Datasheet

EasyAE™ Data Acquisition/Digital Signal Processing System
Model 1288-5025

EasyAE™ is Physical Acoustics' newest two channel Acoustic Emission (AE) data acquisition and digital signal processing system. EasyAE is the size of a business card and uses USB-C communication interface. EasyAE is ideal for R&D laboratories, universities, industrial turnkey systems, and any application where low noise, low channel count and low cost is a requirement. The EasyAE system performs traditional AE feature extraction, AE signal processing, as well as advanced waveform based acquisition and processing. AE hit data and waveforms are recorded and read back using AEwin control software.

EasyAE AE system offers two AE channels with superior low noise and low threshold performance. Each channel offers 18 bit A/D conversion, up to 10 MSamples/second and 1.0 MHz signal bandwidth. In addition, the EasyAE has two Universal I/Os, which are configurable as a Digital Input/Output or as an Analog parametric input to monitor "cause and effect" relationships between AE and load.

Power is supplied over the USB-C type connection via your computer's USB port, and data is transferred back and forth between your computer and the EasyAE processor. SuperSpeed 5 Gbps is supported by the system. The data speed is automatically negotiated between the EasyAE and the connected PC.

The AE sensor plugs directly into this Lemo 00 connector using a push-pull locking mechanism. EasyAE can be configured for using Passive AE sensors (Alpha series) or phantom power can be provided for powering PAC's low power preamplifiers (IL-LP series) and Integral Preamp sensors (PK series). External low power amplifiers like Preamp One can also be connected to offer connectivity of passive sensors when used with long cables. Each AE channel can be configured individually in the software.

EasyAE has built-in parametric processing circuitry, which allows AE activity to be correlated with other sensors used to monitor process changes or other test parameters.

Waveform data streaming capability is built within the data acquisition board allowing waveforms to be continuously transferred to the hard disk.

LED indicators let the user know the status of the system at a glance. A Green POWER LED remains lit as the system is powered and operational. Two Yellow "HIT" LEDs pulse light whenever an AE hit is detected by the EasyAE, and a Red ALARM LED is user programmable and will warn the user when a predetermined event has occurred.

KEY FEATURES

- Two channel AE instrument with all the standard AE features
- Small portable unit
- SuperSpeed USB Type C Interface to ensure compatibility with any modern PC or Laptop
- Runs directly off of PC's power
- Running Windows 10 or newer
- LED display to quickly update the user on Power/Hit/Alarm status
- Full AE bandwidth response up to 10MHz Sampling Rate per channel
- Uses PAC standard Alpha AE sensors or "PK" or LP line of Integral sensors or preamps
- Two analog parametric input
- Waveform streaming capability on each channel up to 5MSPS per channel

SYSTEM SPECIFICATIONS

AE Input: .... 2 Channel/USB node
.... (up to 3 nodes/system)
Bandwidth Response: .... 1.0 kHz to 1.0 MHz
AE Digitizing: .... Internal 18 bit,
.... 10 MSPS A/D per channel
Parametric Inputs: .... 2 Channel+/- 10V, 16 bits,
.... 185 kΩ input impedance, Connection with
Off-the-Shelf Digital I/O Modules
Digital I/O: .... using MC USB - 1024HLS
Preamplifier: .. Built-in turned on/off in software
OS: .... Windows 10 and above

Dimensions
Case Size: .... 3.25" L (3.85" to connector ends) x
2.25" W x 0.63" H (83mm (98mm) x 57mm x 16mm
Weight: .... 0.15 lbs. (65 g)
Power Requirements: .... <100mA running @ 5V,
.... supplied by PC's USB port
External Interface: ... SuperSpeed USB 3.0, 5 Gbps

Temperatures
Operating: .... 32° - 115° F (0° - 45° C)
Storage: .... -4° - 140° F (-20° - 60° C)

SEE THE SECOND PAGE FOR ORDERING INFORMATION AND ACCESSORIES

ORDERING INFORMATION AND ACCESSORIES

PART NUMBER	PART DESCRIPTION
1288-5025	Easy AE with communication cables and factory case
WO80-0500	Cable, Lemo 00 to BNC, 6 ft, RG174, 50 ohm
1288-7001-ACQ-KEY-SW	AEwin 64 for EasyAE software and 1 (USB key-based) Acquisition license.
1288-7001-ACQ-FILE-SW	AEwin 64 for EasyAE software and 1 (file-based) Acquisition license
1288-7001-BR-KEY-SW	AEwin 64 for EasyAE software and 1 (USB key-based) Base-Replay license.
1288-7001-BR-FILE-SW	AEwin 64 for EasyAE software and 1 (file-based) Base-Replay license
1288-7001-AR-KEY-SW	1 (USB key-based) Associated-Replay license for AEwin 64 for EasyAE
1288-7001-AR-FILE-SW	1 (file-based) Associated-Replay license for AEwin 64 for EasyAE
1288-7003	EasyAE LabView and Software Development Kit

#210D-23101-03   📞 +1 833.MISTRAS   ✉ sales@mistrasgroup.com   🌐 **physicalacoustics.com**