

## HDR6464

### 64Channel Portable Data Recorder

- 64 Analogue Input Channels
- 64 Analogue Output Channels
- 80 KHz Bandwidth
- >100 dB SNR
- Portable
- 24-bit ADCs Per Channel
- Voltage & ICP Input
- Gigabit Ethernet Data Link
- Core i7 Processor
- Multi-Unit Sync capability
- 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 HGL HDR6464 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 16-2048 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 19" (450mm) rack mount package with a depth of only 12" (300mm). The HDR6464 weighs less than 15kg (33lbs) and is therefore small enough and light enough to be considered truly portable.

## Features

- Full System Control via large format LCD screen and environmentally resistant multi-function buttons.
- Standard PC based architecture with Core i7 CPU and 4 GBytes RAM. Allows standard office type applications and third party software to be installed for advanced use.
- Standard I/O includes USB2 for Keyboard and Mouse, VGA monitor output for connecting an external monitor for more in depth work
- 64 input channels capable of acquiring a range of analogue channels including Tachometers, Flowmeters, Voice, IRIG B and standard voltage inputs.
- 64 output channels capable of generating signals from +/-50mV to +/-10V full scale range.
- 24-bit Sigma Delta Acquisition Card with individual ADCs per channel ensuring synchronous acquisition across all channels.
- Built-in programmable IEPE conditioning for direct connection of accelerometers and other IEPE based devices (Strain Gauge and Charge Conditioning optional).
- Selectable 16 or 24 bit acquisition modes..
- Capable of recording in a number of data formats (HGL, SIR1000/3000, DATX, EDAS, and others)
- Multiple Media Combinations allowing users the choice of security, performance and extended durations. Tapes (AIT & LTO), removable disk (SSD and HD) and external media are supported.
- Full Replay capability either on the unit with local viewing of recorded data, or through the analogue outputs.
- Built-in real-time monitoring capability including FFT, Oscilloscopes, Peak hold bars. Optional rotating machinery and safety monitoring packages are available on request .
- 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.

## Specification

### Input Support

Channels	64 (in two banks of 32)
Connector	BNC
<b>Voltage</b>	
Standard Ranges	+/- 0.05, 0.1, 0.2, 0.5, 1.0, 2.0, 5.0, 10.0, 20.0V (under software control)
Coupling	AC & DC
Input Impedance	>1M $\Omega$
SNR	>120dB (24-bit mode)
Dynamic Range	>120dB (single gain range) >152dB (across all ranges)
Crosstalk	< -90dB @ 1kHz < -60dB @ 80kHz
Sample Rate	Selectable between 5kHz and 2500kHz (standard). Downsampling of individual channels available through the standard software.
<b>IEPE</b>	
Current	4mA constant current
Voltage	24V compliance
<b>Other Inputs</b>	
IRIG	IRIG-A and IRIG-B using any standard input
Audio	Voice Annotation via any standard input / PC mic input
Tachometer	Multi-tooth and Once Per Rev via any standard input (may require additional external conditioning)

### Output Support

Channels	64 (in two banks)
Connector	BNC
Headphone Jack	Software selectable amplified output from any channel during playback

### General

Dimensions	19" (450mm) x 12" (300mm) x 6U (264mm)
Weight	<15kg
Power	110-240Vac, 50-60Hz mains as standard. 12Vdc (Option) Battery (Option)
Certification	CE

### Media Support (Standard)

30GB 2.5" SSD (built in)	Operating System
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### Media Options

2 x 2.5" Removable HDD	Data Space
2 x AIT Series Tape Drive	Data Archive / Replay
1 x LTO Series Tape Drive	Data Archive / Replay

Any Combination of 1 Removable Disk and Tape Media may be chosen.

**HDR Models**

The HDR Series includes the following models

- HDR0400—4 Channel Analogue Input only
- HDR0800—8 Channel Analogue Input only
- HDR1600—16 Channel Analogue Input only
- HDR3200—32 Channel Analogue Input only
- HDR6400—64 Channel Analogue Input only
- HDR0404—4 Channel Analogue Input and Output.
- HDR0808—8 Channel Analogue Input and Output.
- HDR1616—16 Channel Analogue Input and Output.
- HDR3232—32 Channel Analogue Input and Output.
- HDR6464—64 Channel Analogue Input and Output.

**Software**

HGL Dynamics supplies the HDR series with Configuration, Calibration, Acquisition, Monitoring functionality which allows operation out of the box

Additionally HGL can supply

- Safety Monitoring Real-time Module
- Rotating Machinery Pack
- Basic Modal Analysis Pack
- Vibration Analysis Package
- Programmers API - allows remote control and data collection facilities
- MATLAB & WAV output data output modules for automated data transfer

**Data Formats**

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

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

**Pricing and Availability**

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

**UK & International**  
HGL Dynamics Ltd  
Hamilton Barr House  
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