

# HD-CCTV DVR

Rev 2.0



## HD1600F-R Full-HD & Full-Frame DVR supporting RAID

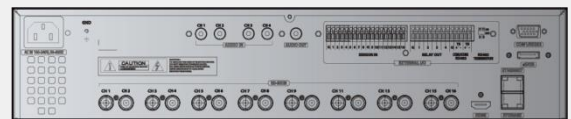
### Key Features

- 16ch HD-SDI Standalone DVR
- Certified by HDcctv Alliance
- Max. 480/400fps Recording & Playback at Full-HD 1080p resolution
- Adjustable recording quality and framerate per each channel
- Supports High-resolutions over 1200TV lines at Live/Playback
- Supports Dual Codec(H.264,JPEG) & Multi Stream (HD, nHD(640x360))
- Full-HD 1920x1080 resolution output via HDMI port
- Various Live and Playback display (1/4/9/10/13/16 Split-screen)
- Robust IPFR (Intelligent Power Failure Recovery) DVR File System
- Max. 5 Internal SATA Type HDDs
- Hardwired RAID system supporting RAID level 1/5/10
- Supports Max. 128TB(NS04R connection via Gigabit ethernet) and Max. 32TB(e-SATA) external storage interface
- Date/Time, Calendar, Event, Thumbnail, Smart, Text Search available
- At-the-PC Playback of removed DVR HDD
- Lightning arrester on HD-SDI, RS-485, DIO ports
- Provides bundle CMS program, managing Max. 1,024 DVRs in various ways such as E-map, Viewset
- Java Viewer for Chrome, Firefox, Safari
- Supports various mobile platform (iPhone/Android Viewer, Mobile page)
- Provides Full SDK for easy and powerful customization

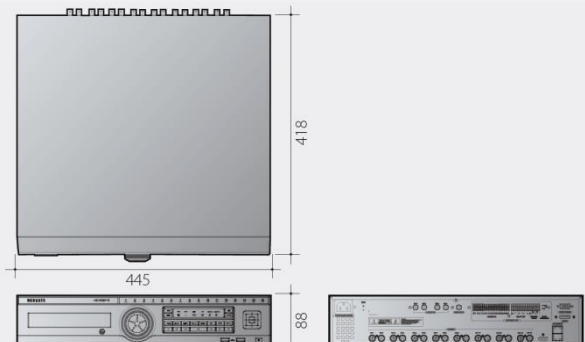
### Front



### Back



### Dimensions (Unit : mm)



## Specifications

|                          |   |  |   |
|--------------------------|---|--|---|
| <b>VIDEO INPUT</b>       |   | <b>NETWORK</b>                                     |   |
| Video input standard     | SMPTE 292M (HD-SDI)   | Interface  | 1 Gigabit Ethernet (10/100/1000Mbps)  |
| Resolution / Framerate   | SMPTE 274M (1080p, 1920x1080) : 25, 30, 29.97 fps<br>Input format auto detection        | Type   | Static IP, Dynamic IP, xDSL   |
| Connectors               | 16ch, 75Ω BNC connector   | DDNS   | WNS, DynDNS, NoIP, WRS  |
| <b>VIDEO OUTPUT</b>      |   | Bandwidth limit                                    | Supported   |
| Video output             | HDMI  | NTP  | Server / Client / Both  |
|                          | 1, 4, 9, 10, 13, 16 split-screen  | Users  | 10 Monitoring, 2 Playback   |
|                          | User defined sequence / Alarm pop-up  | Streaming  | 1 HD, H.264 stream, Same as recording setting   |
|                          | 1920 x 1080p via HDMI port  |  | 1 additional H.264 stream, nHD(640 x 360)   |
| <b>RECORDING</b>         |   | 1 JPEG stream, nHD(640 x 360) for e-mail or mobile |   |
| Compression              | H.264 / JPEG  | <b>SECURITY</b>                                    |   |
| Resolution               | 1920 x 1080   | User level   | 1 admin, 10 users   |
| Rate                     | 480/400 fps at 1080p  | User privilege                                     | Menu, PTZ, Relay, Playback, Power, Copy, Network MIC                                      |
| Quality                  | 1080p, 10 levels up to 12Mbps   | IP filtering                                       | Supported   |
| Mode                     | Manual & Event / Schedule & Event / Continuous & Event                                  | <b>STORAGE &amp; BACKUP</b>                        |   |
| Schedule                 | 24hrs / 7days   | Storage devices                                    | 5 internal SATA HDDs, 1 external eSATA Interface,<br>1 Gigabit network for storage(NS04R) |
| <b>PLAYBACK</b>          |   | RAID Level   | 1/5/10 Supported  |
| Mode                     | Instant playback / search   | File system  | Proprietary file system, Data-loss protection against power-failure                       |
| Speed                    | Max. 480/400 fps at 1080p   | Capacity   | Max. 32TB with eSATA, Max. 128TB with cascaded NS04R                                      |
| Search type              | Time, Calendar, Timeline, Event, Thumbnail, Smart, Text                                 | Backup type  | Multi-channel or Single channel avi file  |
| Block playback           | 24hours ~ 99days  | Backup device                                      | USB drive (2 ports)   |
| <b>EVENT &amp; ALARM</b> |   | S.M.A.R.T.   | Temperature and Health checking   |
| Event source             | MD(Motion Detection), Sensor, Text, Video Loss  | <b>SERIAL &amp; I/O</b>                            |   |
| Event check Schedule     | 24hrs / 7days   | Serial port  | 1 RS-232C, 2 RS-485   |
| Event action             | Buzzer, Relay, E-mail, FTP, Alarm pop-up  | Sensor input                                       | 16 Dry-contacts   |
| MD area                  | 15 x 10   | Relay output                                       | 4 Relays  |
| Sensor input             | Dry contact (NO or NC selectable)   | <b>CONTROLLER</b>                                  |   |
| Text input               | POS/ATM support, AVE VSI Pro/Hydra support  | Device   | Front panel, IR remote, Joystick Keyboard, Mouse  |
| <b>SYSTEM ALARM</b>      |   | <b>SOFTWARE</b>                                    |   |
| Alarm source             | HDD fail, HDD almost full, Fan fail, Password fail, WRS fail                            | Web viewer   | Monitoring / Event / PTZ / Playback with IE   |
| Alarm action             | Warning message, Buzzer, E-mail, Relay  | Java viewer  | Monitoring / Event / PTZ with IE, Chrome, Safari  |
| <b>AUDIO</b>             |   | Mobile viewer                                      | Monitoring / PTZ / LogView with iPhone & Android  |
| Input/output             | Input 4ch RCA / output HDMI, RCA  | CMS  | Control Center Standard, Max. 1024 DVRs   |
| Compression              | 16KHz, 16bit sampling ADPCM   | SDK  | ActiveX(COM) SDK  |
| Direction                | Both  | <b>ENVIRONMENTAL &amp; PHYSICAL</b>                |   |
| <b>PTZ</b>               |   | Dimension  | 445(W) x 418(D) x 88(H) mm  |
| Protocols                | 35 models including C1080, C1080PT-Z20, Pelco-D, Pelco-P, Samsung, Panasonic and others | Weight   | 10 Kg (No HDD)  |
|                          |   | Operating Temperature                              | 5°C~45°C (41°F ~ 113°F)   |
|                          |   | Power  | AC free volt (100 ~ 240VAC), 50/60Hz  |
|                          |   | Power Consumption                                  | Max. 100W Typical 70W (1 HDD)   |
|                          |   | Approval   | KC, FCC, CE, RoHS, HDcctv   |