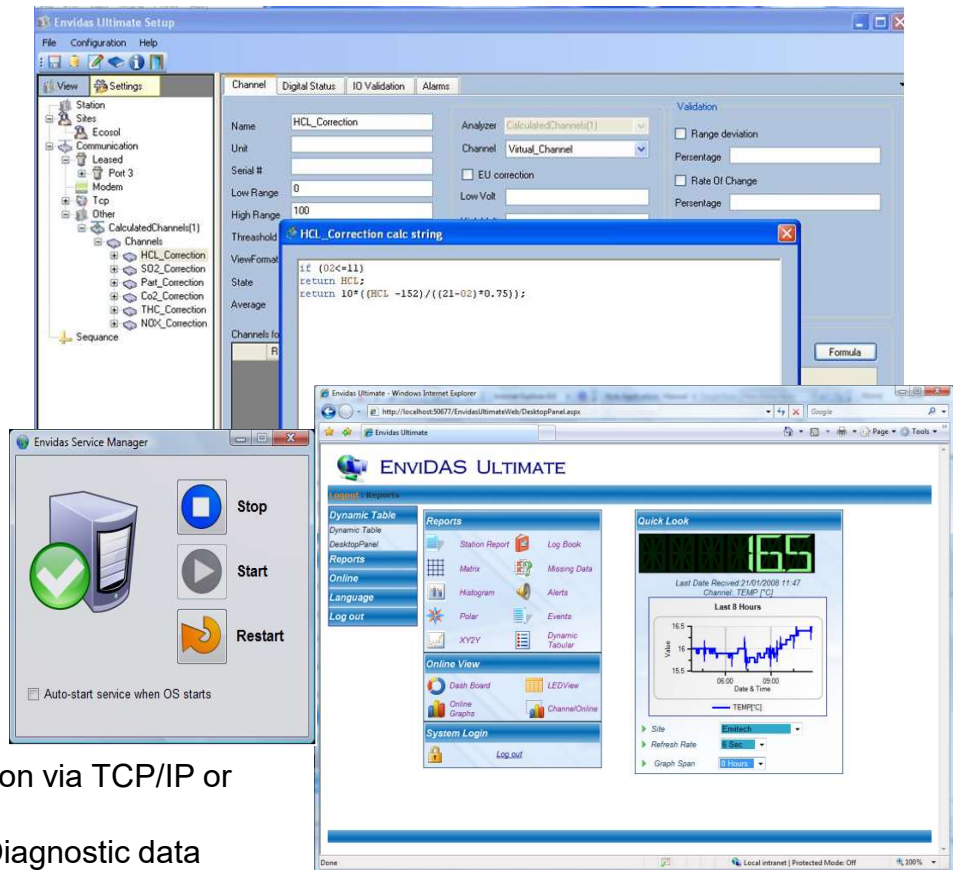# ENVIDAS Ultimate

The Ultimate Solution for Emission, Air, Water Quality Monitoring System and Tank Solution.

A typical ENVIDAS system contains the following in a single industrial chassis:

- PC-based DAS
- 3 serial ports
- 16-32 Measurements
- 16-32 Digital outputs
- 16-32 Digital inputs
- Site Oriented Configuration
- Rugged platform
- SQL Data Base
- Real Time clock
- Flexible easy-to-use
- Menu driven software
- Real Time Charting
- Internal WEB Site
- FTP/FTPs transfer data to Cloud
- HTTPs transfer data to Cloud
- Analyzers/Sensor Data collection via TCP/IP or RS-485/RS232C
- Collect Analyzers Status and Diagnostic data

INTRODUCTION

ENVIDAS is an intelligent, multi function, high – performance data acquisition and reporting system. It is designed with affordability and versatility in mind.

ENVIDAS is a state-of-the-art system that uses nonproprietary desktop or industrial PC computer components to run flexible, environmental data acquisition software. A wide variety of data acquisition modules may be installed.

ENVIDAS software features pull-down windows based menus. Only basic knowledge of PC software operations is required for system operation.
All hardware components are open stock items available from multiple suppliers.
As the name implies, ENVIDAS is designed to help you automate your environmental data acquisition system projects and make your job easier.

The system requires an initial setup. Then it starts to run automatically, acquiring measurements, controlling processes and transferring data to the central computer room. The system has the capability of detecting errors and autonomously transmitting data/alarms to the central. Data values can be filtered and collected according to user-defined criteria. Local on screen display, printing and alerts transfer by e-mails and text messages (SMS) supported.

ENVIDAS has been used in support of data acquisition and control in the following areas:

- Continuous Emissions Monitoring.
- Ambient Air Quality Monitoring.
- Meteorological Monitoring.
- Water Quality Monitoring.
- Toxic Gas Monitoring.
- Radiation Monitoring.
- Noise Monitoring.
- Tank level & volume Monitoring

HARDWARE

The basic ENVIDAS system include 16 analog, 16 digital inputs, 8 digital outputs and 2 RS232C communication ports.

ADAM MODULE
ADAM-4017 x 2

2 x 8-ch Analog Input Module
Main Features
- Channels: Six differential, two single-ended
- Input type: mV, V, mA
- Sampling rate: 10 samples/sec. (total)

ADAM-4051

16-ch Isolated Digital Input Module with Modbus
Main Features
- 16 digital input channels
- Digital input for dry contact or wet contact
- Input Voltage le vel: 10~50V
- Over voltage protection: 70 Vdc
- 2,500 Vdc optical isolation

ADAM-4068

8-ch Relay Output Module with Modbus
Main Features
- I/O type: 8 channels from C (NO/NC selectable)
- Contact rating: AC: 125 V @ 0.6 A; 250 V @ 0.3 A, DC: 30 V @ 2 A; 110 V @ 0.6 A
- Switch Time: Relay on time (typical): 3 msec, relay off time (typical): 1 msec.
- LED Indicators
- Supports Modbus/RTU protocol

Processing unit
- 19" Industrial Chassis
- CPU: i5-12400 6 Cores 2.5 GHz
- MB ATX ultra durable MSI Z790P
- RAM 16 GB/6000 MHz DDR5
- SSD 500 GB M.2
- 1 x 10/100/1000 Base-T RJ-45 port
- 4 x USB 2.0, 2 x USB 3.0
- 4 x RS-232
- Display: 1xHDMI
- Power Supply: 750W
- LED Display: 19 inch
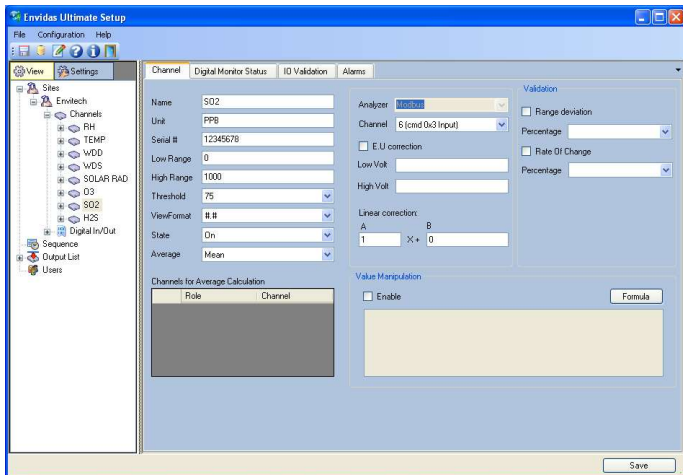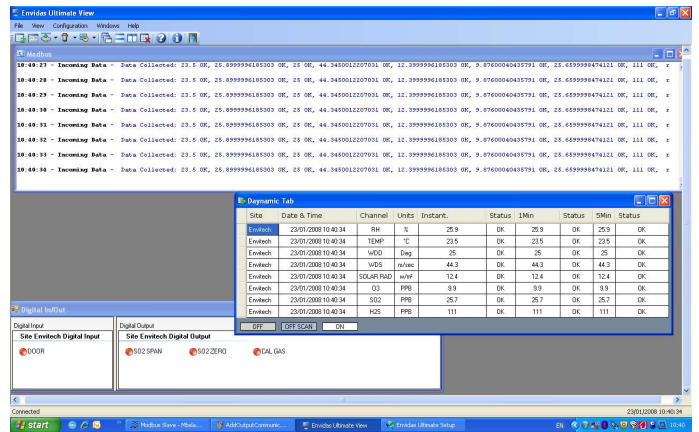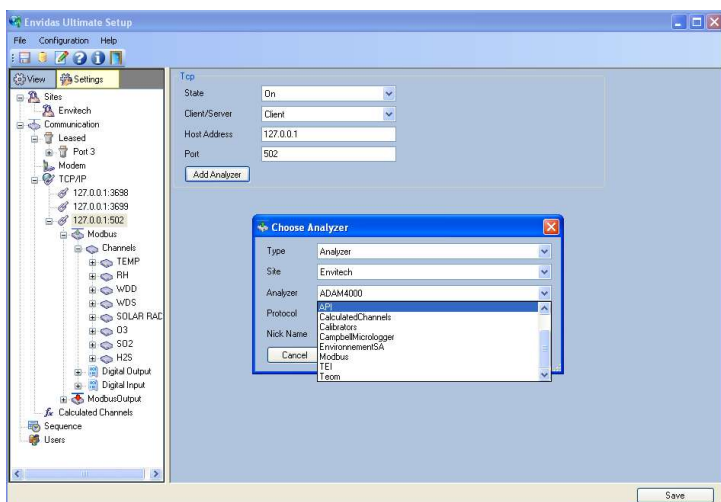- Input voltage: 220VAC 50Hz.
- Windows 11 Pro 64 Bit

ENVIDAS SOFTWARE MAIN SPECIFICATIONS & FEATURES

ENVIDAS supports automatic calibration control, recording and correction. The software generates calibration and data reports at different time intervals, and can transfer data via several communication devices.

ENVIDAS software is a flexible, easy-to-use, turnkey application software that turns a PC with a data acquisition module into an intelligent environmental data acquisition system.

It has the following features:

- Multi tasking software - no data is lost during polling
- Multi-tasking software allows user interaction without interrupting data collection
- Run under Windows 10 Pro. or Windows 11 Pro.
- Handles up to 2,560 analog inputs
- Handles 64 – 2,560 digital input channels
- Handles 64-2,560 digital output channels
- Supports up to 64 RS232C channels
- Remote access for edit or check configuration, calibration start/stop, viewing current measurements, and complete remote control
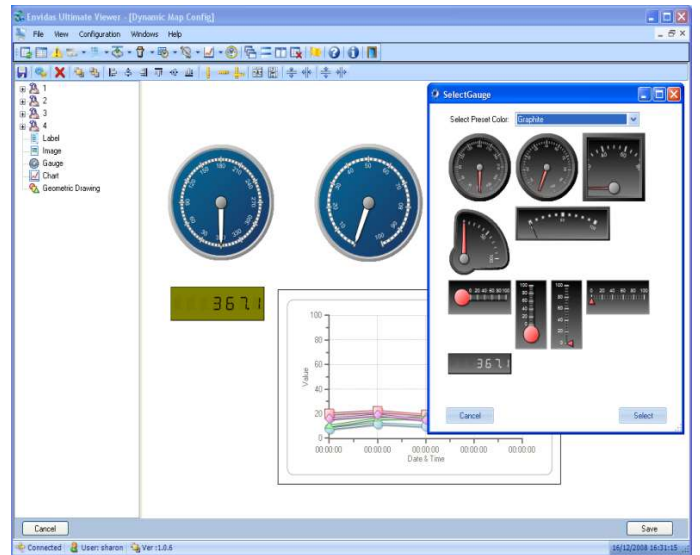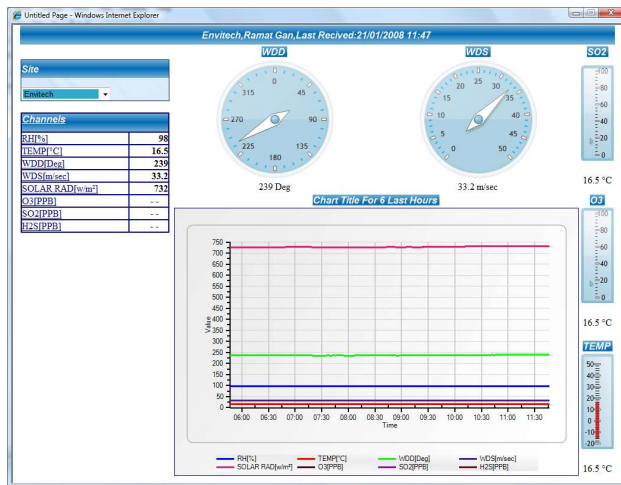
- Measuring/Logging rate: every 1, 2, 5, 10 sec' or any requested rate.
- Logging selected average: 1, 5, 6, 15 or 60 min are typical.
- Dynamic display of instantaneous values in engineering units, voltages, or any calculation.
- Password protection, 3 users levels.
- Calculations for math and meteorological statistics.
- Sec' sample data storage for pre configured amount of days.
- Automatic calibration correction and control via relays, calibrators or analyzer remote commands.
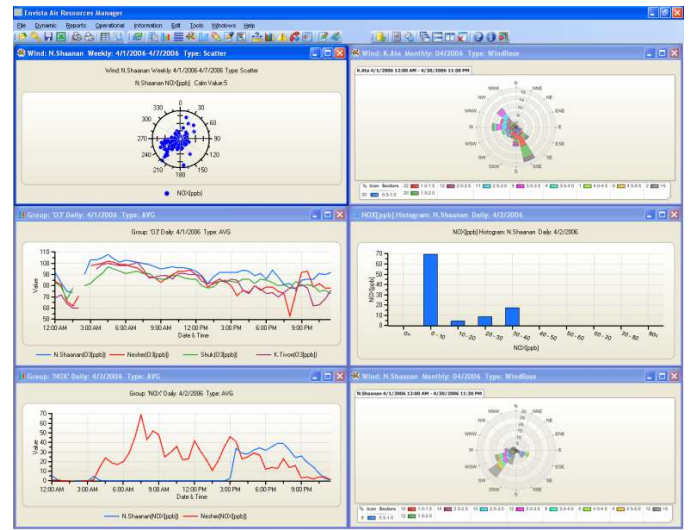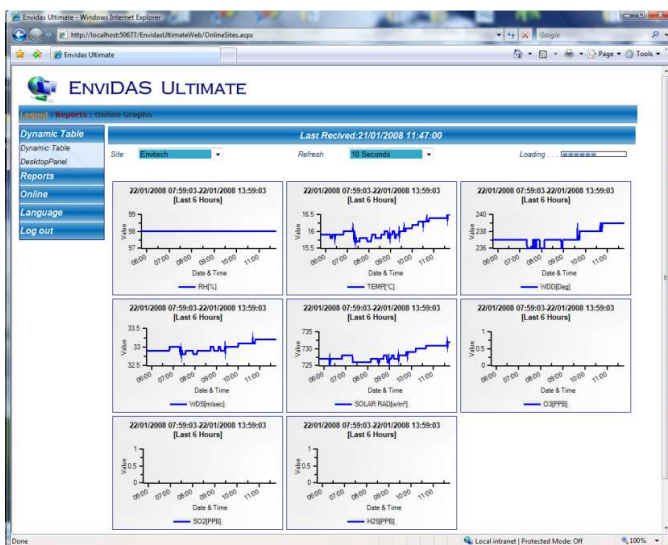
- Daily, weekly, monthly, periodic data listing textual and graphical reports
- Histogram, Wind Rose, Pollution Rose, Polar, Scatter, XY/2Y and Event Analysis reports.
- Calibration report, System fail report.
- Analyzer Digital status information report
- Analyzer Diagnostic Report
- Service Log-Book Writer and Reporter
- Complete Internal Web Site for remote reporting and On-Line Display's
- Manual data transfer (export) by using a USB Key in excel and text file or Lan/Wifi connection
- SQL Database 2019/22 Express Edition.

- Real-Time instantaneous values graph
- Communication via RS232C to the smart analyzers (Multi-drop & Star connection available)
- Collection and reporting of analyzer status information

- Remote access feature allows the user to have direct analyzer connection from a remote location
- Calibration sequence control via RS232C , TCP/IP and Digital Outputs
- Automatic alarm messages via GSM SMS and/or e-mail transfer.
- Optional Bill Boards display support.
- More than 5 years of Data Base Information and Circular management function.
- Internal data saving more than 300,000 samples.

- Connection with Envista ARM data management system/Cloud via Wifi, Lan, cellular, Internet, direct serial or radio
- Error checked data transfer to Envista ARM

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

- Thermo Environment   C, I & iQ Series
- ACOEM   Serinus Series
- Teledyne API   a & e Series
- Horiba   AQM Series
- Environment S.A.   M Series
- Modbus (RTU/ASCII)   Master & Slave
- Modbus TCP   Server & Client
- OPC   Server & Client
- HART Protocol
- LSI, RIKA,

Other RS232C protocols available upon request