

Advanced Monitoring Station by EnviDAS FW

DR DAS
data acquisition systems



www.envitech.co.il

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Typical Automatic Monitoring Station

EnviDAS FW software is flexible, easy-to-use, turnkey application software that turns a PC with a data acquisition Card/Module into an intelligent environmental data acquisition system



Overview of ENVironmental Data Acquisition System

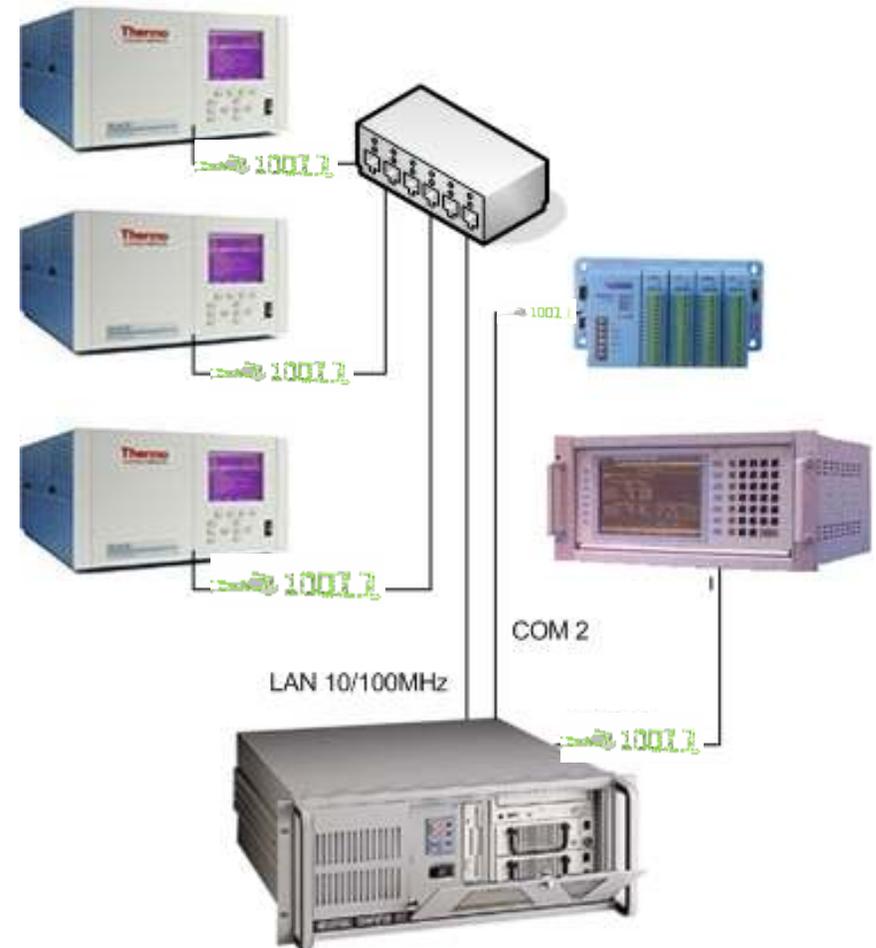
Significant benefits accrue in the EnviDAS FW Software & Hardware Design:

- Multi tasking software – Running under Windows XP pro.
- Microsoft SQL Server 2005 Express Edition Data Base.
- Handles up to 64 measurement inputs channels.
- Handles up to 16 Digital inputs channels.
- Handles up to 16 Digital outputs channels.
- Handles up to 16 RS232C/RS485/USB Ports
- LAN Interface 10/100/1000 Support
- Standard PC Keyboard, Mouse & VGA.
- Rugged rack mountable PC-based platform.
- Printer Parallel & USB Port.
- Real time calendar clock



Smart & Simple Numerical Data Collection & Control

- Communication via RS232C/USB/TCP/IP to the smart analyzers (multi-drop available).
- Logging up to 48 bits of Digital Monitor Status information per each channel.
- Logging up to 32 diagnostic values per each channel.
- Enhanced QA tools by Digital Monitor Status checking.
- Communications bypass feature for direct analyzer connection from remote locations.
- Support Numerical data collection from the most typical AQM/CEM Analyzers and Meteorological Sensors available in the market.
- Control Smart Calibrator units via RS232 port



The following smart analyzers are supported by ENVIDAS's RS232C communication protocols:

- Thermo Environment c & i Series, Sharp, DataRam
- Teledyne- API a & e Series
- Environnement s.a. 1M & 2M Series, SANOA
- Monitor Labs 9400 Series
- TE-R&P TEOM, FDMS, Partisol+
- Horiba AQM Series
- Campbell Scientific CR-21X, CR-10X, CR-23
- RM Young Serial Interfaces
- Met One BAM
- Andersen BAM
- Grimm Dust
- Sunset Labs Carbon
- Andersen/McGhee Aethalometer
- Radiance Nephelometer

and much more.....



Automatic and Manual Calibration

- 3 Type of automatic calibration available in EFW:
 1. 2 Point Calibration (Zero and Span)
 2. 3 Point Calibration (Zero, Span and Extra Span [Precision])
 3. Multi-Point Calibration (Zero and up to 8 Span points).
- Calibration Schedule can be set from every Day to every interval required like every 3 days, week, month, 45 day's etc...
- Calibration hour can be shifted by one hour every day if desired.
- Calibration Command via RS232C Port to Analyzers and Calibrators.
- The Following Calibrators are supporting RS232C Control:
 - SABIO
 - TE 146C
 - API



Setup

Configuration Tree

- Calibration Seq.
 - Sequence 0

Station | Channels | Cal. Gen. | **Cal. Seq.** | Dig. IN | Dig. OUT | Comm | Dig.Out Seq | Misc. | Cont Seq.

Sequence 2 State: ON Days Int.: 5 Start Time: 09:28 Duration[Min]: 0
 Sequence Name: SO2Cal01 Dig. Inp. Trigger: OFF Start Date: 02/10/2005 Hour Shift

State	Time	Stae	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	ON	0	Zero	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	
				☑ Enable Calibrator Cmd. S.1\$TS.1.S02.1															
2	ON	2	Zero	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	
				☑ Enable Calibrator Cmd. S.1\$TS.1.S02.2															
3	ON	14	Span	☉															
				☑ Enable															
4	ON	26	Zero	☉															
				☑ Enable															
5	ON	30	Samp	☉															
				☑ Enable															
6	ON	0	Samp	☉															
				☐ Enable															
7	ON	0	Zero	☉															
				☐ Enable															

Channel: 16

Save Exit

Channel: 16

General | **Calibration** | Data Validation | Alarms

Send RS232 Calib. Commands

2 / 3 Points

2 Points Sequence: 1. COZS_CHECK

3 Points Sequence: 5. COZSP_CHECK

External Cal.

Zero Bit: OFF Span Bit: OFF

Duration[Min]: 1 Samples No.: 1

3 Points

	Offset	Ref.	Value	STD.
Zero :	29	0	0	0
Span :	19	45	0	0
Span1 :	9	9	0	0
Zero :	0			
Factor :	0			

Multi Point

Sequence: 9. COMULTICAL

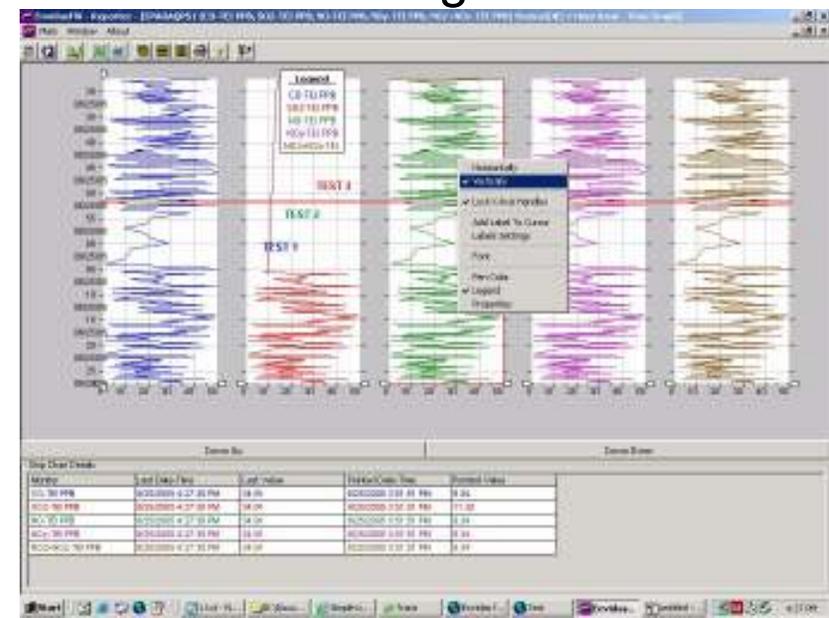
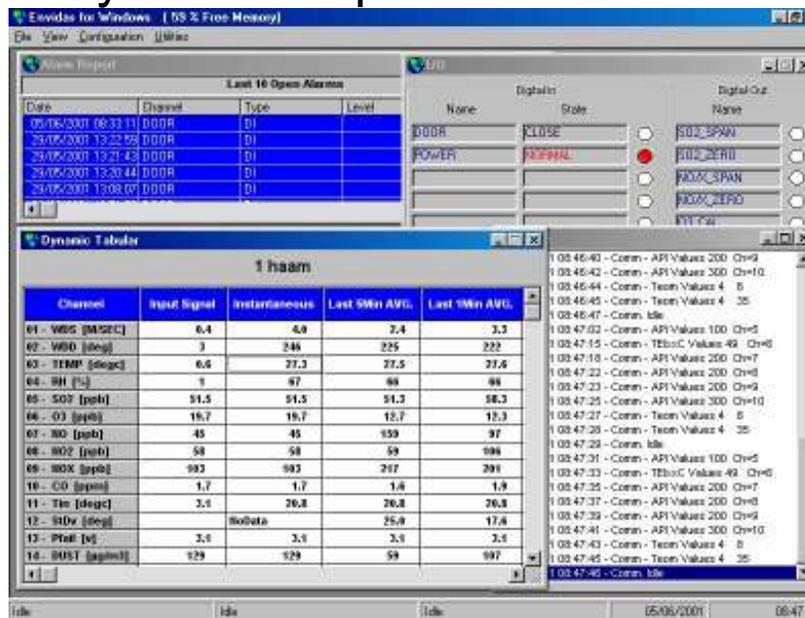
	Zero	Span1	Span2	Span3	Span4	Span5	Span6	Span7	Span8
Offset :	59	49	39	29	19	9	0	0	0
Ref :	0	9	18	27	36	45	-1	-1	-1
Meas :	0	0	0	0	0	0	0	0	0
STD :	0	0	0	0	0	0	0	0	0



Visualisation, Real Time Charting & Reporting



- Display of current measurement in Volt's
- or Real Value and dimensional unit's (ppb/ppm/ $\mu\text{g}/\text{m}^3/\text{mg}/\text{m}^3$ or any other like deg, $^{\circ}\text{C}$, m/sec etc...)
- Visualization of data (graphical and tabular) with zoom function facilities.
- Local Reporter program that create daily, weekly, monthly, annual or any From-To period with selectable time-based averages.



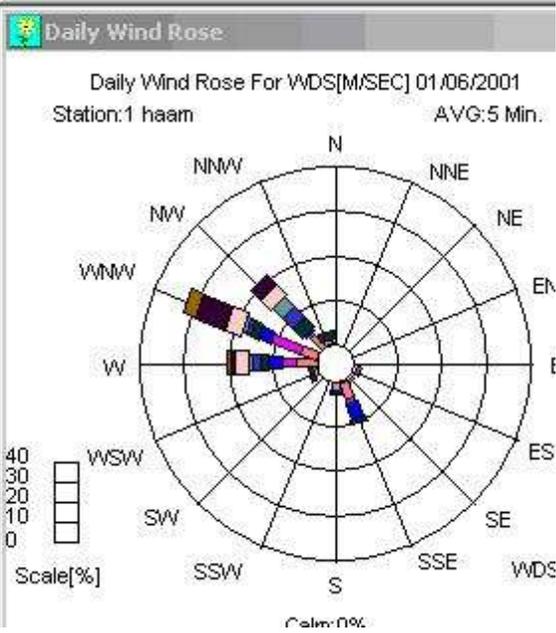
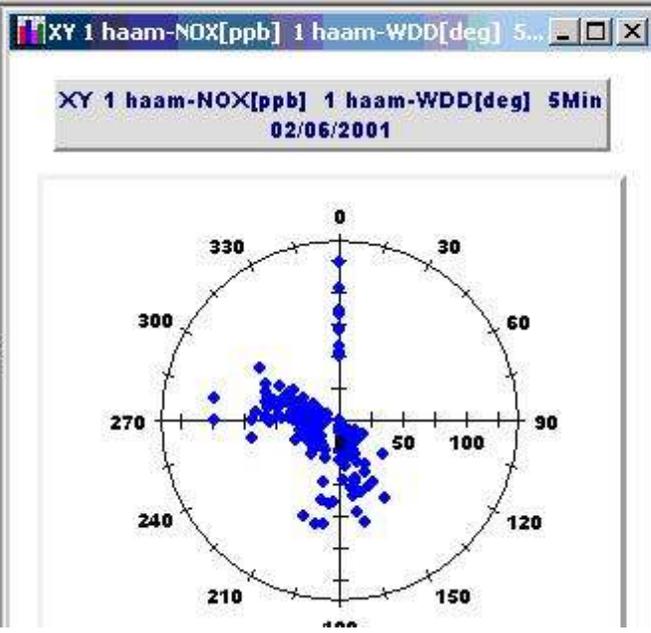
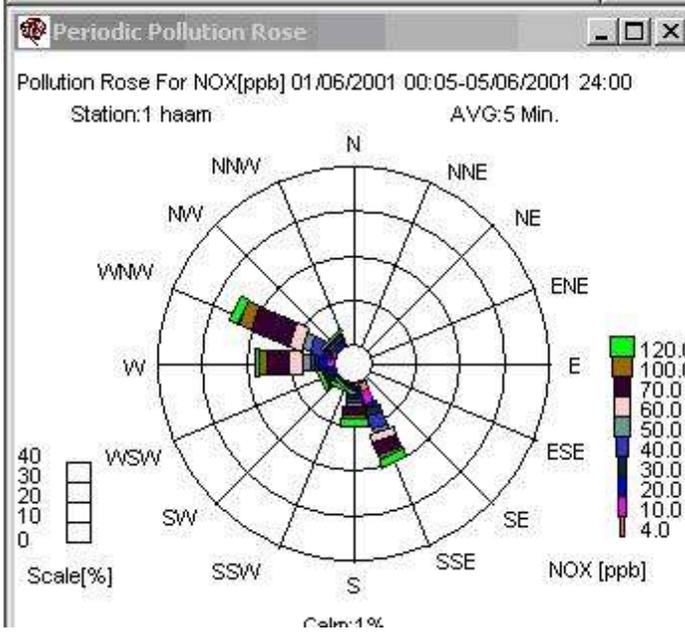
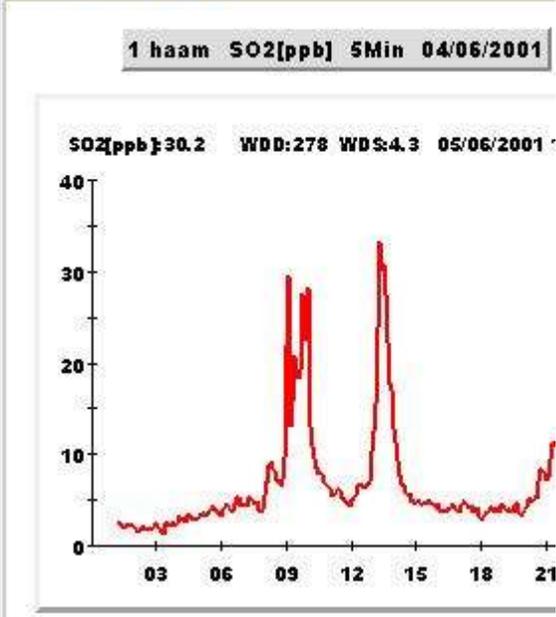
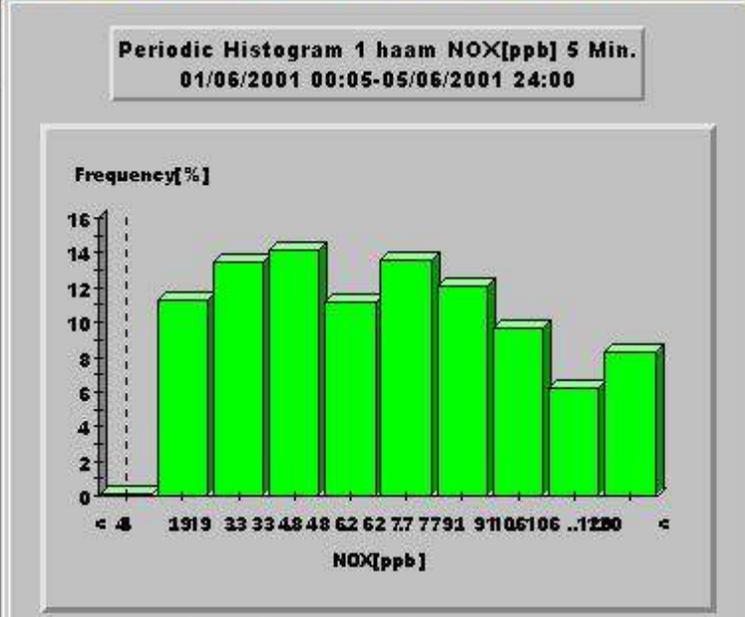
Envidas For Windows Reporter

File Dynamic Reports Analyze Edit Utilities Configuration Fast Report Window Help



Report: Status
Station: 1 haam

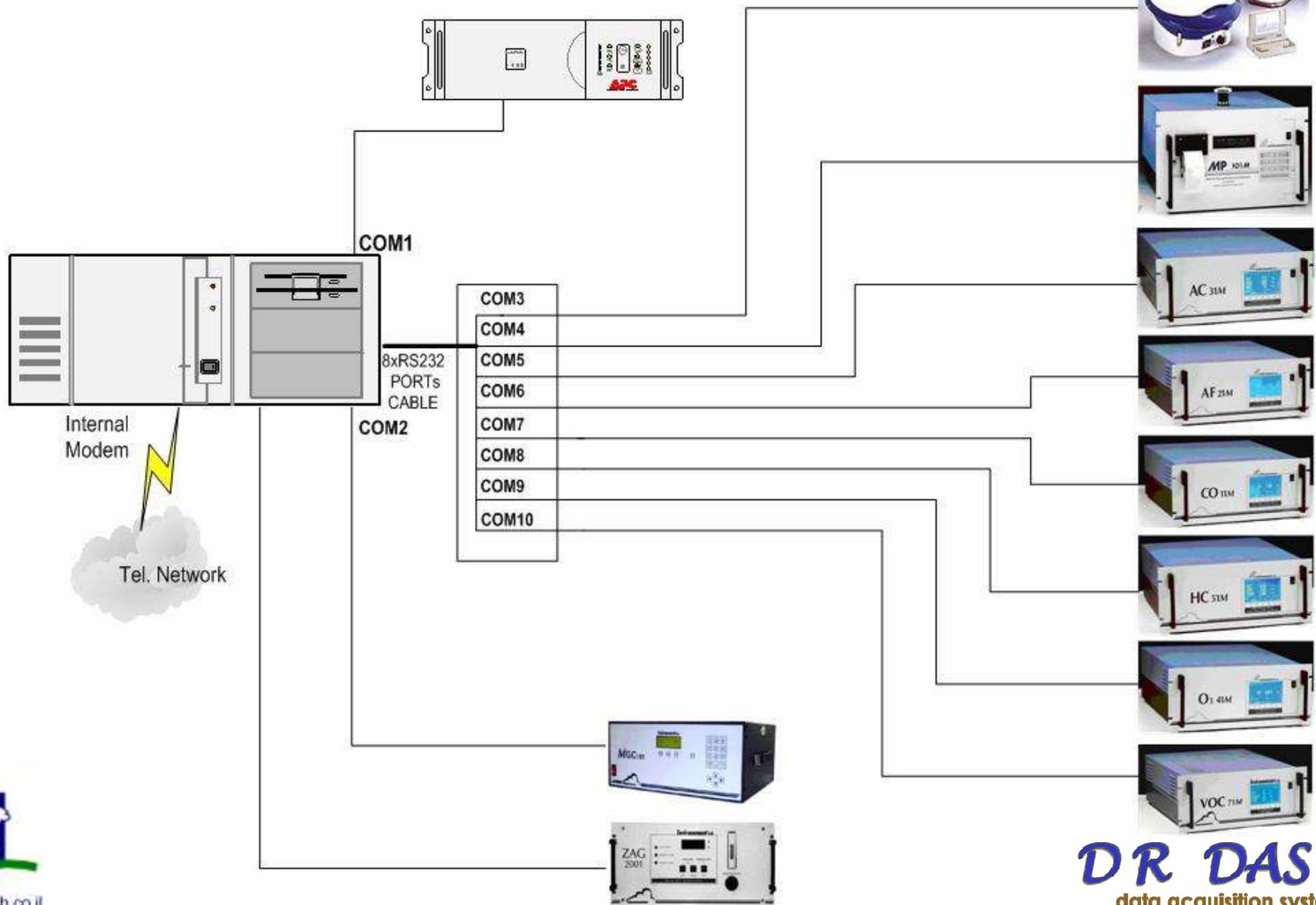
Status	WDS	WDD	TEMP
NoData	0.0%[0]	0.0%[0]	0.0%[0]
OK	100.0%[6298]	94.4%[5944]	100.0%[6298]
OffScan	0.0%[0]	0.0%[0]	0.0%[0]
Samp<	0.0%[0]	0.0%[0]	0.0%[0]
InVld	0.0%[0]	5.6%[354]	0.0%[0]
Zero	0.0%[0]	0.0%[0]	0.0%[0]
Span	0.0%[0]	0.0%[0]	0.0%[0]
OutCal	0.0%[0]	0.0%[0]	0.0%[0]
RS232	0.0%[0]	0.0%[0]	0.0%[0]
Calib	0.0%[0]	0.0%[0]	0.0%[0]



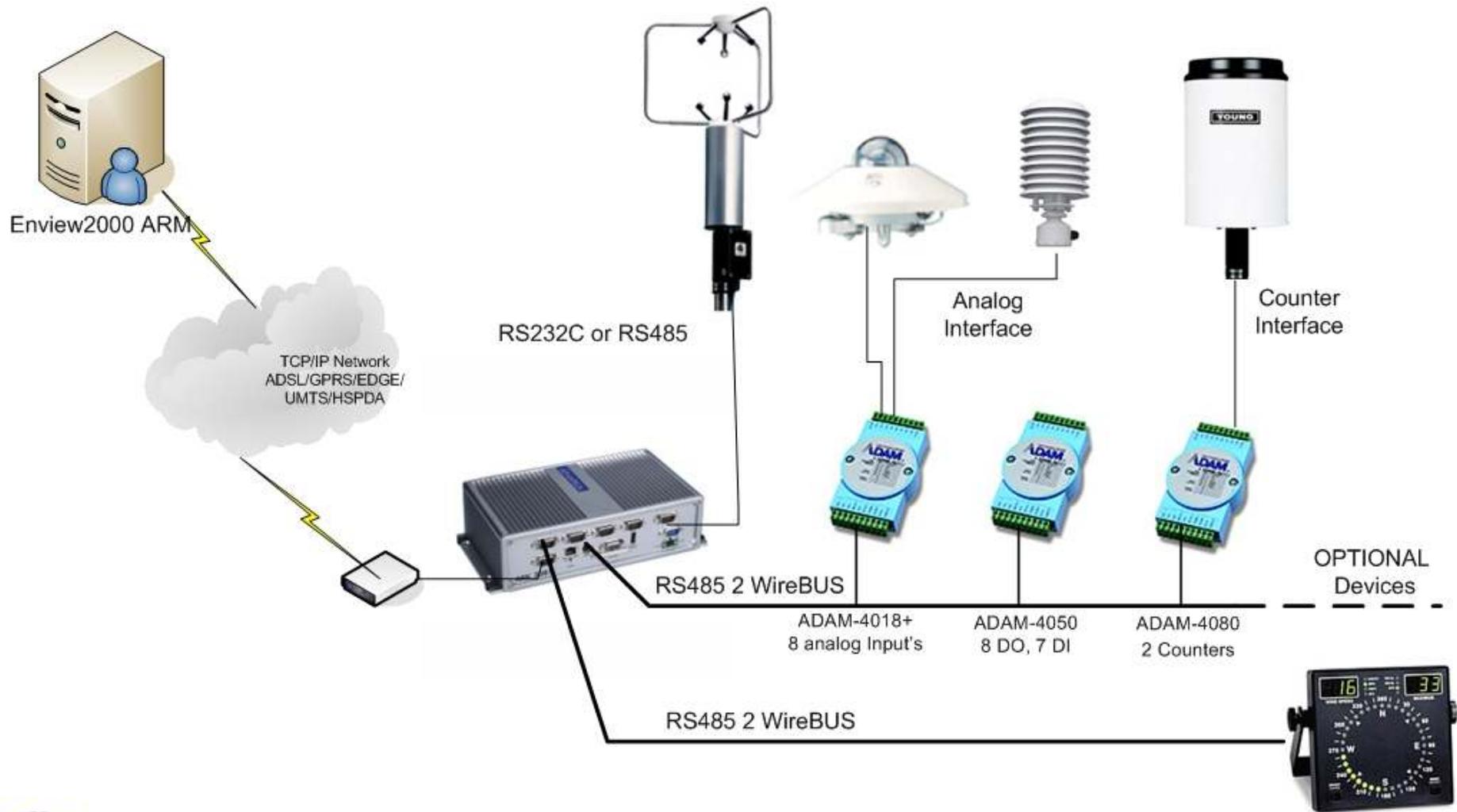
Data Acquisition PC's

Platform	I/O Subsystem	Serial Port Sub Systems
<p>Biscuit Box</p> 	<p>ADAM Remote I/O</p> 	<p>7 RS232/485 Available on board USB, Ethernet and wireless connected serial port servers</p> 
<p>1/2/3/4U 19" Rack Unit</p>  	<p>ADAM Remote I/O And PCI Cards</p>  	<p>PCI Cards and USB, Ethernet and wireless connected serial port servers</p> 

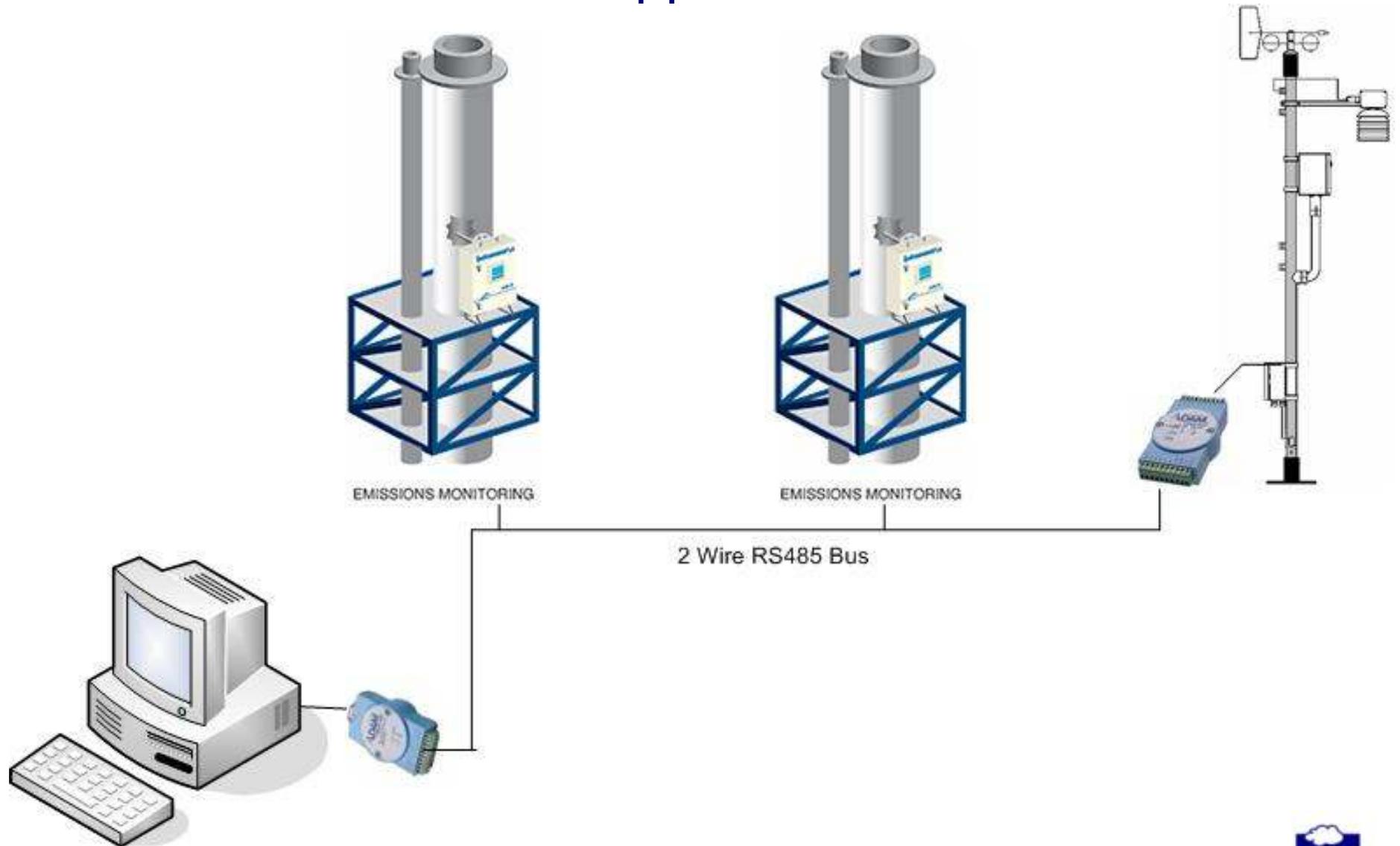
AQM Numerical Station Based on EnvidasFW



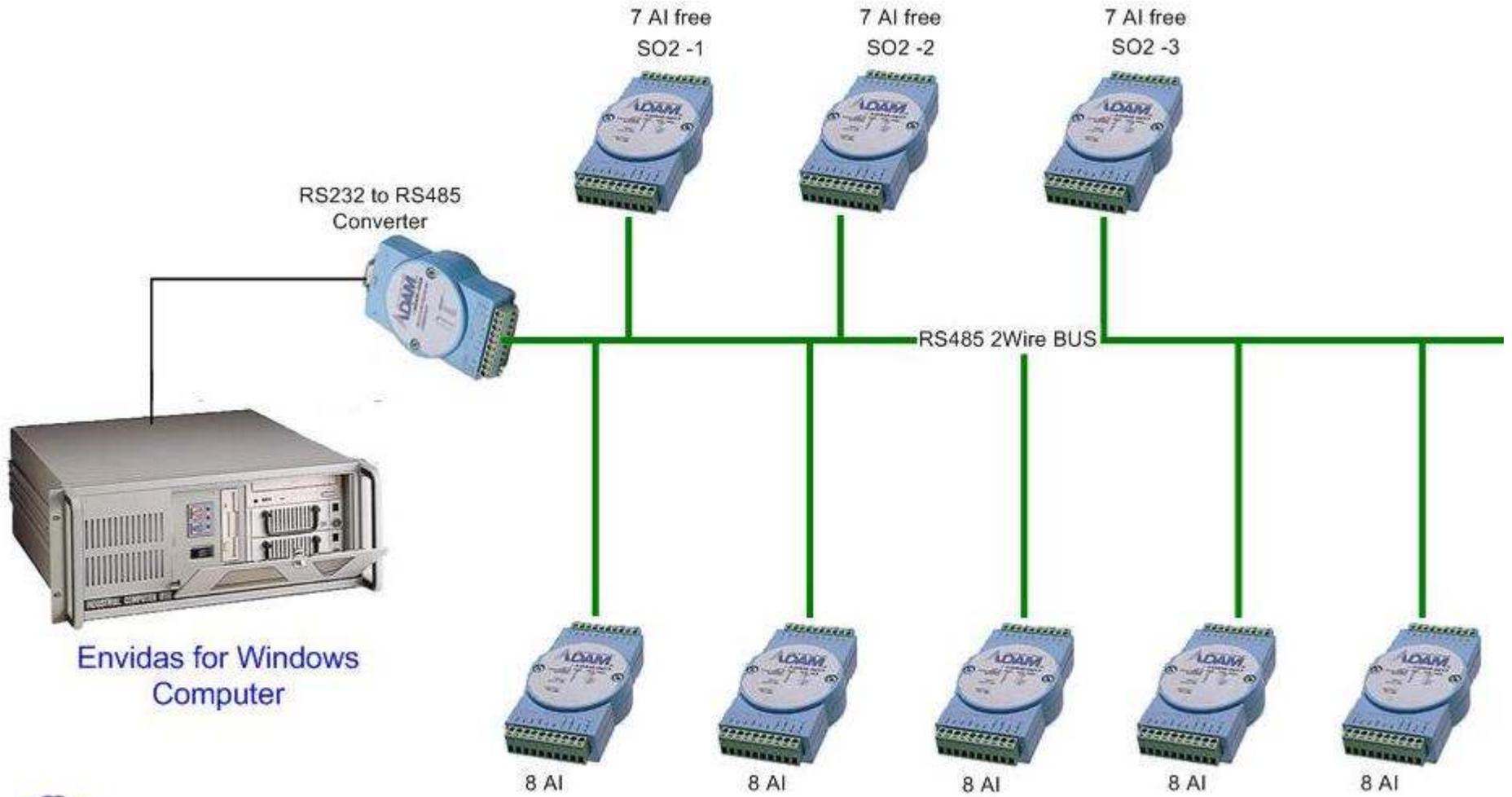
EnvidasFW Meteorological Application



EnvidasFW Emission Application



EnvidasFW Toxic Monitoring Application



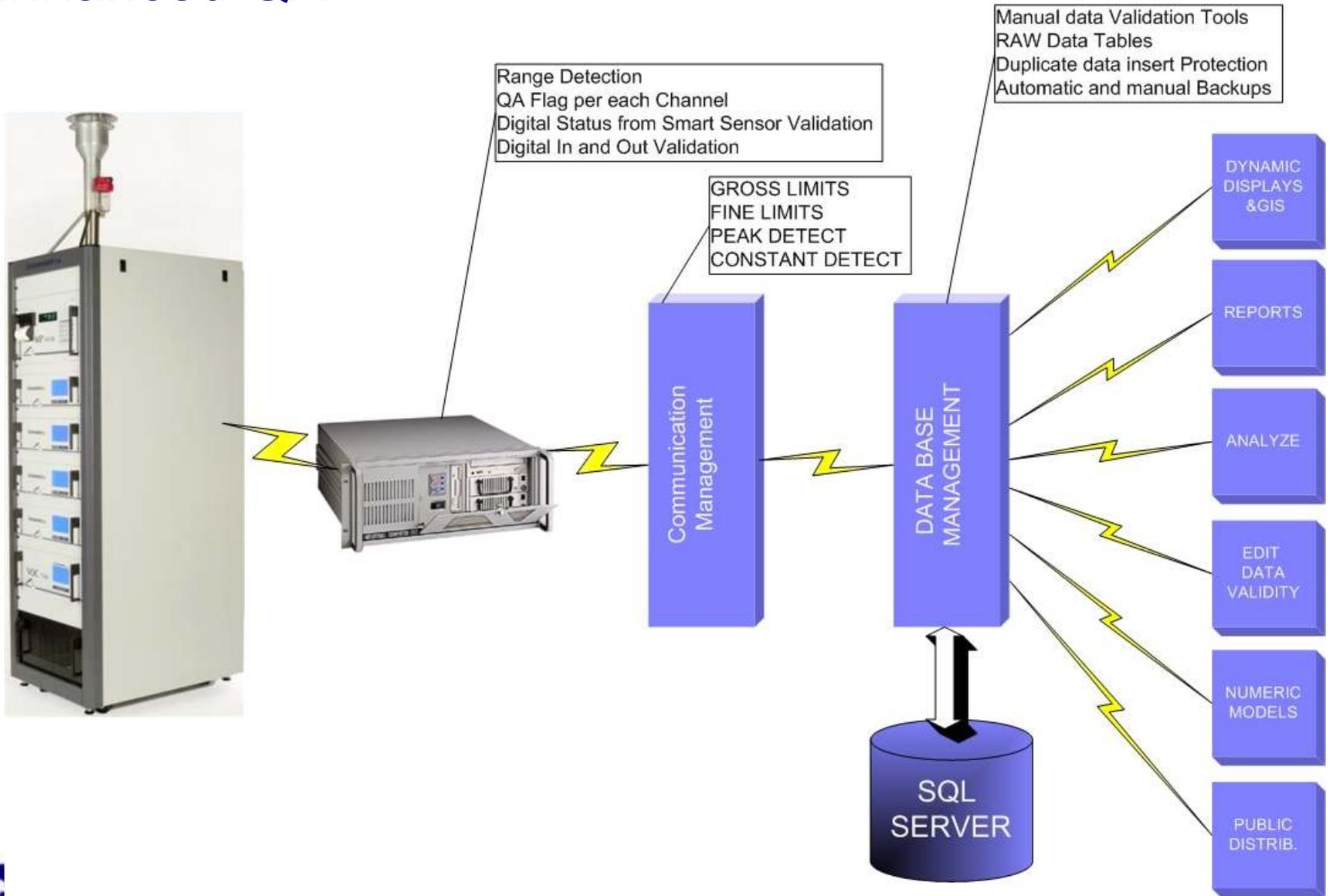
Data Transfer, Alerts & Remote Access

- Connection with ENVIEW2000 environmental data management system via TCP/IP, Cellular (GSM, GPRS, EDGE, UMTS, CDMA), Satellite, Telephone, Leased Lines or Radio.
- Complete Remote access to EnvidasFW PC and Smart Analyzers (Remote Access services, PC Anywhere, Go2MyPC)
- User definable alarms and immediate transmission of them to the Central Data Control System by using ASCII protocol or TCPIP via GPRS/GSM Network or direct to the User/Service Engineer By SMS Messages.
- The EnvidasFW supports the following communication protocols for serving data to other systems: Envitech ASCII protocol, Envitech Binary protocol, Device Emulation protocols (ESC, Dasibi and Odessa), database access protocols (ADO, ODBC and OLEDB), Industrial protocols (MODBUS and OPC Server).
- Optional WEB Site, XML and FTP Pushing available.

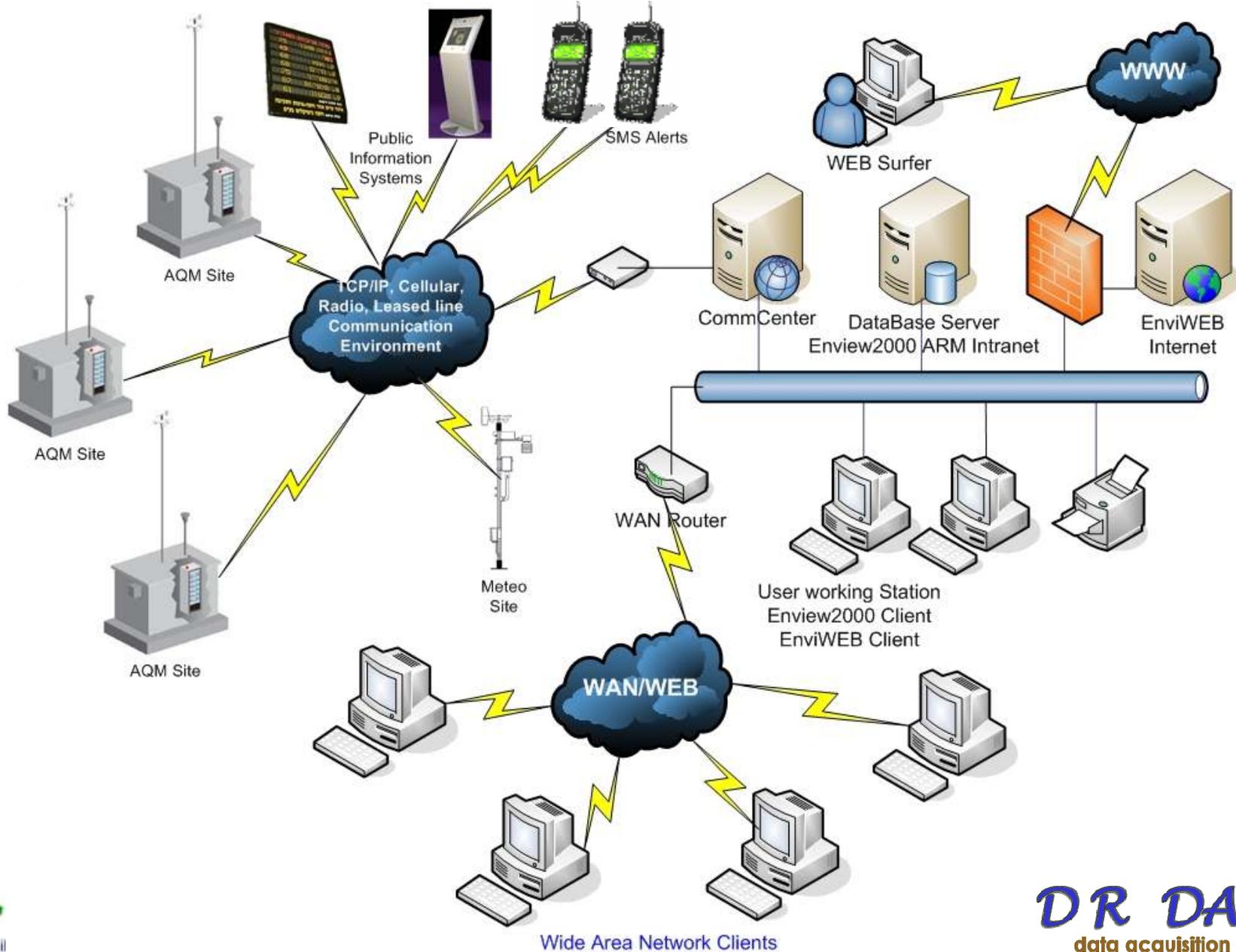
Internal and External Imaging transfer by using EvidasFW & TCP/IP Communication



Enhanced QA



Enview2000 ARM Network Structure



Complete Solution with Enview2000 ARM

- Open System Architecture.
- Databases - Microsoft SQL Server 2000/2005 and ORACLE 9i/10g
- Database Servers - Microsoft 2000/2003 and Linux/Unix
- Smart Client and Client/Server models supported for desktop applications.
- Internet and Intranet applications
- GIS and Mapping integration.

