

HRHD+ Series

Multi-Channel Digital Video Recorders



The HRHD+ Series is a high-performance digital recording system that combines the benefits of digital recording with the advanced processing of a multiplexer. HRHD+ features XtraStor, Honeywell's sophisticated, proprietary compression algorithm that provides more storage on smaller media without sacrificing image quality – resulting in days, weeks and even months of high-resolution video storage.

With its versatile processing capabilities, HRHD+ can capture at a rate of up to 60 images per second, while allowing selection of the recording speed and picture quality for each of the camera inputs. Additional recording features include alarm and motion detection, user-defined recording schedules, and multiple recording modes.

The HRHD+ Series generates compact encrypted archive video clips as self-executable files. Honeywell's minibank format produces an executable (.exe) file containing both the video clip and reader, allowing you to simply run the clip

in its original, unalterable format on any PC, without the need for reader software.

The built-in network connection provides remote viewing and control over LAN/WAN, ISDN or DSL. The Windows-based remote software package allows secure operation and management of multiple HRHD+ locations.

The DVR can be placed on a desktop or rack-mounted for easy access to the front panel controls. The convenient jog shuttle operates just like a VCR, while intuitive, multilingual GUI provides easy-to-use displays for everyday operation and system setup.

With its superior digital technology, flexible feature set and user-friendly operation, the HRHD+ Series provides a powerful, digital solution for a variety of video surveillance applications.

FEATURES

- 4, 9, 16 looping video inputs (model dependent)
- Long-term video storage using XtraStor Technology
- Records/plays high-definition video (720 x 480 NTSC; 720 x 576 PAL) with built-in hard drive options up to 500 GB
- Duplex recording mode with a capture rate up to 60 ips
- Single-channel audio recording/playback (records audio at 1 ips or faster)
- Archive video clips directly to a USB 2.0 storage device
- Spot monitor
- PTZ dome control
- Scalable video recording: 60 ips (336 x 224) or (672 x 224) - NTSC 50 ips (336 x 272) or (672 x 272) - PAL
- Remote access through PSTN, LAN/WAN (internal NIC), DSL and ISDN (remote access software included)
- Linux OS — OS embedded in flash
- External extension SCSI HDD (RAID)

HRHD+ Series

Multi-Channel Digital Video Recorders

FEATURES & BENEFITS

High-Resolution Image Capture

With up to 672 x 224 NTSC (672 x 272 PAL) recording resolution, HRHD+ DVRs use XtraStor technology to record and retrieve video from internal disk storage, as well as optional external storage through SCSI-RAID towers. This advanced video compression technique permits long-term video storage. With its capture rate of up to 60 images per second, critical information is processed accurately and efficiently.

Flexible Recording Options

The HRHD+ Series performs advanced processing on the 16 input cameras, allowing selection of both the recording speed and picture quality per camera. Further options exist to control recording by schedules, external inputs or selectable motion detection. This flexibility provides a customized video processing system for each installation.

Remote Access Software

Using the supplied Remote Access Software (RAS), you can control and configure your HRHD+ unit from virtually any location. The RAS program is an integrated software tool, which controls system management, video monitoring and image playback of multiple HRHD+ remote sites. The RAS software provides secure password protected communications.

Instantaneous Search and Retrieval

Recording digitally eliminates the need to search through hours of videotape. The HRHD+ DVRs allow for quick searches of the video database by event, calendar or time/date.

Exceptional Picture Quality with XtraStor

The HRHD+ Series delivers crystal clear display resolution up to 720 x 480 NTSC (720 x 576 PAL). With its multiple, user-definable image quality settings per camera, HRHD+ is flexible and meets the needs of the vast majority of applications. XtraStor enables high-quality video while using minimal hard drive space.

Advanced Video Encryption

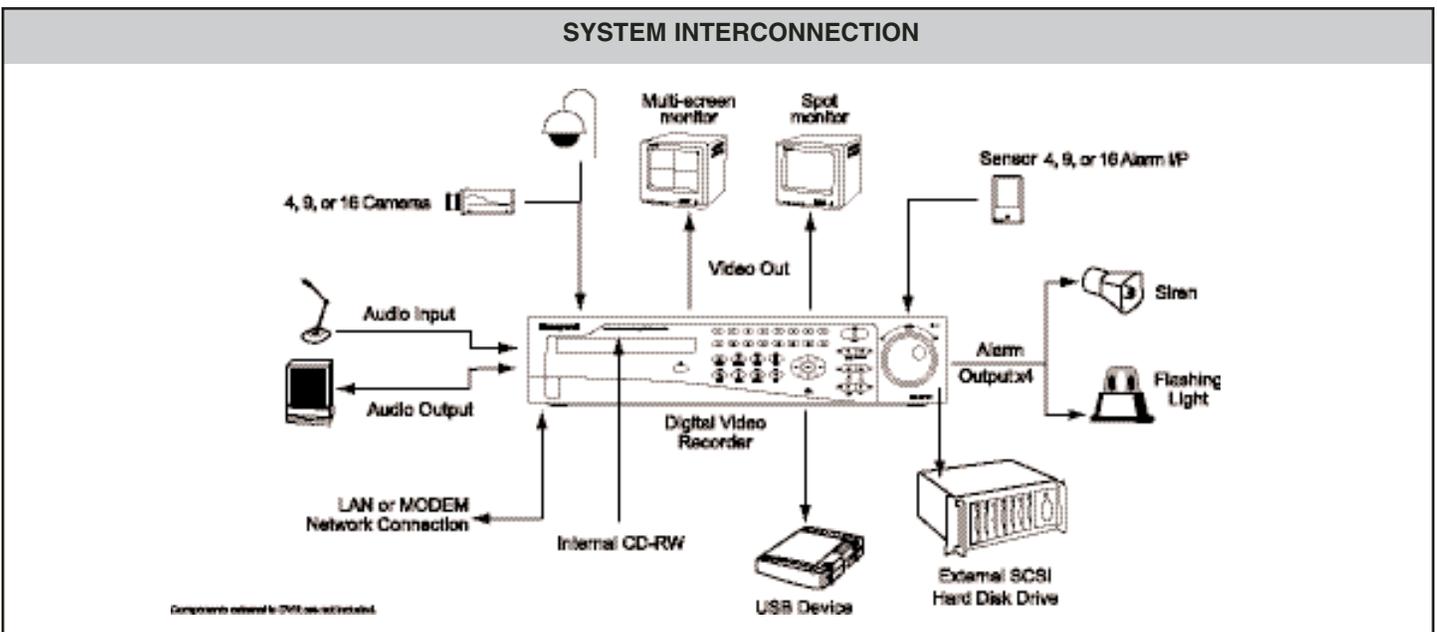
Every recorded image contains a unique fingerprint that is chained with the preceding and succeeding images (chained-fingerprinting). This ensures that the video images cannot be modified with any available PC software – enabling a solid chain of evidence.

Easy to Install, Configure and Operate

An HRHD+ DVR works like a VCR. It's easy-to-use GUI and front panel controls deliver the benefits of digital recording, with minimal training. Its convenient jog-shuttle dial allows video review using step-by-step or variable speed control.

PTZ Dome Control

Control of Honeywell Video Systems' and other manufacturers' PTZ domes is accessible from front panel controls or through the remote software.



RECORDING TIMES

| HRHD+ Series Recording Time (based on 160GB) | | | | | | | | | |
|--|---|-------|------------------|-------|--------------|-------|-----------------|-------|--|
| Image Recording Compression Rate | Recording Picture Quality Mode (336 x 224 NTSC) | | | | | | | | |
| | LOW 2 KB | | STANDARD 3 KB | | HIGH 7 KB | | V-HIGH 18 KB | | |
| (sec/img) (img/sec) | Hours | Days | Hours | Days | Hours | Days | Hours | Days | |
| 0.02 60 | 370 | 15.4 | 247 | 10.3 | 106 | 4.4 | 41 | 1.7 | |
| 0.03 30 | 741 | 30.9 | 494 | 20.6 | 212 | 8.8 | 82 | 3.4 | |
| 0.05 20 | 1,111 | 46.3 | 741 | 30.9 | 317 | 13.2 | 123 | 5.1 | |
| 0.10 10 | 2,222 | 92.6 | 1,481 | 61.7 | 635 | 26.5 | 247 | 10.3 | |
| 1 1 | 22,222 | 925.9 | 14,815 | 617.3 | 6,349 | 264.6 | 2,469 | 102.9 | |

| HRHD+ Series Recording Time (based on 320GB) | | | | | | | | | |
|--|---|---------|------------------|---------|--------------|-------|-----------------|-------|--|
| Image Recording Compression Rate | Recording Picture Quality Mode (336 x 224 NTSC) | | | | | | | | |
| | LOW 2 KB | | STANDARD 3 KB | | HIGH 7 KB | | V-HIGH 18 KB | | |
| (sec/img) (img/sec) | Hours | Days | Hours | Days | Hours | Days | Hours | Days | |
| 0.02 60 | 741 | 30.9 | 494 | 20.6 | 212 | 8.8 | 82 | 3.4 | |
| 0.03 30 | 1,481 | 61.7 | 988 | 41.2 | 423 | 17.6 | 165 | 6.9 | |
| 0.05 20 | 2,222 | 92.6 | 1,481 | 61.7 | 635 | 26.5 | 247 | 10.3 | |
| 0.10 10 | 4,444 | 185.2 | 2,963 | 123.5 | 1,270 | 52.9 | 494 | 20.6 | |
| 1 1 | 44,444 | 1,851.9 | 29,630 | 1,234.6 | 12,698 | 529.1 | 4,938 | 205.8 | |

| HRHD+ Series Recording Time (based on 500GB) | | | | | | | | | |
|--|---|---------|------------------|---------|--------------|-------|-----------------|-------|--|
| Image Recording Compression Rate | Recording Picture Quality Mode (336 x 224 NTSC) | | | | | | | | |
| | LOW 2 KB | | STANDARD 3 KB | | HIGH 7 KB | | V-HIGH 18 KB | | |
| (sec/img) (img/sec) | Hours | Days | Hours | Days | Hours | Days | Hours | Days | |
| 0.02 60 | 1,157 | 48.2 | 772 | 32.2 | 331 | 13.8 | 129 | 5.4 | |
| 0.03 30 | 2,315 | 96.5 | 1,543 | 64.3 | 661 | 27.6 | 257 | 10.7 | |
| 0.05 20 | 3,472 | 144.7 | 2,315 | 96.5 | 992 | 41.3 | 386 | 16.1 | |
| 0.10 10 | 6,944 | 238.4 | 4,630 | 192.9 | 1,984 | 82.7 | 772 | 32.2 | |
| 1 1 | 69,444 | 2,893.5 | 46,296 | 1,929.0 | 19,841 | 826.7 | 7,716 | 321.5 | |

Record duration or the quality of images that can be recorded on the HRHD's hard drive, can vary from one-half to two times the typical results shown in the charts above. These results are dependent on several factors, including the amount of activity or change in picture and the overall light level or noise in the video signal.

***When a user records audio, 6 KB per channel should be added to the above values.*

HRHD+ Series

Multi-Channel Digital Video Recorders

SPECIFICATIONS

Video

- Signal Format: NTSC or PAL
- Video Inputs:
 - Composite:
 - 4 looping inputs (HRHD4+)
 - 9 looping inputs (HRHD9+)
 - 16 looping inputs (HRHD16+)
 - BNC, 1 Vp-p, Auto-Terminating, 75 Ω
- Monitor Outputs:
 - Composite: 1 output BNC, 1 Vp-p, 75 Ω
 - S-Video: 1 output Y/C
 - Spot: 1 output BNC
- Display Resolution: 720 x 480 (NTSC), 720 x 576 (PAL)
- Recording Resolution: 336 x 224 or 672 x 224 (NTSC); 336 x 272 or 672 x 272 (PAL)
- Playback/Record Speed: 60 ips or 30 ips (NTSC); 50 ips or 25 ips (PAL)

Audio

- Input: 1 line input or Mic (programmable), RCA
- Output: 1 line output, RCA

Alarm

- Inputs: 4 TTL (HRHD4+)
 - 9 TTL (HRHD9+)
 - 16 TTL (HRHD16+)
- Programmable as NO/NC

- Output: 4 TTL, Open collector

- Reset Input: 1 TTL

Network Connectivity

- RJ-45: 10/100 Mbps Base Ethernet
- RS-485: PTZ control or remote control option, Terminal block
- RS-232: Standard RS-232 connection for external modem, DB9 connector

Storage

- Primary Storage: EIDE Hard Drives (up to 2) provides up to 500 GB
- Secondary Storage:
 - Clip Copy: USB HDD (V2.0), CD-RW, Memory Stick
 - External: SCSI — RAID Storage Towers

Ports

- USB: USB2.0 2 Port, Clip Copy

Operating System

- OS: Linux
- Firmware: OS in Flash Memory

Physical

- Dimensions (W x H x D):
 - 16.9 in. x 3.5 in. x 15.9 in.
 - (43.0 cm x 8.8 cm x 40.5 cm)
- Weight: 17.98 lbs (8.16 kg)
- Operating Temperature: 41°F to 104°F (5°C to 40°C)
- Operating Humidity: 0% to 90%
- Power: 100 VAC to 240 VAC, 60/50 Hz
- Input Voltage: 24 VDC, 6.3 A (Adapter)
- Power Consumption: Max 90 W

Approvals

- FCC, CE, UL

ORDERING

HRHD16 C 500 X

Signal Format

X PAL
NTSC

Storage

80 80 GB Fixed IDE HDD 320 320 GB Fixed IDE HDD
160 160 GB Fixed IDE HDD 500 500 GB Fixed IDE HDD

CD-RW

Internal CD-RW Drive (standard with all models)

Model

HRHD4 4-channel DVR
HRHD9 9-channel DVR
HRHD16 16-channel DVR

Design and specifications subject to change without notice.

Honeywell Video Systems

171 Eileen Way
Syosset, NY 11791
800 796 CCTV

www.honeywell.com

L/HRHD+/D
January 2005
2005© Honeywell International Inc.

Honeywell