



General

The HEIM DATaRec 4 ANH100 / ANH101 Modules are high speed analogue input or output modules.
The modules can operate as a standalone recording front-end (PC connection via USB 2.0 / 40 Mbit/s max. data rate¹⁾) or linked together with additional HEIM DATaRec 4 modules to a multi channel system via HeimLink.
Each input / output channel is completely independent.
The HEIM DATaRec 4 represents leading edge technology.

ANH100

2 channel high speed analogue input or output

Number of channels	2 input and 2 output
Operation mode	record or replay, E to E (E-E output always 16 bit and not digital filtered)
Input signal	SE or symmetrical (balanced) analogue voltage
Input signal range	$\pm 2 V_{peak}$, $\pm 1 V_{peak}$
Signal coupling	AC or DC
Input impedance	75 Ω or 100 k Ω (SE) / 200 K Ω (sym.) selectable
Time stamping	100 ns
Sampling rate	is settable per channel
Power consumption	16.8 watts typical
Power input range	17 – 28 V DC
Connector	separate input and output triax / three lugs
Dimensions	standard HEIM DATaRec 4 housing 48.1 x 184 x 124.5 mm (w x h x d) including fixing system
Weight	1120 g typical
Communication	HeimLink and USB interface USB ¹⁾ (max. data rate 40 MBit/s)
Display, button, LED	yes

High bandwidth mode

Analogue bandwidth	DC – 1.25 MHz to DC – 10 MHz (selectable)
Sampling ratio	2.5; no mirroring effect
Resolution	8 bit (DC-10 MHz) 16 bit (DC-64 MHz)
Dynamic	> 48 dB (8 bit) > 70 dB (16 bit)

Low bandwidth mode

Analogue bandwidth	DC – 2.44 KHz to DC – 1.25 MHz (selectable)
Sampling ratio	2.5; no mirroring effect
Resolution	16 bit
Dynamic	> 70 dB

Output

Output signal	SE or symmetrical (balanced) voltage
Output range	same as input
Dynamic	depending on the mode >48 dB or >70 dB
Impedance	75 Ω

Functions

Supported dataformat	each channel provides an independent 106 chapter 10 data stream replay of ANH101 records up to 10 MHz bandwidth
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Technical Specification HEIM DATaRec 4 ANH100 / ANH101

ANH101

1 channel high speed analogue input or output

Number of channels	1 input and 1 output
Operation mode	record or replay, E to E (E-E output always 16 bit and not digital filtered)
Input signal	SE or symmetrical (balanced)
Input signal range	$\pm 2 V_{\text{peak}}$, $\pm 1 V_{\text{peak}}$
Signal coupling	AC or DC
Input impedance	75 Ω or 100 k Ω (SE) / 200 K Ω (sym.) selectable
Time stamping	100 ns
Power consumption	max. 14.8 watts max. 20.5 watts
Power input range	17 – 28 V DC
Connector	separate input and output triax / three lugs
Dimensions	standard HEIM DATaRec 4 housing 48.1 x 184 x 124.5 mm (w x h x d) including fixing system
Weight	1080 g typical
Communication	HeimLink and USB interface USB (max. data rate 40 Mbit/s)
Display, button, LED	yes

High bandwidth mode

Analogue bandwidth	DC – 1.875 MHz to DC – 30 MHz (selectable)
Sampling ratio	2.5; no mirroring effect
Resolution	8 bit (DC-30 MHz) 16 bit (CD-12.9MHz)
Dynamic	> 48 dB (8 bit) > 70 dB (16 bit)

Low bandwidth mode

Analogue bandwidth	DC – 7.32 KHz to DC – 1.875 MHz (selectable)
Resolution	16 bit
Sampling ratio	2.5; no mirroring effect
Dynamic	> 70 dB

Output

Output signal	SE or symmetrical (balanced) Voltage
Output range	same as input
Dynamic	depending on the mode >48 dB or >70 dB
Impedance	75 Ω

Functions

Supported dataformat	each channel provides an independent IRIG 106 chapter 10 data stream replay the ANH100 records
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Environmental specifications

ANH100 / ANH101

Vibration	5 g
Shock	10 g
Temperature operational	IEC 60068-2-14-Nb
Standalone module	-20 °C - 70 °C -30 °C - 70 °C ²⁾
Link chain system	-10 °C - 55 °C -20 °C - 55 °C ²⁾
Storage	-40 °C - 85 °C
Humidity	0 - 93% relative, non-condensing
EMI	DIN EN61000 / DIN EN61326 ³⁾

Notes

Performance varies depending on the installation environment. The shown values were measured using an appropriately designed test system including the HEIM DATaRec 4 power supplies under nominal conditions of temperature, voltage, etc..

Performance is significantly influenced by storage medium type, host computer performance and load, used acquisition software, signal module configuration, power supplies and cabling.

- 1) under development
- 2) special start-up procedure required
- 3) for operation in industrial environment (according to DIN EN 61326) earthing of the module and / or shielded cable is necessary to prevent influences by external electromagnetic distortions.

Applications



Miniature system
Single module system with direct link to the PC via USB 2.0



Distributed data acquisition system
Remotely located modules (up to 768 channels)



Compact system
Centralized acquisition system with up to 768 channels



Distributed multi channel system
Remotely located groups of modules (up to 768 channels)



GSS base system, up to six internal Signal Modules



Decentralized system
Base system, module extender and external storage