

PortaPAQ



This is an integrated suitcase mounted PC based Data Acquisition System that is capable of reading up to 6 analog inputs and 6 frequency inputs simultaneously. Our system has the capability to display and record locally or transmit acquired data via a wired or wireless connection to a remote laptop or data van running the SES Charting & Analysis Software. Detailed specifications of this system are as follows:

I. Enclosure

- Installed in a rugged Pelican type suitcase with hinged cover
- Mil Spec C-41505 case
- Operating temperature range -40 Deg C to +60 Deg C
- Dimensions:
 - Total Length - 18.06" (45.9 cm)
 - Total Width - 12.89" (32.7 cm)
 - Total Depth - 6.72" (17.1 cm)
 - Lid Depth - 1.79" (4.5 cm)
- Approximate Weight - 30 lbs (13.33 kg)
- 9-30VDC Wide Range Power Supply
- 15" 1800NIT LCD high bright/resistive color touch screen installed in the hinged cover
- PCT (Projective Capacitive Touch) screen for impact resistance
- Weatherproof PC type alpha/numeric keyboard with integrated pointing device
- 1 Weather-tight USB Connection on front panel of suitcase
- 1 Weather-tight Ethernet (RJ45) Connector on front panel of Suitcase

- Wireless or wired communication via TCP/IP Protocol

II. PC Hardware

- Single board solid state
- -40 C to 60 C Operating temperature
- Shock mounted PC case for improved reliability
- Windows XP embedded operating system
- G4 Pentium M 760, 2.0 GHz, Type 2, Hs,
- Solid state 4 GB Hard Drive Internal (Expandable to 8 if required)
- 1.0GB PC-2 -4200 DDR 200-pin So-DIMM
- Integrated video card
- 802.11 G wireless networking card
- 4 port network switch

III. PC Software

- Microsoft Office Professional (Excel & Word Only)*
- Optional Single or Multi Pump (up to 6 pumps) Control software**
- Optional Blender Control software**
- Optional Frac/Cementing/N2/CTU windows based simulation/data analysis and management software programs**

*Included in software package on unit

**May be purchased separately

IV. DAS Hardware

- National Instruments cRIO embedded real time controller with the following features:
 - This Compact Reconfigurable Input/Output (cRIO) [programmable automation controller \(PAC\)](#) is a reconfigurable control and acquisition system designed for applications that require high performance and reliability. The system combines an open embedded architecture with small size, extreme ruggedness, and hot-swappable industrial I/O modules. This cRIO is powered by reconfigurable I/O (RIO) FPGA technology
 - Complete reconfigurable embedded system for rugged stand-alone or networked control and data acquisition applications
 - Embedded controller runs LabVIEW Real-Time for deterministic control, data logging, and analysis
 - 400 MHz processor, 2 GB of nonvolatile CompactFlash storage, 128 MB DRAM Memory
 - 10/100BaseT Ethernet port with embedded Web and file servers with remote-panel user interface
 - Full speed USB host port for connection to USB flash and memory devices
 - RS232 serial port for connection to peripherals: dual 9 to 35 VDC supply inputs
 - -40 Deg C to +70 Deg C temperature range
- FPGA (Field Programmable Gate array)
- Up to 5 million data points stored in secure, non-volatile internal memory
- 6 4-20mA analog Inputs
- 6 Frequency Inputs.
- Inputs (via keyboard or touch screen):
 - Operator information

- Zero sensors
- Input calibration (K) factors

V DAS Software

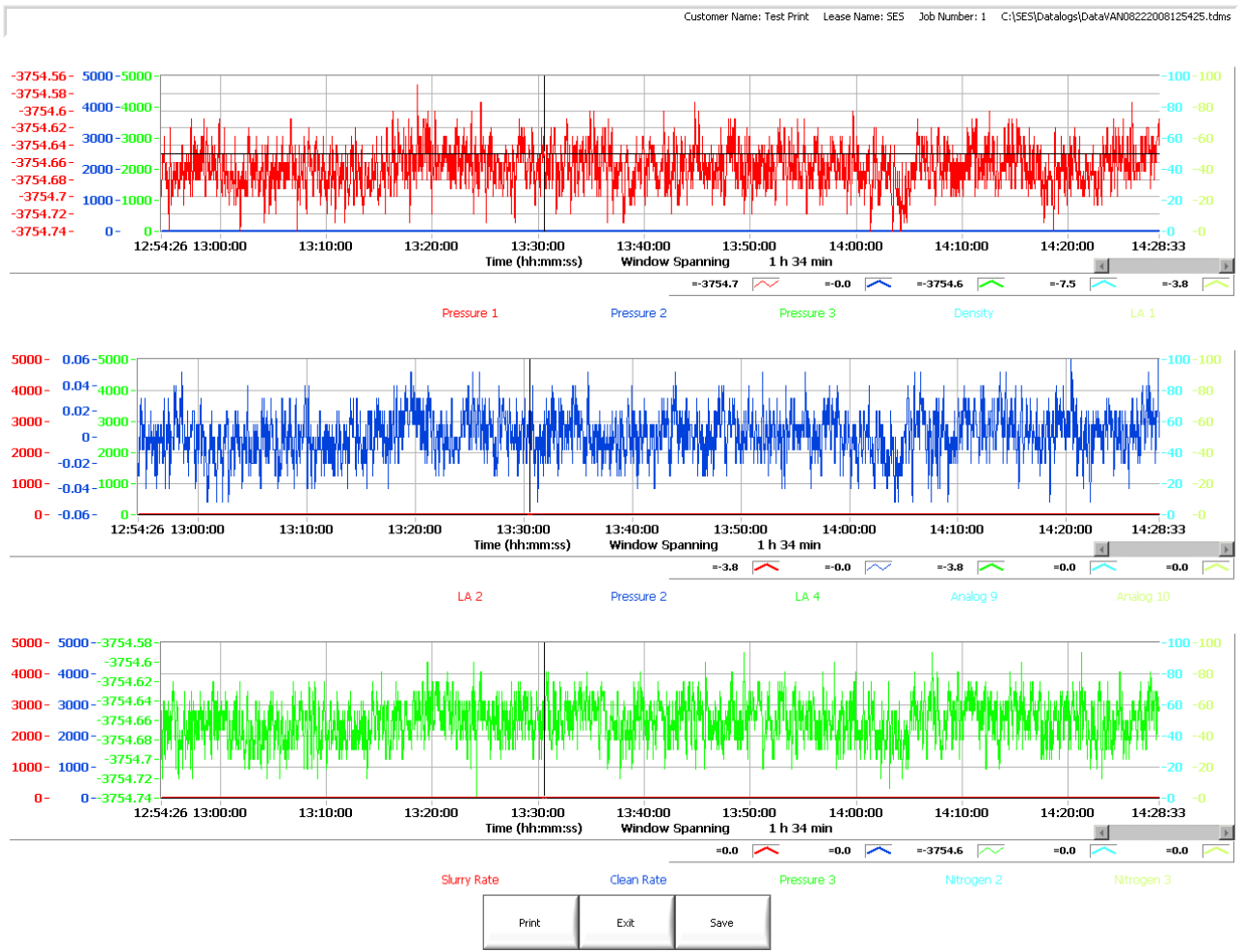
Graphical Reporting Software

- Graphical Reporting Software
- Windows based
- Digital and graphical displays for charting and trending data real time
- Designed for operators (easy to use)
- Updates once a second Replay jobs
- Real time recording
- Data storage
- Data editing
- Typical Inputs:
 - Pump Pressure
 - Pump Flowrate
 - Temperature
 - Density
 - Well Head Pressure
 - Circulating Pressure
 - Tubing Depth
 - Tubing Speed
 - Tubing Weight
 - N2 Rate
 - Diesel Engine operating information and diagnostic data (from a J1939 communication bus) **Must be Specified as a requirement so hardware can be included**
- Typical Calculated Math Channels:
 - Flow totals
 - Bottom Hole Pressure
 - Hydraulic Horsepower

– Typical Screen shots of the DAS Operator Interface:



VI Accessories



- USB memory stick for data transfer and additional data storage
- 9 – 30 VDC Input, 20 VDC output car/plane/external power adapter with circuit protection fuse, 6' 0" (2 meter) long power cable, one car connection and one power connection.
- Cables and sensors to be quoted and sold separately