



General

The HEIM DATaRec 4 ETH100 Module is a 2 channel Ethernet input or output module
 The module can operate as a standalone recording front-end (PC connection via USB 2.0 / max. data Rate 40 Mbit/s¹⁾) or linked together with additional HEIM DATaRec 4 Modules to a multi channel system via HeimLink.
 Each channel is completely independent.
 The HEIM DATaRec 4 represents leading edge technology.

2 channel Ethernet input or output

Number of channels	2
Mode	input or output, no E to E mode
Input format	10 / 100 / 1000 Mbit/s Ethernet bus communication network interface Ethernet IEEE 802.3 industry standard 10 Mbps baseband CSMA/CD (10BASE-T) 100 Mbps baseband CSMA/CD (100BASE-TX) 1000 Mbps baseband
Total data rate	max. 600 Mbit/s (combined channel 1 and channel 2)
Local buffer	256 Mbyte
Recorded information	destination address, source address, length, data, FCS (checksum), the module also records runt packets (collision fragments)
Additional information	there are flags available in the data packet for all messages for frame or CRC error, data buffer overflow and Ethernet bus speed
IP address	the module records all message received on the Ethernet bus

Time accuracy	5 µs
Message generation ¹⁾	a free (up to 1600 byte long) message can be programmed for both channels independently to transmit on the Ethernet bus.
Message rate ¹⁾	the transmitted message rate can be set from 1 ms to 60 seconds in 1 ms steps
Power consumption	10 watts typical
Power input range	17 – 28 V DC
Connector	2 x 9-pin D-Sub (female)
Dimensions	standard HEIM DATaRec 4 housing 37.1 x 184 x 124.5 mm (w x h x d) including fixing system
Weight	760 g typical
Communication	HeimLink and USB interface
Display, button, LED	yes

Functions

Supported dataformat	each channel provides an independent IRIG 106 chapter 10 data stream
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Environmental specifications

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⁾

Technical Specification HEIM DATaRec 4 ETH100

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

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