

## Digital Video Recorder

**HNDR-P2424 (8Ch. Realtime Recording, 8Ch. Audio)**

**HNDR-P4848 (16Ch. Realtime Recording, 16Ch. Audio)**



Digital Video Recorder



Monitoring



Playback



Remote App.



Web App.



## Features

**Full-Frame Displaying & Recording for 8 channels, 16channels with 8Ch, 18Ch. Audio**

**Excellent Image Quality and File Size by Hardware MPEG-4**

**High Resolution ( 704 x 480, 704 x 240, 320 x 240)**

**Less CPU burden**

**Max. 16 Alarm inputs / Max. 8 Alarm Outputs**

**Full-Duplex Synchronized Audio Comm. & Audio Recording Support**

**Diverse PTZ Device support**

**Recording by Motion and / or Sensor Detection**

**Remote Access through HNDR-NET or HNDR-WEB**

**Smart Search for Simple Playback**

**Powerful Scandome II Control (Preset. Guard Tour, Home Function ...)**

**Support Transaction software ( POS, ATM, Cash Register )**

**Support Access Control (Biometric access, Proximity Detecting)**

	HNDR-P2424	HNDR-P4848
CPU , GHz	Pentium4 2.8	
OS	Windows 2000 Professional, Windows XP Home	
RAM	256MB	
HDD	1HDD Default (Expandable Max. 6HDD, 1.5TB)	
VGA	64 MB ATI	
LAN	10/100 Mbps	
Video Input	8ch BNC, Composite	16ch BNC, Composite
Video Output	VGA(YUV,RGB24), 1ch BNC,1ch RCA(Sequence)	
Video signal Type	NTSC/PAL, EIA/CCIR	
Audio Input	1 ch ~ 8ch	1 ch ~ 16ch
Audio Output	1 ch	
Sensor Input	1 ch ~ 8ch	1 ch ~ 16ch
Sensor Output	1 ch ~ 4ch	1 ch ~ 8ch
Video compression	Hardware MPEG4 (Recording/Transmission)	
Resolution	320x240, 704x240, 704x480	
Compressed File size	1Kb~2Kb	
Split	1, 4, 6, 8, 10, 16	
Max. Display (PAL)	240fps	480fps
Max. Recording (PAL)	240fps	480fps
Recording Mode	Continuous/ Motion/ Sensor/ Sensor&Motion/Priority motion	
Back-up	CD-RW, DVD, DAT, SCSI, S-HDD( Schedule/ Manual Backup)	
Viewer S/W	Backup Viewer, Quick viewer, Media Player	
Remote trans. Method	PSTN / ISDN / LAN / Leased Circuit	
Remote trans. Speed	LAN : ~120fps, ISDN : 3~10fps, PSTN : 1~5fps	
Network	Up to 20 users can connect at once	
Pre/Post Alarm Control	Emergency Notifying, PTZ Control, Remote Playback 4 frames RS-485 (For PTZ Control)	
<u>Electrical</u>		
Power Source	AC 110/220 Selectable (100~120V ±10% or 200~240V ±10%)	
Power Consumption	Max. 110W (Power capacity 300 W)	
Connector	Video Input BNC Video Output BNC (Sequence & Part)	
Fan filter	Front side, Easy replacement	
<u>Environmental</u>		
Operating Temperature	-10 ~ 60 (Recommended -10 ~ 45 )	
Operating Humidity	10% ~80% RH (non-condensing)	
<u>Mechanical</u>		
Material	Steel(Body), Aluminum(Front Door)	
Color	Light Gray	
Weight	Approx. 18Kg	
Dimensions (WxHxD)	444 x 178 x 550 mm	

## File Size (In case of HNDR-P Series)

*Note. With 60fps Recording condition*

Resolution	Compression Method	Compression Level	Image Size(KB)	Disk Space for 1Hour (MB)	Bandwidth (Mbps)
352 x 240	MPEG-4	50	0.83	179	4.3
		72	1.60	347	8.3
		82	2.83	611	14.7
		90	6.02	1300	31.2
704 x 480	MPEG-4	50	3.21	693	16.6
		72	6.08	1313	31.5
		82	9.65	2084	50
		90	19.53	4218	101.2

**This table is just a guide for Model selection and, the actual results may be different from the above data**

- SET

External Design



- BOARD

## HNDR – P2424



240 Frame(8ch) Board

+



Watchdog wire

+



1 TV-OUT Cable



Sensor Cable

+



Video Cable

+



RS-485 Board



Audio Input Cable

+



BNC Board

+



RS-232 Cable

## HNDR – P2424A



**240 Frame(8ch) Board**

+



**Watchdog wire**

+



**Sensor Board & Cable**

+



**Video Input Cable**

+



**Audio Input Cable**

+



**RS-485 Board**



**RS-232 Cable**

## HNDR – P4848



480 Frame(16ch) Board

+



Watchdog wire

+



1 TV-OUT Cable

+



Cable board to board



Sensor Cable x 2

+



Video Cable

+



RS-485 Cable



Audio Input Cable

+



BNC Board



RS-232 Cable



## HNDR – P4848A



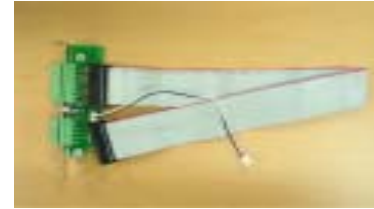
480 Frame(16ch) Board

+



Watchdog wire

+



Sensor Board & Cable x 2

+



Cable board to board

+



Video Input Cable

+



RS-485 Cable



Audio Input Cable



RS-232 Cable

## Testing of image size



k bite

No of Picture	A lot of Motion		A few of motion	
	Sound	No sound	Sound	No sound
# 1	1.48	2.29	0.65	1.73
# 2	1.67	2.04	0.90	1.90
# 3	2.00	1.74	0.76	1.80
# 4	2.22	1.22	1.07	1.94
# 5	2.21	1.70	0.88	1.84
# 6	2.63	1.80	1.06	1.95
# 7	2.38	1.86	0.89	1.80
# 8	2.37	1.54	1.01	1.99
# 9	2.11	1.63	0.81	1.80
# 10	2.07	1.78	1.00	2.00
# 11	1.90	1.88	0.76	1.86
# 12	2.22	1.89	1.02	2.03
# 13	1.95	2.30	0.84	1.87
# 14	2.16	2.49	0.99	2.01
# 15	2.11	2.47	0.70	1.82
# 16	2.40	2.31	0.93	2.04
# 17	2.47	2.28	0.64	1.83
# 18	2.75	1.98	0.87	2.00
# 19	2.62	1.71	0.66	1.81
# 20	2.58	1.66	0.82	2.03
# 21	2.13	1.97	0.66	1.87
# 22	2.06	1.73	0.92	1.98
# 23	1.94	1.68	0.64	1.86
# 24	2.26	1.41	0.90	2.05
# 25	1.87	1.89	0.69	1.85
# 26	2.21	1.74	0.93	1.97
# 27	2.35	2.13	0.71	1.86
# 28	2.60	2.34	0.90	1.97
# 29	2.86	2.69	0.71	1.80
# 30	3.35	2.45	0.91	1.80
Avg.	2.26	1.95	0.84	1.90

## Actual Recording duration based on 120GB HDD

DVR calculator							120
The variables in the fields below can be freely changed			The values in the fields below are calculated from the values on the left				
Frame per second (variable)	File size (in kB) (variable)	Number of Cameras (variable)	Rec. Duration for 1GB (in minutes)	Rec. Duration for 1GB (in hours)	Rec. Duration on 35GB (in hours)	Rec. Duration on 35GB (in days)	Rec. Duration on X GB insert it above (in days)
30	2.3	1	241.55	4.03	144.93	6.04	20.13
		2	120.77	2.01	72.46	3.02	10.06
		3	80.52	1.34	48.31	2.01	6.71
		4	60.39	1.01	36.23	1.51	5.03
		5	48.31	0.81	28.99	1.21	4.03
		6	40.26	0.67	24.15	1.01	3.35
		7	34.51	0.58	20.70	0.86	2.88
		8	30.19	0.50	18.12	0.75	2.52
		9	26.84	0.45	16.10	0.67	2.24
		10	24.15	0.40	14.49	0.60	2.01
		11	21.96	0.37	13.18	0.55	1.83
		12	20.13	0.34	12.08	0.50	1.68
		13	18.58	0.31	11.15	0.46	1.55
		14	17.25	0.29	10.35	0.43	1.44
		15	16.10	0.27	9.66	0.40	1.34
		16	15.10	0.25	9.06	0.38	1.26