systems to various Pollution Control Boards and Industries in all major markets. With many executed contracts of NTPC, IOCL, Tata Steel, Jindal Thermal, LANCO, Shree Cement and having worked with various consultants, we stand committed to serve the industry needs and our customers by undertaking operational & maintenance contracts inclusive of comprehensive annual maintenance contracts of Ambient Monitoring Systems for trouble free operations.



## MONITORING AT A TOUCH

With Installed base in excess of 200 systems to monitor Ambient Air Quality across different parts of the country; timely response, reliability and multi analytical capability are the major strengths of Chemtrols. Providing training is an important part of our philosophy and customized training is provided to the customer for operations, basic maintenance, and trouble shooting of the system.



### System Overview:

Chemtrols designs and manufactures systems for continuous monitoring of Ambient Air Quality for use either as a fixed station or as part of a mobile system. Each system is replete with:

- Analyzers designated according to U.S.E.P.A reference or equivalent methods
- Sampling System
- Calibration System
- Metrological Sensors
- Data Acquisition and Management Systems
- Mobile Vans or Fixed shelters.



## ANALYZERS - Easier, Faster, Better! US EPA Approved

Ambient Air Analyzers from our principals come with state-of-art features and are USEPA approved. Advanced color display, touch screen, electronic architecture and connectivity features make them the most capable and versatile air quality analyzers available.

High Resolution Color Graphic Display  
- Bright, sharp, clear

Advanced Touch Screen Interface  
- Durable glass surface  
- Scratch resistant & cleanable



Front Panel USB Connections  
- Mouse  
- Flash drive / Memory stick  
- 'One Touch' firmware upgrade



Fold Down Front and Rear Panels  
- Easy maintenance access  
- Quick-change filter



The T series Analyzers from M/s. Teledyne API – USA measure sulfur dioxide, hydrogen sulphide, nitrogen oxides, nitrogen dioxide, ammonia, carbon monoxide, carbon dioxide, and Ozone.

## ANALYZERS -Trace Level. Reliable.

Special version of these analyzers are available for measurement of background trace, precursor level Sulfur dioxide, total Sulfur, Nitrogen oxide, Nitrogen dioxide, NOy, Nitrous oxide N2O, Carbon monoxide, Carbon dioxide. Analyzers for measurement of high concentrations of Sulfur dioxide, Nitrogen oxide, Nitrogen dioxide, Carbon monoxide and Carbon dioxide are available for Continuous Stack Emission Monitoring.

### Calibration:

Calibration is performed using microprocessor based state-of-the-art dilution gas calibrator. NIST traceable gases and high performance zero air generator is used to calibrate gaseous analyzers. Auto calibration by controlling the calibration cycle through data acquisition system can be performed.

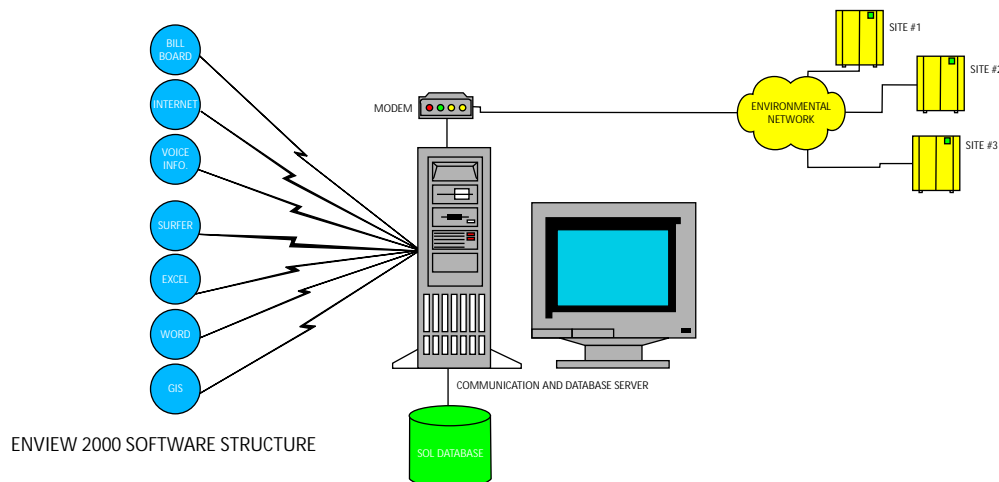


# Data Collection & Data Transfer

Data management is the heart of an Air Quality Monitoring System and a Data Acquisition System (DAS) is designed for operating the Ambient Air Monitoring Station unattended. Data is collected by the DAS from various analyzers and meteorological sensors through an RS232 multi-drop serial link. The Data loggers have internal storage capacity.

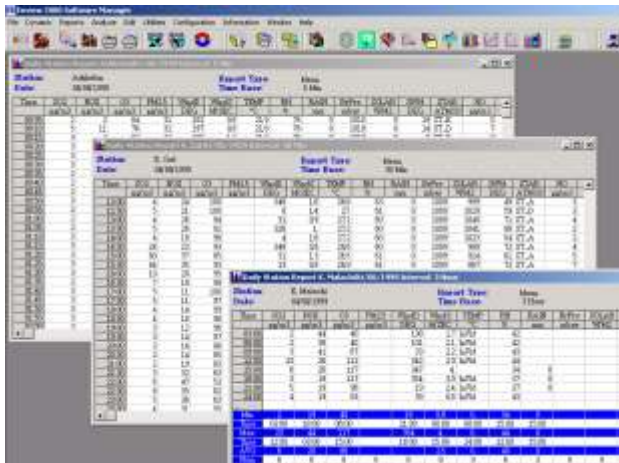
Data from one or multiple locations can be transferred to a central station through various communication systems; wired communication mode like LAN, Telephone or through wireless communication using RF, GSM, GPRS.

The Central Station Software is capable of transferring the data for display or to third parties like pollution control boards through internet or intranet using TCP/IP protocol.



## DATA MANAGEMENT - Quick View. Networking.

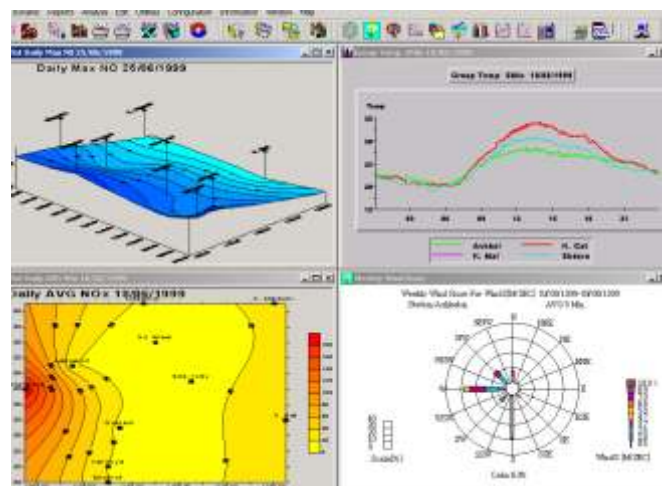
Daily, weekly, monthly, periodic, annual, alarm, data status reports are generated using the Enview software supplied along with the system. Data protection and security is provided through use of login procedure and secured server connections.



The Data Logger will have the ability to log Channels at different intervals with the capability of averaging and displaying real time data and averaged data over selectable periods (minutes, hours, days, months and years) such as 1 min, 10 min, ½ hr, 1 hr., 4 hrs., 8hrs., 24 hrs., 1 month, 3 months, 6 months, year etc.

## Analysis Report:

- Wind Roses & Pollution Roses
- Histogram
- Events
- 2Y Time Plot
- X/Y Plot
- Group Plot
- Wind Polar





## MEASUREMENT PARAMETERS

Pollutant	Technique	Range	Detection Limit
Sulfur Dioxide	UV Fluorescence	0-50ppb, 0-20ppm	0.4ppb
H <sub>2</sub> S, TRS, TS	UV Fluorescence	0-50ppb, 0-20ppm	0.4ppb
Oxides of Nitrogen NO – NO <sub>2</sub> – NO <sub>x</sub>	Chemiluminescence	0-50ppb, 0-20ppm	0.4ppb
Ammonia	Chemiluminescence	0-50ppb, 0-2000ppb	1ppb
NO <sub>y</sub>	Chemiluminescence	0-5ppb, 0-2000ppb	<50ppt
Carbon Monoxide	Gas filter correlation	0-1ppm, 0-1000ppm	0.04ppm
Carbon Dioxide	Gas filter correlation	0-2ppm, 0-2000ppm	<0.2ppm
Nitrous Oxide N <sub>2</sub> O	Gas filter correlation	0-1ppm, 0-1000ppm	<0.04ppm
Ozone	UV Photometric	0-100ppb, 0-10ppm	<0.6ppb
Total Hydrocarbon	FID	0-1000ppm	0.03ppm
Benzene , Toluene, Ethyle Benzene, Xylene, BTEX	Gas Chromatography	0-10ppb, 0-100ppb, 0-1000ppb	<0.01ppb
Particulates ( PM <sub>10</sub> , TSP, PM <sub>2.5</sub> )	Beta attenuation	0-1000,0-2000,0-3000 0-4000,0-5000 µg/m <sup>3</sup>	< 1 µg/m <sup>3</sup>
Meteorological Sensors WS,WD, Ambient Temp., RH, Barometric Pr., Solar Radiation, Rain Guage	As per requirement	As per requirement	-

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