# Video Management Server
# BP-VMS-500

## Key Features

- Powerful connection: 250 devices, 500 channels

- Unified management: IPC, NVR, smart device, access control device, entrance & exit device, cloud device, decoder, network keyboard, access control, alarm control, etc.

- High bandwidths: 512Mbps incoming bandwidth, 384Mbps forwarding bandwidth

- Strong compatibility: Standard ONVIF, VSS, VIID, and RTSP

- Rich functionality: Basic functions including live view, playback, sequence, view, video wall, e-map, two-way audio, broadcast, alarm linkage; smart functions including perimeter protection, face detection, face recognition, LPR, entrance & exit management, access control, basic attendance management, mixed-traffic detection, people counting, and data search

- Flexible access: Local client (C/S and B/S), PC client (C/S and B/S), and mobile client (iOS and Android)

- Stability and reliability: Embedded Linux OS, 802.1x authentication, ARP protection, HTTPS, SSH enabling/disabling, network fault tolerance, load balancing, multi-IP configuration, secure password, and IP address filtering

- Operation and maintenance: Provide a comprehensive management dashboard, server status, device/channel online status, HDD status, online users, bandwidth usage, packet loss rate, log search, etc.

- Abundant Interfaces: 4 Gigabit Ethernet interfaces, 24 alarm inputs, 8 alarm outputs, 4 USB3.0 interfaces, 1 HDMI interface, and 1 VGA interface

## Specification:

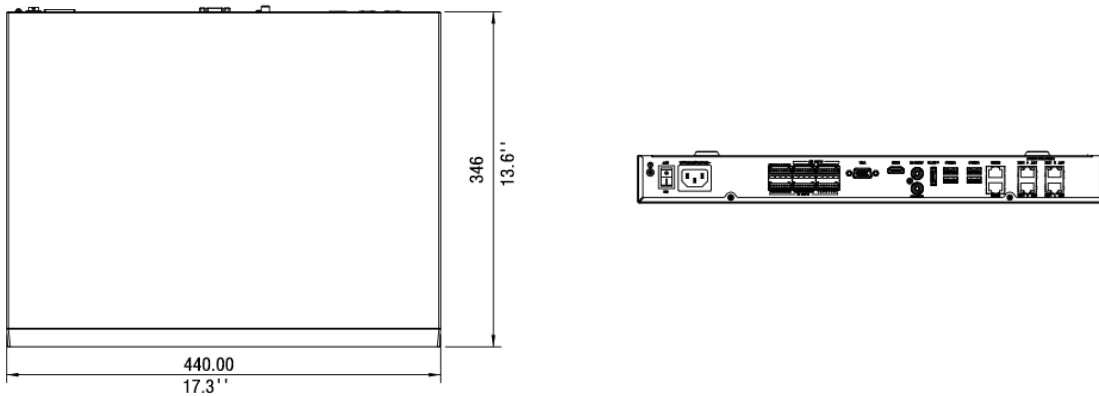| PERFORMANCE | |
|---|---|
| **Management** | |
| Type | Software and hardware integration |
| Total Devices | 250 devices, 500 channels |
| Cloud device | 250 |
| Access control device | 128 |
| Smart device | 100 smart encoding devices and entrance & exit devices, 256 channels |
| Decoder | 30 |
| Security gateway | 128 |
| Alarm control | 50 |
| Access control | 50 |
| Network keyboard | 50 |
| **Decoding** | |
| Video | U-Code, H.265, H.264 |
| Resolution | 12MP/8MP/6MP/5MP/4MP/3MP/1080P/960P/720P/960H/D1/2CIF/CIF/QCIF |
| Video output (local) | 1xHDMI, 1xVGA (independent output); HDMI supports 4K resolution |
| Decoding (standard) | 16x1080p@30 |
| Audio | G.711A, G.711μ, ACC |
| **Network** | |
| Incoming bandwidth | 512Mbps |
| Forwarding bandwidth | 384Mbps |
| Alarm receiving and forwarding | 100 alarms/s |
| Playback channels | Max. 24-ch central recording playback (16-ch playback on single client) |
| User management | Up to 500 users;<br>Up to 50 concurrent online users |
| Map resources | Max. 20MB per image, max. 800MB storage space, and no limit on the number of map resources;<br>Supported image format: PNG, BMP, and JPEG |
| Personnel management | Max. 10,000 persons, max. 100 departments;<br>Max. 6 library images for each person;<br>JPG image only, each 10KB-500KB, max. resolution 1672*1080;<br>Up to 16 vehicles can be added for each person |
| Image processing performance | Receive 100 vehicle/face images per second (1 original image and 1 thumbnail image are counted as 2 images).<br>Note: For example, if each device uploads 1 image per second, then 100 devices can be connected; if each device uploads 5 images per second, then 20 devices can be connected |
| Face library | Up to 128 face libraries, each with up to 50,000 faces |
| Vehicle library | Up to 16 vehicle libraries, each with up to 10,000 vehicles |
| People/vehicle image storage | Up to 256 channels |
| Alarm logs | Max. 200,000 |
| Operation logs | Max. 200,000 |
| Face snapshots | Max. 3000,000 |
| Face alarms | Max. 3000,000 |

| Vehicle pass-thru records | Max. 3000,000 |
|---|---|
| Mixed-traffic detection records | Max. 3000,000 |
| Access records | Max. 3000,000 |

| Basic Function | |
|---|---|
| Device management | IPC, NVR, smart device, access control device, entrance & exit device, cloud device, decoder, network keyboard, security gateway, alarm control, access control, etc. |
| Live view | 1/3/4/5/6/7/8/9/10/13/16/17/25/32/36/64 window display; custom window layout (64 window layout is not available on local client);<br>3/7 window layout in corridor mode;<br>Up to 3 auxiliary monitors (not support on local client);<br>Supports view, sequence, snapshot, digital zoom, PTZ control, patrol, fisheye, 5ePTZ, panoramic linkage, instant playback, recording, etc. |
| Playback | Play recordings saved on NVRs;<br>Supports normal playback, smart recording playback (local client does not support), event playback, and VCA recording playback;<br>Normal playback supports 1/3/4/5/6/7/8/9/10/13/16 window layout;<br>Supports up to 16-ch synchronous playback on single client (depending on NVR playback streaming performance);<br>Multiple playback speeds: -256x, -128x, -64x, -32x, -16x, -8x, -4x, -2x, -1x, 1/4x, 1/2x, 1x, 2x, 4x, 8x, 16x, 32x, 64x, 128x, 256x (depending on NVR playback streaming performance);<br>Supports snapshot, digital zoom, clipping, locking, tagging, rewinding/forwarding 30 seconds, zooming in/out on the timeline, synchronous playback, recording preview on timeline, etc.<br>Download recordings by file, time, etc. |
| Alarm | Supports alarm subscription, custom alarm level, alarm time template, and contacts management (B/S client);<br>Add, delete, edit, search, enable/disable alarm plan, and configure linkage actions for alarm plan, for example, live view, go to preset, alarm output, alarm to video wall (B/S client also supports email, buzzer, snapshot);<br>View real time and history alarm records; search history alarms by alarm source, time, alarm status, alarm type, and alarm level. |
| Audio | Two-way audio: supports two-way audio with IPCs and NVRs; allows up to one channel;<br>Broadcast: allows up to 128 audio channels.<br>(Note: The functions are not available on local client) |
| E-map | Supports local and online map (Emap); supported formats: JPG, PNG, BMP;<br>Add, delete, edit, and search map, hot spot (video channel, alarm input, door), and hot zone;<br>Select or customize icons for hot spots;<br>Max. 4 channels of live video and 16 channels of recordings on maps;<br>Supports flashing alarms, and allows user to view and acknowledge alarms on the map;<br>Max. 800MB storage space of map resources; up to 7 layers of maps are allowed |
| Video wall | Supports multi-model decoding devices;<br>Add, delete, edit, and search video walls; set parameters including video wall name, specification, resolution, binding/unbinding decoding channel;<br>Supports live view, playback, sequence on video wall;<br>One-click to save settings as a scene for quick recall and restoration of the layout;<br>Play signal source on video wall, turn on/off the screen, and virtual LED configuration |
| Local file | View local videos and images of video channels |

| SMART FUNCTION | |
|---|---|
| Face Recognition | |
| Face library management | Add, delete, edit, search face libraries; supports 128 face libraries;<br>Add, delete, edit, search, import, export person information; supports batch operation;<br>Search face information by name, ID number, gender. |
| Monitoring task | Face match alarm and face not match alarm |
| Realtime monitoring | View live video, snapshots and comparison records of monitoring cameras;<br>View body temperature and mask status;<br>Supports up to 4 channels of live video |

| People counting | |
|---|---|
| Realtime statistics | View live video of monitoring cameras;<br>Add, delete, edit, search people counting areas; up to 8 areas are allowed, each area allows up to 32 channels;<br>Set thresholds for people present alarms (critical/major/minor);<br>Add, delete, edit, search crowd density monitoring areas; up to 16 areas are allowed, each area allows up to 1 channel;<br>Set thresholds for crowd density alarms (critical/major/minor);<br>View people counting statistics of the monitored area and access status |
| Report statistics | Supports people counting statistics by minute/hour/day/month;<br>Use line chart or column chart to view the number of people in/out/present separately or combined;<br>View the number of people in/out/present, channel details for a certain time, and export report |

| Behaviour Search | |
|---|---|
| On VMS | Search alarm information on the VMS by pedestrian/non-motor vehicle/motor vehicle, time range, and alarm type (cross line detection, intrusion detection, enter area, leave area);<br>View alarm information including original and closeup images, attribute details, and alarm videos (10s). |
| On devices | Search alarm snapshots and recordings saved on NVRs/IPCs by time and alarm type (cross line detection, intrusion detection). |

| Access Control | |
|---|---|
| Permission management (B/S) | Set time template;<br>Assign permissions to access specified doors |
| Manual control | View door status, open/close doors manually |
| Visitor management | Sign in/out visitors, search visitor information by his/her name or the name of the visited;<br>Set visitor permission group/blocklist |
| Monitoring management | Add, delete, edit, search a blocklist library and its person information;<br>Add blocklist to a monitoring task and block persons on the blocklist |
| Search records | Search and export access records by time, door name, person name, card number, body temperature, direction, person type, mask status; view information such as body temperature, mask status, and authentication status;<br>Search and export attendance information by time, name, and person ID; view date, name, person ID, department, door, first in time, last out time, duration, access records, etc.;<br>Search and export blocklist alarms by time, name, and alarm source. |

| LPR | |
|---|---|
| Vehicle library management | Add, delete, edit, search vehicle libraries; supports 16 vehicle libraries;<br>Add, delete, edit, search, import, export license plate information; supports batch operation;<br>Search vehicles by plate number, plate type, plate color, and vehicle color |
| Monitoring task | Sync vehicle information classified by robbed vehicle, stolen vehicle, suspect vehicle, traffic violation, emergency control to device(s) for comparison;<br>Select one vehicle library or up to 32 vehicles for a monitoring task |
| Realtime monitoring | View live video, snapshots and comparison records of monitoring cameras;<br>View up to 4 channels of live video |

| Parking Lot | |
|---|---|
| Vehicle library management | Add, delete, edit, search vehicle libraries; supports 16 vehicle libraries;<br>Add, delete, edit, search, import, export license plate information; supports batch operation;<br>Search vehicles by plate number, plate type, plate color, and vehicle color. |
| Realtime monitoring | View live video of monitoring cameras;<br>Open gate remotely |
| Pass-thru records | Search pass-thru records by time, plate number, owner name, vehicle color, and entrance & exit |

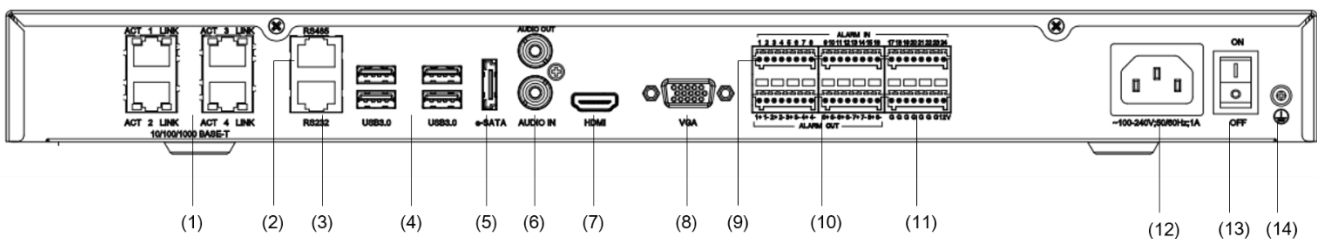| Mixed-traffic detection | |
|---|---|
| Realtime monitoring | View two channels of live video;<br>View motor vehicle/non-motor vehicle/pedestrian/face snapshots in real time |

| Data search | |
|---|---|
| Face search | Search by attribute, event, and image;<br>By attribute: search by channel name, snapshot time, gender, age, glasses type, mask status, body temperature, and search images by the search results; view alarm images, alarm videos, object features, and export data;<br>By event: search by monitoring type (match/not match alarm), alarm source, alarm time, name, ID number, gender, mask status, body temperature; view alarm images, alarm videos, object features, and export data;<br>By image: use a face image to search pass-thru records and face libraries on NVRs; view alarm snapshots and videos. |
| Pedestrian search | Search criteria include channel name, snapshot time, gender, age, hair style, clothes style and color, shoe style, and bag style; view alarm snapshots, object features, and export data. |
| Motor vehicle search | Search by attribute and event;<br>Search by attribute: search criteria include channel name, snapshot time, plate number, vehicle type, plate color, plate type, vehicle logo, direction, speed, and vehicle color; view alarm snapshots, alarm videos, object features; and export data;<br>Search by event: search criteria include monitoring type (match/not match alarm), alarm source, alarm time, plate number, plate color, vehicle color, and cause of monitoring; view alarm images, alarm videos, object features, and export data. |
| Non-motor vehicle search | Search criteria include channel name, snapshot time, vehicle type, direction, speed; view alarm snapshots and object features; export data. |
| O&M management (BS) | |
| Homepage | Displays operation & maintenance information and smart data in real time, including device/channel online statistics, real time alarm statistics, central recording storage status, server performance, live face snapshot, live plate snapshot, people counting, visitor management, etc.; support custom homepage. |
| Basic configuration | Manage organizations, users, person information, devices;<br>Change device passwords, shut down NVRs, scramble streams, set encoding parameters, and upgrade devices in batches. |
| Recording backup | Manually back up recordings to a USB storage device. |
| System configuration | Set TCP/IP parameters, BP Cloud, DDNS, port, port mapping, custom route, email, protocol interconnection (UNP, VSS, VIID), etc.;<br>802.1x client, ARP protection, enable/disable HTTPS, enable/disable SSH, enhanced password, IP address filtering (enable/disable, blocklist/allowlist configuration). |
| Maintenance statistics | Server statistics: view server status, network status, online users, bandwidth statistics, packet loss statistics, server performance, HDD;<br>Device statistics: view device status, channel status, hard disk status;<br>Log management: view operation logs, view and acknowledge alarm logs. |
| Parameter | |
| CPU | Intel(R) Celeron(R) CPU N3160@1.60GHz, 64-bit, 4-core processor |
| RAM | 4GB |
| Operating system | Linux |
| Network interface | 4×10M/100M/1000M Base-T adaptive Ethernet interfaces |
| USB interface | 4xUSB3.0 |
| Serial interface | 1xRS232 (RJ45), 1xRS485 (RJ45) |
| Alarm input/output | 24 alarm inputs, 8 alarm outputs |
| Power output | DC 12 V |
| Power supply | 100 to 240V AC, with power button |
| Power consumption | ≤ 40W |
| Operating temperature | -10℃ to 55 ℃ |
| Operating humidity | 10% to 90% (non-condensing |
| Weight | ≤ 4.1 Kg (not including HDD) |
| Dimensions (H x D x W) | Height: 1U; 440mm × 346mm × 48mm |

| PC Requirements | |
|---|---|
| 64-bit version | OS: MS Windows 7/8/10, 64-bit<br>CPU: Intel core i5 3.1 GHz or higher<br>RAM: 4GB or higher |
| 32-bit version | OS: MS Windows 7/8/10 32/ 64-bit<br>CPU: Intel Pentium IV 3.0 GHz or higher, 4 cores, 3.0GHz is recommended<br>RAM: 2GB or higher<br>Note: 64-bit operating system must be compatible with 32-bit software |
| Mac version | OS: Mac OS 10.11 or higher<br>CPU: Intel core i5 3.1 GHz or higher<br>RAM: 4GB or higher |

## Dimensions



## Rear Panel



1. Gigabit ethernet interface

2. RS485

3. RS232

4. USB3.0

5. eSATA interface

6. Audio input/output

7. HDMI output

8. VGA output

9. Alarm input

10. Alarm output

11. 12V DC output

12. Power interface

13. Power button

14. Grounding