

# TURBO HD DVR

## Features and Functions

### Appearance Design

- Typical chassis design to guarantee the low noise and environmental protection of the device
- Front slot for insertion of DVD-R/W with bracket to make it more convenient to install and maintain

### Video Input and Transmission

- Self-adaptive HDTVI/HDCVI/AHD/CVBS signal input
- Up to 6 MP IP cameras input
- Long distance transmission over UTP and coaxial cable

### Compression and Recording

- H.265+/H.265/H.264+/H.264 encoding for the main stream, and H.265/H.264 for the sub-stream of analog cameras
- Connectable to H.265+/H.265/H.264+/H.264 IP cameras
- H.265+ can be enabled to improve encoding efficiency and reduce data storage costs
- Supports 4 MP lite
- Supports real-time 1080p lite and when enabled, the image effect is similar with 1080p
- Supports POS triggered recording and POS information overlay

### Video Output

- Simultaneous HDMI1 and VGA output at up to 1920 × 1080 resolution, and independent HDMI 2 output at up to 4K (3840 × 2160) resolution
- Separate CVBS output

### Storage and Playback

- Four SATA interfaces (up to 8 TB capacity per HDD) and 1 eSATA interface
- 16-ch synchronous playback
- Smart search for efficient playback
- Supports playback by main stream, or sub-stream for IP cameras
- Supports third party cloud storage (Dropbox/Google Drive/Microsoft OneDrive)

### Smart Function

- Supports multiple VCA (Video Content Analytics) events for both analog and smart IP cameras
- Supports 4-ch line crossing detection and intrusion detection, and 1-ch sudden scene change detection
- VQD (Video Quality Diagnostics)
- Supports PTZ control via Omnicast VMS of Genetec protocol

### Network & Ethernet Access

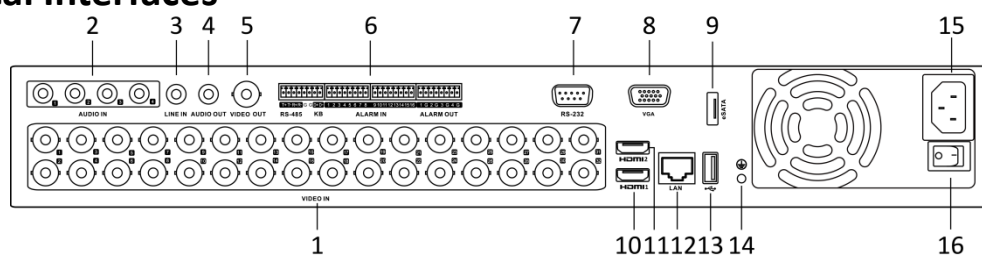
- Hik-Connect & DDNS (Dynamic Domain Name System) for easy network management
- One RJ45 10M/100M/1000M Ethernet network interface
- Output bandwidth limit configurable



## Specifications

| Model              |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video/Audio input  | Video compression         | H.265+/H.265/H.264+/H.264                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                    | Analog video input        | 32-ch<br>BNC interface (1.0 Vp-p, 75 Ω), supporting coaxitron connection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                    | HDTVI input               | 4 MP, 3 MP, 1080p25, 1080p30, 720p25, 720p30, 720p50, 720p60<br><b>Note:</b> The 3 MP signal input is only available for channel 1/2/3/4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                    | AHD input                 | 4 MP, 1080p25, 1080p30, 720p25, 720p30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                    | HDCVI input               | 1080p25, 1080p30, 720p25, 720p30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                    | CVBS input                | PAL/NTSC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                    | IP video input            | 8-ch (up to 40-ch)<br>Up to 6 MP resolution<br>Supports H.265+/H.265/H.264+/H.264 IP cameras                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                    | Audio compression         | G.711u                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                    | Audio input               | 4-ch, RCA (2.0 Vp-p, 1 KΩ)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                    | CVBS output               | 1-ch, BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704 × 576, NTSC: 704 × 480                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Video/Audio output | HDMI/VGA output           | 1-ch, 1920 × 1080/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                    | HDMI2 output              | 1-ch, 4K (3840 × 2160)/30Hz, 2K (2560 × 1440)/60Hz, 1920 × 1080/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                    | Encoding resolution       | When 1080p Lite mode not enabled:<br>4 MP lite/3 MP/1080p/1080p lite/720p/WD1/4CIF/VGA/CIF<br>When 1080p Lite mode enabled:<br>4 MP lite/3 MP/1080p lite/720p/720p lite/WD1/4CIF/VGA/CIF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                    | Frame rate                | Main stream:<br>When 1080p Lite mode not enabled:<br>For 4 MP stream access: 4 MP lite@15fps; 1080p lite/720p/WD1/4CIF/VGA/CIF@25fps (P)/30fps (N)<br>For 3 MP stream access: 3 MP/1080p/720p/WD1/4CIF/VGA/CIF@15fps<br>For 1080p stream access: 1080p/720p@15fps; 720p/WD1/4CIF/VGA/CIF@25fps (P)/30fps (N)<br>For 720p stream access: 720p/WD1/4CIF/VGA/CIF@25fps (P)/30fps (N)<br>When 1080p Lite mode enabled:<br>For 4 MP stream access: 4 MP lite@15fps; 1080p lite/720p lite/WD1/4CIF/VGA/CIF@25fps (P)/30fps (N)<br>For 3 MP stream access: 3 MP/1080p lite/720p lite/WD1/4CIF/VGA/CIF@15fps<br>For 1080p stream access: 1080p lite/720p lite/WD1/4CIF/VGA/CIF@25fps (P)/30fps (N)<br>For 720p stream access: 720p/WD1/4CIF/VGA/CIF@25fps (P)/30fps (N)<br>Sub-stream:<br>WD1/4CIF@12fps; CIF@25fps (P)/30fps (N) |
|                    | Video bit rate            | 32 Kbps to 6 Mbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                    | Audio output              | 1-ch, RCA (Linear, 1 KΩ)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                    | Audio bit rate            | 64 Kbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                    | Dual stream               | Support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                    | Stream type               | Video, Video & Audio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                    | Synchronous playback      | 16-ch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Network management | Remote connections        | 128                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                    | Network protocols         | TCP/IP, PPPoE, DHCP, Hik-Connect, DNS, DDNS, NTP, SADP, NFS, iSCSI, UPnP, HTTP, ONVIF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Hard disk          | SATA                      | 4 SATA interfaces                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                    | eSATA                     | Support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                    | Capacity                  | Up to 8 TB capacity for each disk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| External interface | Two-way audio input       | 1-ch, RCA (2.0 Vp-p, 1 KΩ) (independent)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                    | Network interface         | 1, RJ45 10M/100M/1000M self-adaptive Ethernet interface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                    | USB interface             | Front panel: 2 × USB 2.0<br>Rear panel: 1 × USB 3.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                    | Serial interface          | RS-232, RS-485 (full-duplex), Keyboard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                    | Alarm in/out              | 16/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| General            | Power supply              | 100 to 240 VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                    | Consumption (without HDD) | ≤ 45 W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                    | Working temperature       | -10 °C to +55 °C (+14 °F to +131 °F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                    | Working humidity          | 10% to 90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                    | Dimensions (W × D × H)    | 440 × 390 × 70 mm (17.3 × 15.4 × 2.8 inch)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                    | Weight (without HDD)      | ≤ 7 kg (15.4 lb)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Physical Interfaces



| Index | Description                                                         | Index | Description                |
|-------|---------------------------------------------------------------------|-------|----------------------------|
| 1     | VIDEO IN                                                            | 9     | eSATA Interface            |
| 2     | AUDIO IN, RCA Connectø                                              | 10    | HDMI1 Interface            |
| 3     | LINE IN                                                             | 11    | HDMI2 Interface            |
| 4     | AUDIO OUT                                                           | 12    | LAN Network Interface      |
| 5     | VIDEO OUT                                                           | 13    | USB Interface              |
| 6     | RS-485 Serial Interface, Keyboard Interface, ALARM IN and ALARM OUT | 14    | GND                        |
| 7     | RS-232 Serial Interface                                             | 15    | 100 to 240 VAC Power Input |
| 8     | VGA Interface                                                       | 16    | Power Switch               |