



General

The HEIM DATaRec 4 VCR100 / VCP100 Modules are 4 channel video + voice modules (VCR100 input; VCP100 output). The modules can link together with additional HEIM DATaRec 4 Modules to a multi channel system via HeimLink. In addition the VCR100 can operate as a stand alone front-end (PC connection via USB 2.0¹⁾ / max. data rate 40 Mbit/s). Each input / output channel is completely independent. The HEIM DATaRec 4 represents leading edge technology.

VCR100

4 video + voice input channels

Number of channels	4 video channels, 1 audio channel per video input
Operation mode	record video buffered output DCM output
Recorded data rate	1 to 15 Mbit/s per channel
Time stamping resolution	33.3 ms (NTSC), 40 ms (PAL / SECAM)
Video input signal	analogue video signal CVBS (Composite) and Y/C (S-Video)
Video input level	CVBS / Y: 1 V _{pp} +3 dB/-6 dB (with AGC); C: 0.3 V _{pp} +3 dB/-6 dB (with AGC)
Video input impedance	75 Ω
Video input format	NTSC, up to 720 x 480 PAL / SECAM, up to 720 x 576
Video monitor output level	as input level (terminated with 75 Ω)
Video monitor output impedance	75 Ω (series resistor)
Video sampling format	4:2:0
Video output resolution filter	D1, HD1, SIF,
Video encoding algorithm	MPEG-2 (MP@ML)
Video GOP-Structure	IIIIIII, IPPPPPPPP, IBPBPBPBP or IBBPBBPBB

Video GOP-Size	1 to 252
Audio input level	1 V _{RMS}
Audio input impedance	100 kΩ
Audio sampling frequency	48 kHz
Audio bitrate	32; 48; 56; 80; 96; 112; 128, 160; 192 kbit/s,
Audio encoding algorithm	MPEG-1 (layer 2)
Audio monitor output level	as input level (terminated with 47 kΩ)
Audio monitor output Impedance	100 Ω series resistor with 47 kΩ termination
MPEG2-TS output	data & clock (RS-422 differential or single ended TTL-level)
Power consumption	20 watts typical
Power input range	17 – 28 V DC
Connector	62 Pin D-Sub male (Video signals) 24 Pin D-Sub female (DCM out)
Dimensions	standard HEIM DATaRec 4 housing 37.1 x 184 x 124.5 mm (w x h x d) including fixing system
Weight	1020 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
Time insertion	yes
Text insertion	80 characters
Position	user defined

Technical Specification HEIM DATaRec 4 VCR100 / VCP100

VCP100

4 video + voice output channels

Number of channels	4 video channels 2 audio channels per video channel
Operation mode	replay DCM input
Video output signal	analogue video signal CVBS (Composite), Y/C (S-Video) or RGB with separate Sync.
Video output level	CVBS / Y: 1 Vpp ; C: 0.3 Vpp; RGB: 0.7 Vpp terminated with 75 Ω
Video output impedance	75 Ω termination
Video input resolution filter	D1, 3/4D1, 2/3D1, HD1, SIF (all expanded to D1)
Audio output signal	dual (Stereo) or mono analogue audio signal (per channel)
Audio output level	1 V _{RMS}
Audio output impedance	100 Ω series resistors with 47 kΩ termination
Output format	NTSC, PAL or SECAM as recorded
MPEG2-TS input	Data & Clock (RS-422 differential or single ended TTL-level)
Power consumption	22 watts typical
Power input range	17 – 28 V DC
Connector	62 Pin D-Sub female (video signals) 24 Pin D-Sub male (DCM input)
Dimensions	standard HEIM DATaRec 4 housing 48.1 x 184 x 124.5 mm (w x h x d) including fixing system
Weight	1020 g typical
Communication	HeimLink
Display, button, LED	yes

Functions

Supported dataformat	each channel provides an independent IRIG 106 chapter 10 data stream
Time insertion	yes
Text insertion	80 characters
Position	user defined

Environmental specifications VCR100 / VCP100

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