ENVIDAS for Windows

ENVIRONMENTAL DATA ACQUISITION SYSTEM

A typical ENVIDAS system contains the following in a single industrial 4U chassis:

- PC-based DAS
- Core 2 Due processor
- 1 - 16 serial ports
- 8 - 64 analog inputs
- 16 digital outputs
- 16 digital inputs
- Rugged platform
- SQL Data Base
- 6 USBx2 Ports
- SVGA video display
- Real Time clock
- Flexible easy-to-use
- Menu driven software
- Store 15 Sec' data
- Real Time Charting
- Analyzers Data collection via TCP/IP or RS232C
- Collect Analyzers Status and Diagnostic data

INTRODUCTION

ENVIDAS is an intelligent, multi function, high – performance data acquisition 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 cards 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 alarms to the central. Data values can be filtered and collected according to user-defined criteria. Local on screen display and printing is supported.

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

- Ambient Air Quality Monitoring.
- Continuous Emissions Monitoring.
- Meteorological Monitoring.
- Water Quality Monitoring.
- Toxic Gas Monitoring.
- Radiation Monitoring.
- Noise Monitoring.

HARDWARE

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

ADAM-5000/485
4-Slot Distributed DA&C System

The ADAM-5000/485 and ADAM-5000E systems conform to the EIA RS-485 communication standard. This is the industry's most widely used, balanced, bidirectional transmission line standard. RS-485 was specifically developed for industrial applications to transmit and receive data at high rates over long distances.
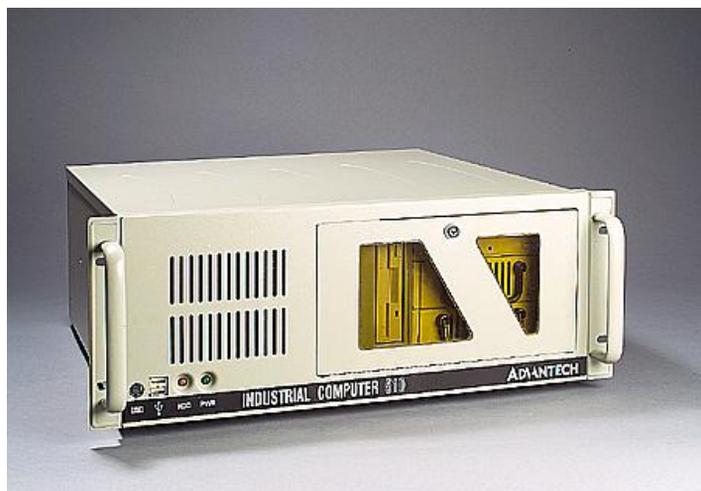
- Supports ADAM ASCII protocol
- RS-485 Communication for easy installation and networking
- 4 or 8 slots for up to 128 points data monitoring card control in one module
- Complete set of I/O Modules.
- Build in RS232C Communication
- 2500 VDC Communication Line isolation
- 3000 VDC Communication Power Isolation
- 3000 VDC I/O Module Isolation

IPC-510MB
ATX RACKMOUNT PC CHASSIS

- 19" rack mount case meets the EIA RS-310C standard
- ATX or Back plane mother board
- Field-replaceable 450-watt power supply
- Shock-absorbing mounts cushion disk drives
- Dual push-pull cooling fans generate positive air pressure inside the chassis
- Filtered cooling air reaches all cards
- Removable air filter
- Lockable door for rustproof integrity and running security
- Hold-down clamp protects plug-in cards from vibration
- Full line of industrial CPU cards
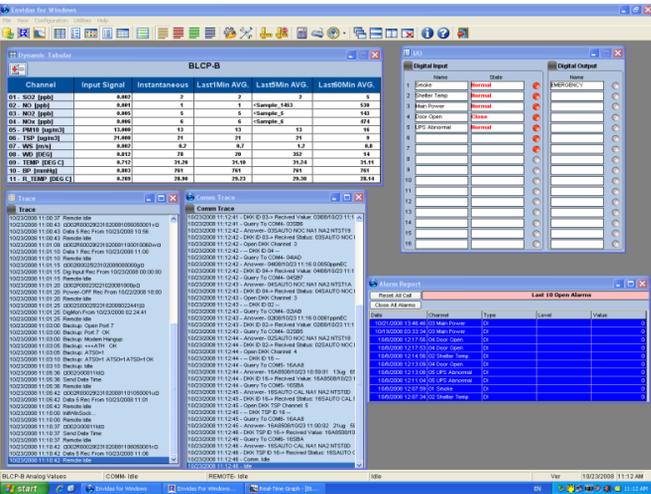
C104H
4 PORT'S RS232C BOARD

- Number of ports: 4
- I/O address: 0x0000-0xFFFF
- IRQ: 2, 3, 4, 5, 7, 10, 11, 12, 15
- Data bits: 5, 6, 7, 8
- Stop bits: 1, 1.5, 2
- Parity: none, even, odd, space, mark
- Speed (BPS): 50-115.2K

GIGABYTE ATX GA-965P-DS3P

- CPU: P4 Dual 2 Core 2 GHz
- RAM: 1024 MB DDRAM 633MHz
- Cache Memory: 4 MB
- Features SATA 3Gb/s interface with RAID function (2 ports with RAID function supported by GIGABYTE SATA2)
- Northbridge: Intel® P965 Express Chipset
- Supports 1333/1066/800/533 MHz FSB
- Supports DDR2 800/667/533 memory
- Parallel port: One enhanced parallel port, supports SPP/EPP/ECP modes
- ATX form factor, 305 x 210mm
- 3 PCI slots, 1 PCI Express X16 slot, 3 PCI Express X1 slot
- DVD Read/Write
- Serial ports: One RS-232 on-board
- 4 USB 2.0/1.1 ports
- 3 USB 2.0/1.1 connectors for additional 6 ports by cable
- Use of licensed AWARD BIOS
- PS2 Mouse Port
- Marvel 8056 Gigabit LAN Controller
- Option industrial CPU with Watch Dog system
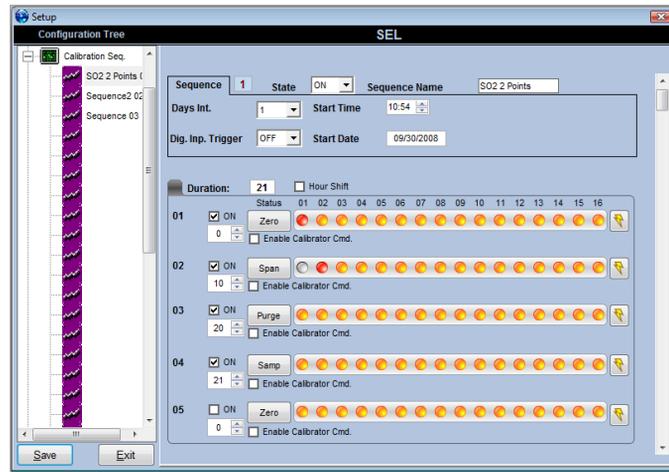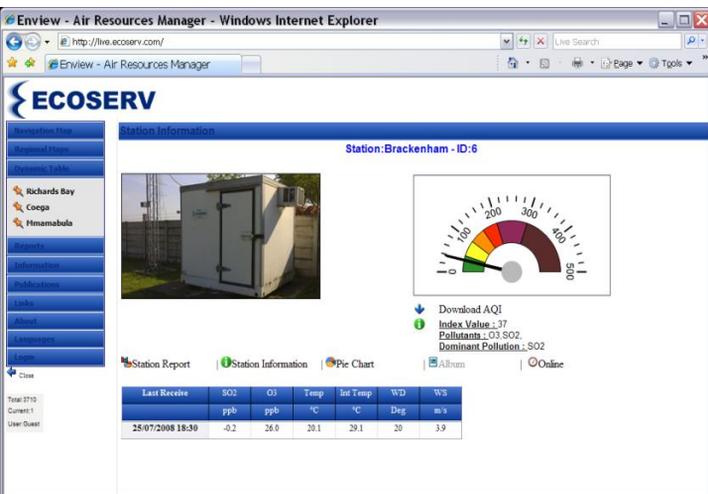- 15",17" or 19" LCD SVGA screen

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.
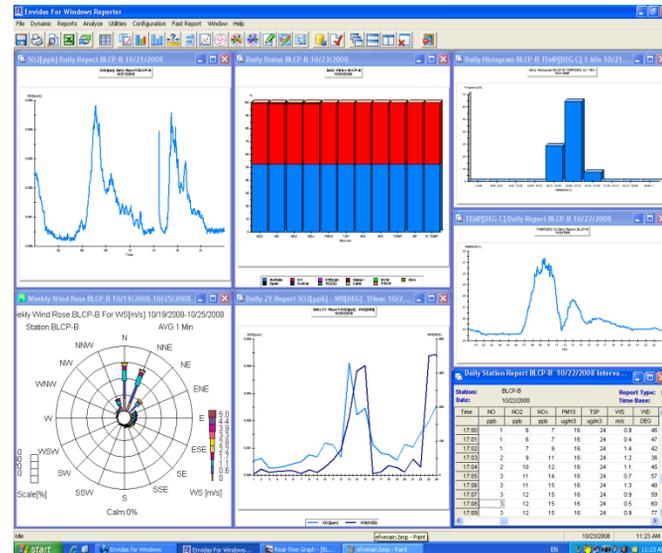

ENVIDAS software is a flexible, easy-to-use, turnkey application software that turns a PC with a data acquisition card into an intelligent environmental data acquisition system.
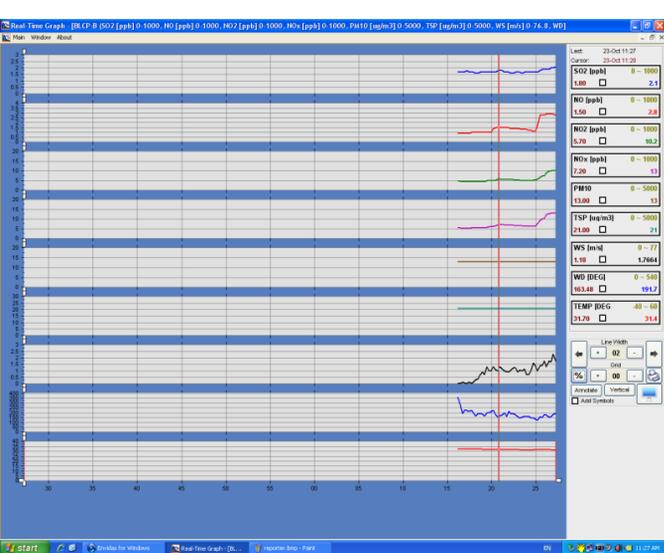It has the following features:

- Multi tasking software - no data is lost during polling
- Multi-tasking software allows user interaction without interrupting data collection
- Run under Windows 2000/XP Pro.
- Handles up to 64 analog measurement inputs
- Handles 16 digital input channels
- Handles 16 digital output channels
- Supports up to 16 RS232C channels
- Remote access for upload or download of configuration, calibration start, viewing current measurements, and remote control

- Measuring rate: every 1, 2, 5, and 10 sec'
- User 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
- Calculations for math and meteorological statistics
- 15 Sec' average data storage for 31 days
- Automatic calibration correction and control via relays, calibrators or analyzer serial commands
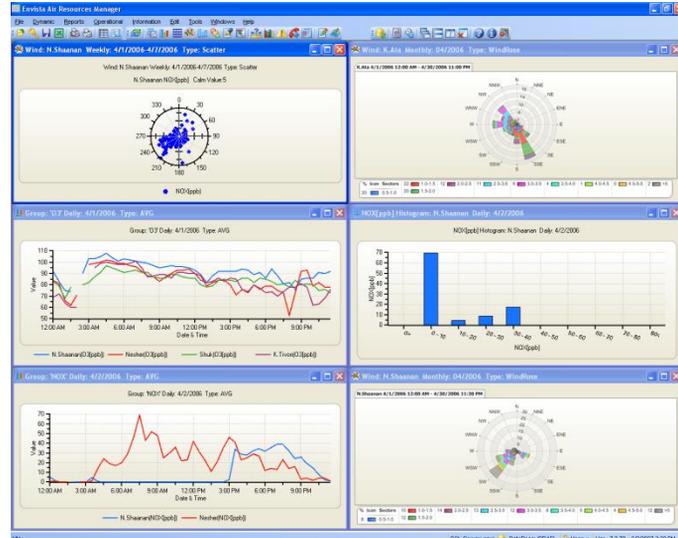

- Daily, weekly, monthly, periodic data listing textual and graphical reports
- Histogram, Wind Rose, Pollution Rose, Polar and Event Analysis reports.
- Calibration report
- System fail report
- Analyzer Digital status information report
- Manual data transfer by using a floppy disk
- SQL Database

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

- Connection with Envista ARM data management system via telephone line (POTS, cellular, or leased line), direct serial or radio
- Error checked data transfer to Envista ARM

- Bypass feature allows the user to have direct analyzer connection from a remote location
- Calibration sequence control via RS232C and/or digital outputs
- Automatic alarm messages via GSM SMS and/or Terminal Display
- Optional Bill Boards display support
- More than 10 years of Data Base Information

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

- Teledyne API — a & e Series
- Thermo Environment — c & i Series
- Monitor Labs — 9400 Series
- TE-R&P — Teom, FDMS, Partisol+
- Horiba — AQM Series
- Environment S.A. — M Series
- Campbell — CR-10X, CR-23X
- RM Young — Serial Interfaces

Other RS232C protocols available upon request

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