

## Product Key Features

### General

- Connectable to TVI HD and analog cameras;
- Supports UTC (Coaxitron) protocol for connecting camera over coax;
- Connectable to AHD cameras;
- Connectable to HDCVI cameras;
- Connectable to IP cameras;
- The analog signal inputs including TVI HD, AHD, HDCVI, and CVBS can be automatically recognized without configuration;
- Each channel supports dual-stream. And sub-stream supports up to WD1 resolution;
- The main stream of 2MP series supports up to 3 MP resolution for the first 4 channels.
- The main stream of 5MP series supports up to 5 MP resolution of all the channels;
- For 5MP series DVR, 5 MP long distance transmission can be enabled for the analog cameras;
- Independent configuration for each channel, including resolution, frame rate, bit rate, image quality, etc.;
- Encoding for both video stream and video & audio stream; audio and video synchronization during composite stream encoding;
- Supports enabling H.265+/H.264+ to ensure high video quality with lowered bit rate;
- H.265+/H.265/H.264+/H.264 encoding for the main stream, and H.265/H.264 encoding for the sub-stream of analog cameras;
- Connectable to H.265 and H.264 IP cameras;
- Defog level, night to day sensitivity, day to night sensitivity, and IR light brightness configurable for the connected analog cameras supporting these parameters;
- 4 MP/5 MP signal switch for the supported analog cameras;
- Watermark technology.

### Local Monitoring

- HDMI output at up to 4K (3840 × 2160) resolution;
- 1/4/6/8/9/16/25 screen live view is supported, and the display sequence of screens is adjustable;
- Live view screen can be switched in group and manual switch and automatic cycle live view are also provided, the interval of automatic cycle can be adjusted;
- CVBS output only serves as the aux output or live view output.
- Quick setting menu is provided for live view;
- The selected live view channel can be shielded;

- VCA information overlay in live view for the supported analog cameras and in smart playback for the supported analog and IP cameras;
- Motion detection, video-tampering detection, video exception alarm, video loss alarm and VCA alarm functions;
- The 5MP series DVR support VCA (line crossing detection and intrusion detection) of all channels. The 2MP series support 2-ch VCA (line crossing detection and intrusion detection). For the analog channels, the line crossing detection and intrusion detection conflict with other VCA detection such as sudden scene change detection, face detection and vehicle detection. You can only enable one function;
- For 5MP series DVR, the enhanced VCA mode conflicts with the 2K/4K output and 4 MP/5 MP signal input;
- Privacy mask;
- Several PTZ protocols (including Omnicast VMS of Genetec) supported; PTZ preset, patrol and pattern;
- Zooming in/out by clicking the mouse and PTZ tracing by dragging mouse.

### **HDD Management**

- Each disk with a maximum of 8 TB storage capacity;
- 8 network disks (8 NAS disks, 8 IP SAN disks or n NAS disks + m IP SAN disks ( $n+m \leq 8$ )) can be connected;
- Remaining recording time of the HDD can be viewed;
- S.M.A.R.T. and bad sector detection;
- HDD sleeping function;
- HDD property: redundancy, read-only, read/write (R/W);
- HDD group management;
- HDD quota management; different capacity can be assigned to different channels.

### **Recording and Playback**

- Holiday recording schedule configuration;
- Cycle and non-cycle recording modes;
- Normal and event video encoding parameters;
- Multiple recording types: manual, continuous, alarm, motion, motion | alarm, motion & alarm and event;
- 8 recording time periods with separated recording types;
- Supports Channel-Zero encoding;
- Main stream and sub-stream configurable for simultaneous recording;
- Pre-record and post-record for motion detection triggered recording, and pre-record time for schedule and manual recording;
- Searching record files by events (alarm input/motion detection);

- Customization of tags, searching and playing back by tags;
- Locking and unlocking of record files;
- Local redundant recording;
- When TVI HD, AHD, or HDCVI input is connected, the information including the resolution and frame rate will be overlaid on the bottom right corner of the live view for 5 seconds. When CVBS input is connected, the information such as NTSC or PAL will be overlaid on the bottom right corner of the live view for 5 seconds.
- Searching and playing back record files by camera number, recording type, start time, end time, etc.;
- Smart playback to go through less effective information;
- Main stream and sub-stream selectable for local/remote playback;
- Zooming in for any area when playback;
- Multi-channel reverse playback;
- Supports pause, fast forward, slow forward, skip forward, and skip backward when playback, locating by dragging the mouse on the progress bar;
- 8/16-ch synchronous playback.

### **Backup**

- Exports data by a USB, and SATA device;
- Exports video clips when playback;
- Video and Log, Video and Player, and Player are selectable to export for backup;
- Management and maintenance of backup devices.

### **Alarm and Exception**

- Configurable arming time of alarm input/output;
- Alarms for video loss, motion detection, video tampering, abnormal signal, video input/recording resolution mismatch, illegal login, network disconnected, IP confliction, record/capture exception, HDD error, and HDD full, etc.;
- Alarm triggers full screen monitoring, audio alarm, notifying surveillance center, sending email and alarm output;
- One-key disarms the linkage actions of the alarm input;
- PTZ linking for the VCA alarm;
- VCA detection alarm is supported;
- Supports coaxial alarm;
- System will automatically reboot when a problem is detected in an attempt to restore normal functionality.

### **Other Local Functions**

- Manual and automatic video quality diagnostics;

- Operable by mouse and remote control;
- Three-level user management; admin user can create many operating account and define their operating permission, which includes the permission to access any channel;
- Completeness of operation, alarm, exceptions and log writing and searching;
- Manually triggering and clearing alarms;
- Importing and exporting of configuration file of devices;
- Getting cameras type information automatically;
- Unlock pattern for device login for the *admin*;
- Clear-text password available;
- GUID file can be exported for password resetting;
- Multiple connected analog cameras supporting TVI HD or AHD signal can be upgraded simultaneously via DVR.

### **Network Functions**

- 1 self-adaptive 10M/100M/1000M network interface;
- IPv6 is supported;
- TCP/IP protocol, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, NFS, iSCSI, UPnP™ and HTTPS are supported;
- Supports access by GuardingVision. If you enable GuardingVision, the device will remind you the internet access risk and ask you to confirm the “Terms of Service” and “Privacy Statement” before enabling the service. You should create a verification code to connect to the GuardingVision;
- TCP, UDP and RTP for unicast;
- Auto/Manual port mapping by UPnP™;
- Remote search, playback, download, locking and unlocking the record files, and downloading files broken transfer resume;
- Remote parameters setup; remote import/export of device parameters;
- Remote viewing of the device status, system logs and alarm status;
- Remote keyboard operation;
- Remote HDD formatting and program upgrading;
- Remote system restart and shutdown;
- Supports upgrading via remote FTP server;
- RS-485 transparent channel transmission;
- Alarm and exception information can be sent to the remote host;
- Remotely start/stop recording;
- Remotely start/stop alarm output;
- Remote PTZ control;

- Two-way audio and voice broadcasting;
- Output bandwidth limit configurable;
- Embedded WEB server;
- If DHCP is enabled, you can enable DNS DHCP or disable it and edit the Preferred DNS Server and Alternate DNS Server.

### **Development Scalability**

- SDK for Windows and Linux system;
- Source code of application software for demo;
- Development support and training for application system.