HGL Dynamics

Dynamic Solutions For A Testing World

HDR0808

8 Input / Output Channel Portable Data Recorder

- *8 Input Channels*
- *8 Output Channels*
- *100 kHz Bandwidth*
- *>90 dB SNR*
- *Portable*
- *16-bit ADCs Per Channel*
- *Voltage & ICP Input*
- *Gigabit Ethernet Data Link*
- *Core 2 Quad Processor*
- *Multi-Unit Sync ability*
- *Multi-function Display for Control and Real-time FFT / Oscilloscope Views*
- *Various Media Combinations*

Overview

Combining the ease of use and compact size of traditional data recorders such as the Sony SIR1000 and Teac RD series, and the functionality and flexibility of modern data acquisition systems such as the HGL Hawk series, the new HGL HDR0808 provides the best of both worlds in a powerful and cost effective package

The new HDR series machines from HGL Dynamics represent the next step in the evolution of data recording and analysis:

- Traditional data recorders have required extra equipment for monitoring the signals being recorded; the HDR series allows you to monitor signals on the integrated display, optionally including alarm indications for safety monitoring applications.
- Traditional data recorders have required the captured data to be taken elsewhere for replay and analysis; the HDR series allows you to perform analysis on the machine, quite often whilst recording further data.
- Traditional data recorders have generally provided little meta-data for traceability (such as channel parameters and calibration information). Full data acquisition systems provide this information but with more complex interfaces. The HDR series combines the simplicity of a traditional recorder with the enhanced meta-data facilities of more complex systems through the use of innovative techniques and software from HGL Dynamics.

Multiple HDR units can be linked together allowing channel counts from 8-1024 and above to be achieved simply and with no degradation in bandwidth.

The HDR series are the most compact machines in their class offering world class performance in a 3U 19" (450mm) rack mount package with a depth of only 12" (300mm). The HDR series weighs less than 10kg (22lbs) and is therefore small enough and light enough to be considered truly portable.

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Features

- Full System Control via large format LCD screen and environmentally resistant multi-function buttons.
- Standard PC based architecture with Core2 Quad CPU and 2 GBytes RAM. Allows standard office type applications and third party software to be installed for advanced use.
- Standard I/O includes PS/2 and/or USB2 for Keyboard and Mouse, SVGA monitor output for connecting an external monitor for more in depth work
- Eight input channels capable of acquiring a range of analogue channels including Tachometers, Flowmeters, Voice, IRIG B and standard voltage inputs.
- Eight output channels capable of replaying captured data at originalA rate. Outputs can also be used during acquisition to provide a 'buffered' copy of the input signals
- 16-bit Sigma Delta Acquisition Card with individual ADCs per channel ensuring synchronous acquisition across all channels.
- Built-in programmable ICP conditioning for direct connection of accelerometers and other ICP based devices (Strain Gauge and Charge Conditioning optional).
- Capable of recording in a number of data formats (HGL, DATX, EDAS, SIR1000 and others)
- Multiple Media Combinations allowing users the choice of security, performance and extended durations. Included are interfaces to allow external disks (via USB or Ethernet) for downloading of data even during operation.
- Full Replay capability on the unit with local viewing of recorded data, and with analogue output.
- Built-in real-time monitoring capability including FFT, ZMOD/Campbell, Oscilloscopes, Peak hold bars, Phase & Balancing. Optional safety monitoring package available providing broadband and frequency based alarming capability and indications.
- Optional analysis packages for specific requirements available on request.

Benefits

- Compact and rugged design for challenging environments
- Simple on–test operation requiring no special training.
- Access to full configuration features of HGL Hawk systems for enhanced system setups
- Real-time monitoring assures high-quality of recorded data
- Lower cost of ownership due to the flexibility of the system and its suitability for multiple tasks
- Multiple Media options provide for every environment and provide long-term recording facilities.
- Compatible with all the acquisition products in the HGL Dynamics range. It shares the same software platform, allowing users to move from small to high-channel count systems without retraining.

General

Number of Channels	8 + 8
Input Connectors	BNC
Dimensions	450mm x 300mm x 132mm
Weight	<10kg
Power	110-240Vac, 50-60Hz mains as standard. 12Vdc via external battery option

Input Support

Voltage

Standard Ranges	+/-10V
Coupling	AC & DC
Input Impedance	>100kOhm
SNR	>1040dB
Sample Rate	Selectable between 5kHz and 256kHz (new-June 2013). Downsampling of individual channels available through the standard software.

IEPE

Current	0-20mA (continuously variable, controlled by s/w)
Voltage	1-24V max
Impedance	4kΩ max

Other Inputs

IRIG	IRIG-A and IRIG-B using any standard input
Audio	Voice Annotation via any standard input
Tachometer	Multi-tooth and Once Per Rev via any standard input (may require additional external condition-ing)

Output Support

16 Channels (BNC)	+/-10V 5-256kHz
Monitor Output BNC	Software selectable buffered output from any input channel (prior to digitisation)
Headphone Jack	Software selectable amplified output from any input (prior to digitisation)

Media Support (Standard)

120GB 2.5” HDD	Operating System
1 TByte 3.5” HDD	Data Space
AIT5 Tape Drive	Data Archive / Replay

Media Options

64 or 128 GByte SSD	Operating System
AIT3 Tape Drive	For SIR1000 compatibility
Dual AIT3 Tape Drives	100GB per tape
Dual AIT5 Tape Drives	400GB per tape
Dual 3.5” Disk Drive	Up to 4 TB space
Dual 2.5” SSD Drives	Up to 500GB space

Any Combination of 1 HD/SSD and Tape Media may be chosen. All 3.5” HDD drives and Tape drives are shock mounted.

HDR Models

The HDR Series includes the following models

- HDR1600—16 Channel Analogue Voltage & IEPE Input 256kHz Maximum Sample Rate
- HDR3200—32 Channel Analogue Voltage & IEPE Input 256kHz Maximum Sample Rate
- HDR1616—16 Channel Analogue Voltage & IEPE Input 256kHz Maximum Sample Rate. 16 Channel Analogue Output 200kHz +/-2V range.
- HDR0016—16 Channel Analogue Output 256kHz Maximum Sample Rate
- HDR0800H—8 Channel Analogue Voltage Input 2/4MHz Maximum Sample Rate
- HDR1600H—16 Channel Analogue Voltage Input 2/4MHz Maximum Sample Rate

Software

HGL Dynamics supplies the HDR series with Configuration, Calibration, Acquisition, Monitoring and archiving software as standard, optionally HGL can supply

- Programmers API - allows remote control and data collection facilities
- Safety Monitoring Real-time Module
- Rotating Machinery Pack
- Basic Modal Analysis Pack
- Vibration Analysis Package

Data Formats

The HDR series writes data natively in HGL Dynamics Format but can optionally be supplied with support for:

- DSPCon DATX format
- EDAS raw data format
- Sony SIR1000 / 3100 (AIT drive hardware availability depending)
- SDF for import into LMS systems
- ASAM ODS
- Heim DatRec3

Evaluation

HGL Dynamics is so convinced that the HDR0808 will meet or exceed your portable data acquisition needs that we are offering to provide a unit for up to 1 month on an evaluation basis *(subject to qualifying criteria).*

Pricing and Availability

The entire HDR range is now available for purchase or lease, please contact HGL at the locations detailed below.

UK & International
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