

# DAQ Plus Data Acquisition System

## Introduction

Data Acquisition is the process by which events in the real world are sampled and translated into machine-readable signals. Sometimes abbreviated as DAQ, data acquisition is a process of gathering information from analog and digital measurement sources such as sensors and devices under test to collect signals, waveforms etc. to be processed and analyzed with a computer. The actual process involves digitizing of the gathered signals for storage, analysis and presentation on a personal computer (PC). Data acquisition (DAQ) systems come in many different PC technology forms for great flexibility when choosing your system. This can be chosen from PCI, PXI, CompactPCI, PCMCIA, USB, Firewire, parallel or serial ports for data acquisition in test, measurement and automation applications.



## Purpose

Data acquisition system options have exploded as a result of the growth in Personal Computer (PC) hardware. Data acquisition is necessary to evaluate the optimum performance in the system. The basic necessities for data acquisition are

- To process and analyse the acquired data.
- To accurately identify and highlight any anomalies and limitations
- To summarise and draw justifiable conclusions from the analysis
- To check conformity in accordance with organisational requirements

## Typical Data Acquisition Applications

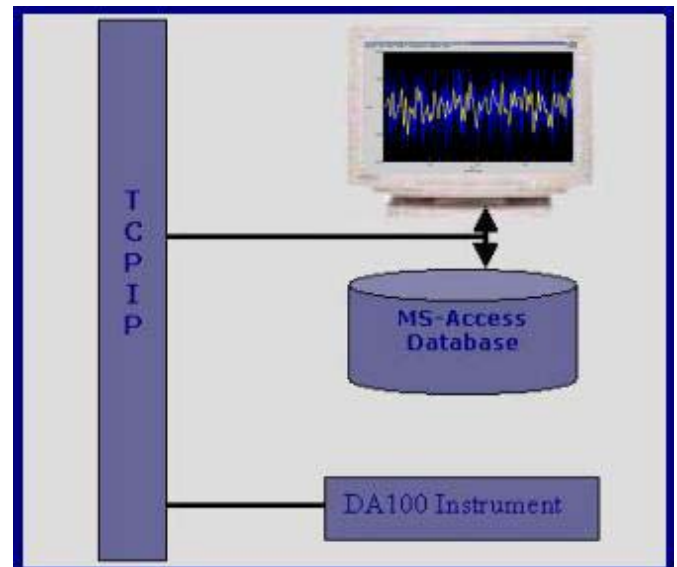
- Physiological Studies
- Environmental Studies
- Materials Testing
- Medical Research
- Quality control and Testing
- Strain, Pressure, Temperature and Vibration Analysis
- Fluid Analysis
- Manufacturing automations

## DAQPlus

DAQ Plus is a utility for data acquisition designed such that it can acquire data from any data acquisition system and store the same for analysis.

## Architecture

DAQ Plus is an integration of Configuration module and Report generation module. The Configuration module handles Channels configuration, Data Acquisition, storage of the acquired data, backup and analysis of the stored data. The report generation module helps to view or print the reports for the stored data in a customized format.

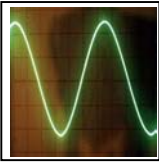


## Features

- Identifying the channels of the data acquisition system with unique tag names
- Continuous acquisition of data for selected channels at specified intervals
- Selection of required channels for data acquisition and analysis
- Configuring the selected channels under a group name which makes the analysis easy
- Defining the scan time interval for acquiring data
- Data storage and system security
- Backup of the stored data at specified locations for regular intervals.
- Data and Waveform report generation for analysis.
- Auto Generation of the reports for every shift which are pre-configured

## Report Generation

DAQ plus provides a feature for generation of customized data reports for the previously stored data. The reports generated can be on weekly, monthly or yearly basis, which is provided as a selection to the user. Important Reporting Feature in the application is the automatic generation of shift reports. Reports give the maximum, minimum and average values of the acquired data for the selected channels. DAQ Plus generates the reports in both data and graphical formats.



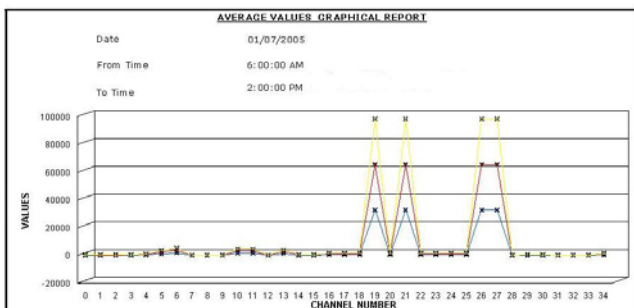
# DAQ Plus Data Acquisition System



## Sample Reports Data Report

AVERAGE VALUES REPORT						
Unit 6	SHIFT: B	Date: 30/06/2005	From: 2:00:00 PM	To: 10:00:00 PM		
Sl.No	Parameter	Unit	Minimum	Maximum	Average	Remarks
1	SRAPHA FG OL	Deg.C	154.00	154.00	154.00	
2	PRAPHA FG OL	Deg.C	144.00	158.00	156.63	
3	SRAPHB FG OL	Deg.C	144.00	149.00	146.54	
4	PRAPHB FG OL	Deg.C	158.00	173.00	165.95	
5	TOTAL COAL FL	T/Hr	293.30	316.90	312.41	
6	TOTAL SEC AIR FL	T/Hr	1,168.80	1,302.50	1,242.11	
7	TOTAL AIR FL	T/Hr	1,810.70	1,874.80	1,827.11	
8	OXYGEN IN FG	%	2.29	2.89	2.51	
9	SH ATTEMP FL	T/Hr	56.90	73.80	65.56	
10	RH ATTEMP FL	T/Hr	37.70	56.90	40.87	
11	BLI	T/Hr	1,552.50	1,625.00	1,580.81	
12	PW FLOW	T/Hr	1,317.50	1,566.30	1,513.69	
13	CON MAKEUP FL	T/Hr	0.10	7.90	6.64	
14	CONDENSATE FLOW	T/Hr	1,243.10	1,357.90	1,305.13	
15	TURB THROTTLE PR	Kg/cm2	160.90	171.60	171.26	
16	FIRST STAGE PR	Kg/cm2	145.60	165.90	161.03	
17	GEN MW	MW	496.50	516.40	504.88	
18	MS TEMP BEF SV1	Deg.C	524.70	532.70	529.03	
19	MS TEMP BEF SV2	Deg.C	522.10	529.80	528.42	
20	MS TEMP BEF SV3	Deg.C	527.67.00	527.67.00	527.67.00	
21	MS TEMP BEF SV4	Deg.C	525.30	531.90	529.22	
22	CRH LINE TEMP-L	Deg.C	527.67.00	527.67.00	527.67.00	
23	RH TEMP BEF IV1	Deg.C	534.60	536.10	535.47	
24	RH TEMP BEF IV2	Deg.C	529.40	536.90	533.36	
25	RH TEMP BEF IV3	Deg.C	531.00	536.60	533.98	
26	RH TEMP BEF IV4	Deg.C	523.80	536.20	532.60	
27	MS TEMPERATURE	Deg.C	527.67.00	527.67.00	527.67.00	

## Graphical Report



## Typical Application

DAQ Plus for DA100 is a typical application that can collect data for a maximum of 300 channels or for selected number of channels. The data collection is via the Ethernet interface through the Darwin DDE Server. DA100 is the member of the DARWIN data Acquisition family that is uniquely suitable for compactly configuring a data acquisition environment using a PC as a human interface.



## Data Acquisition

The Data Acquisition module collects data from the DA100 instrument through the DARWIN DDE server via the Ethernet interface. The data will be acquired and stored for the selected number of channels with date and time stamp which is useful for report generation

## System Requirements

Hardware	Software
Pentium III processor or higher, 256 MB of RAM or higher, 100 MB of available hard drive space, Communication Interface Cards	Windows 2000/XP/ 9X Microsoft Office

## Ordering Information

DP-9005-001	Full Featured Version with single client user license.
-------------	--

## Related Products

**Connect Plus** – Interface software for monitoring and control of instruments with data storage and report generation

## Other Products

**eCal** – The Calibration Management System for refineries and manufacturing industry finds its application in calibration of Pneumatic, Electrical and Temperature equipments

**SATMON** – Satellite channel monitoring system, useful for satellite service providers to monitor the strength of various satellite channels. Automation of Testing of RF Component using Programmable Network Analyzer

**Tsharp** – Training Management System for monitoring or tracking training activities of each employee of the organization with automatic reminder facility

**MPTS** - is a full-fledged fast and accurate package to perform Measurements on RF Components used in Filters, Power Combiners, and Low Noise amplifiers, antennas.

**About us** Access Automation Pvt. Ltd., headquartered in Bangalore, India is involved in the business of providing high quality solutions to industry verticals: energy, healthcare, manufacturing and education. Our highly qualified and experienced team of professionals has a mission of bringing in automation to your business. Through state-of-the-art technology and development methodology, we have introduced frameworks and solutions for the automation market.

Our area of expertise include Test and Measuring Instrumentation, Man-Machine Interface, Calibration Work Bench, PC based Instrumentation, Automation of information flow from plant floor to management, Functional Test Solutions, Data Acquisition Systems and Web based Solutions.