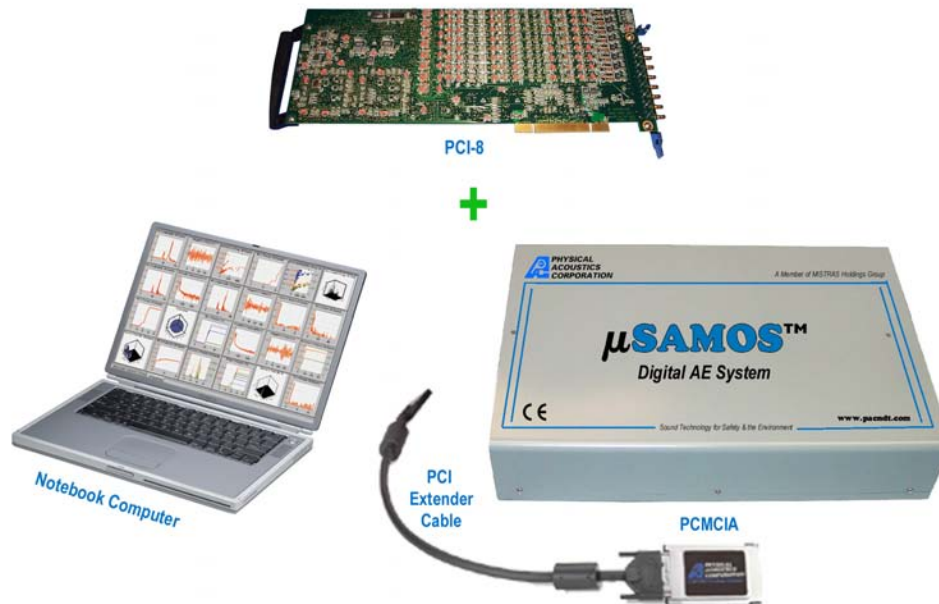




μSAMOS™

Notebook Based, Portable Workstation for Advanced Acoustic Emission Testing



The **μSAMOS** (*Sensor based Acoustic Multichannel Operation System*) is a small, truly portable, **battery (optional) and notebook operated**, acoustic emission system. It is similar in size to a notebook computer, and contains **up to three** PCI-8 cards to form a powerful 8, 16 or 24 channel Acoustic Emission system. Key advantages of the μSAMOS over conventional AE system chassis's include its small size yet high channel density (up to 24 channels), its portability and light weight (less than 10 lbs), its connectivity to a notebook computer, all while maintaining very good AE acquisition performance and field ruggedness. An external connector allows connection of up to 2 parametrics, control input and Alarm output functions.

Notebook computers have become a common and necessary tool for all professionals. That is why PAC is now capitalizing on this and making it a part of your AE system. The notebook computer, used in the AE examination as a μSAMOS Controller, contains the collected AE data. After the AE test, the same notebook can be used to do the analysis of the data, or for preparing the report, whether on-site, in a hotel or on an airplane.

There are **2 models** of μSAMOS, one AC powered only and one for **AC/DC powering with or without internal battery** option for up to 2.5 hours of operation on a charge with one PCI-8 card. An external battery option is also available to **extend operation to 8 hours**. The μSAMOS chassis is 16" long 9.5" wide and 2.9" high and is comfortable sitting just below the notebook computer.

The μSAMOS comes complete with a PC-Card and cable to plug into the notebook computer's PCMCIA connector port. Most Notebook computers are compatible with the μSAMOS PC-Card interface. The system requires a notebook with Windows 98 (Second Edition), ME, 2000 or XP to operate and will run with PAC's AWin™ WINDOWS software. While the majority of "name brand" notebooks are compatible with the μSAMOS' PCMCIA Card, PAC will provide our customers with "best effort" service to interface your computer to our system. PAC advises that the customer purchase the notebook from PAC or call in advance to determine if their existing notebook is compatible for the μSAMOS.

PCI-8 Board Sample Specifications:

Physical Specifications:

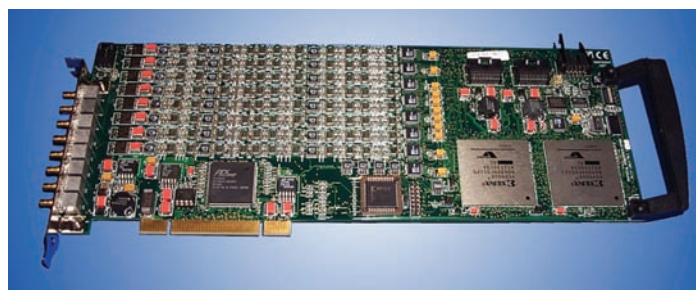
- **Size:** 13.415" L x 4.8" H x 0.7" T
- **Weight:** 1.1 lbs.
- **Power Consumption:** 10 Watts
- **DC Power:** +12.0 volts, 0.4 amps
-12.0 volts, 0.1 amps
+5.0 volts, 1.0amp

Electrical Specifications:

- **AE Inputs:** 8 channels
- **Input Impedance:** 50 W
- **Preamplifier Power:** DAC controlled voltage for **preamplifier gain control**
- **Sensor Testing:** **AST built-in**
- **Frequency Response:** 1 kHz - 200 kHz (at 3 dB points)

Signal Processing:

- **AE Signal Gain:** 0, 6 dB computer selectable
- **Filters:** 4 High Pass **computer selectable** filters - 1 kHz, 5.0 kHz, 20 kHz, 100 kHz, 4th order Butterworth
4 Low Pass computer selectable filters - 10 kHz, 40 kHz, 100 kHz, 200 kHz, 4th order Butterworth
- **Max. Signal Amplitude:** Ip to 100 dB AE
Up to 99 dB ASL
- **ADC Type:** 16 bit 1.0 MSPS per channel maximum
- **Waveform Sample Rate:** Computer selectable
100 kS/s, 200kS/s, 500kS/s, 1M-Samples/sec
- **Extracted AE Features:** Time of 1st Threshold Crossing, Time to Peak, Peak Amplitude, Envelope Strength, Duration, Rise Time Counts, True Energy, RMS, ASL, Parametric 1 & 2



PCI-8 Board

Analog Parametrics:

- **Parametric Channels:** 2
- **Parametric A/D Res.:** 16 bits
- **Parametric Sample Rate:** 10 kHz sample rate for each analog parametric
- **Time Driven Data Rate:** Controlled by software
10 msec. to 60 seconds
- **Time Parametrics:** All parametrics are available in time data set

Additional I/O:

- **Digital I/O:** 8 Digital Inputs
8 Digital Outputs
- **Audio Monitor Interface:** Analog switch and buffer to select desire channels to be routed to standard PAC **audio monitor board**
- **LED Activity Monitor:** On board LED driver to directly drive LED's on front panel. LED minimum on time is 0.05 seconds

For more information, call (609) 716-4000, email sales.systems@mistrasgroup.com, or fax (609) 716-0706

For information on PAC products and services, visit our web site at: www.mistrasgroup.com



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