VIVOTEK’s VAST 2 is an easy to use IP video management software (VMS). To meet users’ real-world needs, it comes with exciting advancements such as easy operation on single or multiple monitors, custom layout to fit both in corridor and panorama format, rapid export of multi-channel video and acquiring VCA analytics with integrated cameras.

VAST 2 supports smart search and thumbnail search for advanced video search applications. Smart search provides users to easily set critical areas with a custom zone setting. Thumbnail search produces the snapshot preview to reduce the chance of selecting the wrong image. Both ways allow for smarter and quicker searches of specific events. To efficiently solve users’ problems and system bugs, VAST 2 provides an automatic problem feedback mechanism to directly connect to VIVOTEK’s FAE system. Any feedback will be handled instantly.

Utilizing automatic configuration wizards, VAST 2 can significantly reduce the time and cost of installing multiple camera surveillance systems. With more advanced setup features such as logical tree, camera configuration, archive management and recording schedule backup solutions, VAST 2 provides easy and intuitive UI with rich functionality to meet the needs of any customer. For efficient video management, VAST 2 also provides multi-layered, interactive 2.5D maps, and sophisticated alarm management. Furthermore, VAST 2’s add-on solutions include failover protection, a transportation solution with GPS coordinates, transaction solutions with POS integration and Data Magnet integration solutions. All of these features combine to make VAST 2 the perfect VMS for use in retail, banking, transportation, and industrial applications.

New Features
- Enhanced Alarm Management
- 3rd Party Data Integration
- Video Wall Solution "VAST 2 Matrix"
- Panoramic PTZ
- License Rule Changed for MA-series Cameras and Video Servers
- VCA Report Update Regularly

Support List
- VIVOTEK Network Camera: 8000 & 9000 Series
- VIVOTEK NVR: ND & NR & NV Series NVR (ND8321 excluded)
- VIVOTEK Software: VAST 2

Key Features
- Windows Active Directory Integration
- Panoramic PTZ Support
- Auto Streaming Size for Client Application
- Multiple Fisheye Dewarp Modes Support
- Custom Layout to Fit Different Camera Type
- Automatic Problem Feedback Mechanism
- Easy to Support Multi-Monitor as Tabs
- Advanced Search (Smart & Thumbnail Search)
- Evidence Lock
- Multi-Video Export with Custom Layouts
- Counting Solution Integrate with VCA Report/Counting Cameras
- Add-on Solutions: Failover, Transportation, Transaction and Data Magnet Integration
Highlight Features

Intuitive UI Design
Direct intuitive custom layout adjustment and fisheye ROI control for better security management experience.

Auto Setup
Easy configuration through a fully automated process. Saves user’s time and cost to install surveillance devices.

Problem Feedback Mechanism
Quick detect system problem and feedback to VIVOTEK’s FAE system via automatic popup or manual operation.

Multi-Monitor & Tabs
Manage unlimited tasks with multiple screens for intuitive and easy surveillance.
Highlight Features

Advanced Search
Efficiently search suspicious video and specific events with thumbnail view and smart search.

Evidence Lock
Manually extend the retention time for video recordings and manage a high number of investigation scenarios.

2.5D Visualization eMap
Multiple layers and camera's FOV views allow users instantly to pinpoint a selected camera located on the map.
Highlight Features

Export Evidence
Easily export multiple video recordings with custom layouts in a specific time period or instant snapshot with a fast click.

Schedule Backup
Automatically backs up the recording video clip to another network storage device.

VCA Report
Integrate VIVOTEK’s intelligence cameras to provide visual reports including video feedback, tables and charts.
## Add-on Solutions

### Failover Solution
Reliable backup system designed to transfer recording tasks from N sites to M sites upon the rare occurrence of disk or other malfunction.

![Failover Solution Image]

### Transportation Solution
VAST 2 can trace vehicles through information provided from GPS receivers, track vehicles’ real-time location, and playback videos with recorded visited paths.

![Transportation Solution Image]

### Transaction Solution
Retains all transaction details including not only POS data but also associated video footage to create deeper POS knowledge. Enter search conditions to filter transactions more easily.

![Transaction Solution Image]

---

<table>
<thead>
<tr>
<th>Name</th>
<th>Unit</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomato</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Banana</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Drink</td>
<td>2</td>
<td>24</td>
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<tr>
<td>Cookies</td>
<td>4</td>
<td>28</td>
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</table>

**Total: 72**
## Technical Specifications

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Auto Wizard</strong></td>
<td>Plug &amp; Play Auto Setup</td>
</tr>
<tr>
<td><strong>Max. Number of Cameras</strong></td>
<td>Unlimited</td>
</tr>
<tr>
<td><strong>Max. Number of Servers</strong></td>
<td>Unlimited</td>
</tr>
<tr>
<td><strong>Max. Number of Clients</strong></td>
<td>Unlimited</td>
</tr>
<tr>
<td><strong>Support OS</strong></td>
<td>Windows 10, 8, 7, Windows Server 2012, 2016</td>
</tr>
<tr>
<td><strong>Mobile Support</strong></td>
<td>iViewer (iOS/Android)</td>
</tr>
<tr>
<td><strong>Virtual Matrix Supported</strong></td>
<td>VAST 2 Matrix</td>
</tr>
<tr>
<td><strong>Tabs Support</strong></td>
<td>Supported</td>
</tr>
<tr>
<td><strong>Devices Pack</strong></td>
<td>Ver. 5.9.192</td>
</tr>
<tr>
<td><strong>LiveView (Local Display)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Max. Channels</strong></td>
<td>64-channel per monitor (Supports up to 8 Monitors)</td>
</tr>
<tr>
<td><strong>Layout</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Equal</strong></td>
<td>1x1, 2x2, 3x3, 4x4, 5x5, 6x6, 7x7, 8x8</td>
</tr>
<tr>
<td><strong>Panorama</strong></td>
<td>1P+6, 2P, 2P+3, 3P</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>1+12, 1+16, 1+3, 1+5, 1+7, 1+9, 2+8</td>
</tr>
<tr>
<td><strong>Vertical</strong></td>
<td>1V+6, 2V+2, 2V+3, 3V, 3V+4, 4V, 4V+4, 5V</td>
</tr>
<tr>
<td></td>
<td>Single Layout Display</td>
</tr>
<tr>
<td><strong>Custom Layout</strong></td>
<td>Supported</td>
</tr>
<tr>
<td><strong>Layout Configuration Saving</strong></td>
<td>Supported</td>
</tr>
<tr>
<td><strong>Layout Rotation</strong></td>
<td>Supported</td>
</tr>
<tr>
<td><strong>Stream Application</strong></td>
<td>Stream Selection &amp; Auto Stream Size</td>
</tr>
<tr>
<td><strong>View Application</strong></td>
<td>Drag &amp; Drop Remote I/O Control</td>
</tr>
<tr>
<td></td>
<td>PIP (Digital Zoom)</td>
</tr>
<tr>
<td></td>
<td>Instant Playback</td>
</tr>
<tr>
<td></td>
<td>Video Display Mode (Aspect Ratio &amp; Camera Information)</td>
</tr>
<tr>
<td></td>
<td>Metadata Display (VCA, POS and Data Magnet)</td>
</tr>
<tr>
<td><strong>Fisheye Dewarp Mode</strong></td>
<td>1Q, 1P, 1R, 1O3R, 4R, 2P, 4R Pro, 1O8R</td>
</tr>
<tr>
<td><strong>Fisheye Auto-Pan</strong></td>
<td>Supported</td>
</tr>
<tr>
<td><strong>Playback</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Max. Channels</strong></td>
<td>64-channel per monitor (Supported monitor depends on PC decoding efficacy)</td>
</tr>
<tr>
<td><strong>Layout</strong></td>
<td>Equal: 1x1, 2x2, 3x3, 4x4, 5x5, 6x6, 7x7, 8x8</td>
</tr>
<tr>
<td></td>
<td>Panorama: 1P+6, 2P, 2P+3, 3P</td>
</tr>
<tr>
<td></td>
<td>Focus: 1+12, 1+16, 1+3, 1+5, 1+7, 1+9, 2+8</td>
</tr>
<tr>
<td></td>
<td>Vertical: 1V+6, 2V+2, 2V+3, 3V, 3V+4, 4V, 4V+4, 5V</td>
</tr>
<tr>
<td></td>
<td>Single Layout Display</td>
</tr>
<tr>
<td><strong>Custom Layout</strong></td>
<td>Supported</td>
</tr>
<tr>
<td><strong>Playback Mode</strong></td>
<td>Asynchronous &amp; Synchronous</td>
</tr>
<tr>
<td><strong>Playback Control</strong></td>
<td>Play, Rewind, Pause, Stop, Next/Previous Frame, 1/64X – 64X Speed Control, Bookmark</td>
</tr>
<tr>
<td><strong>Playback Timeline</strong></td>
<td>Scale Adjustment Event Timeline Interval Display</td>
</tr>
<tr>
<td><strong>Search Mode</strong></td>
<td>Calendar, Alarm, Bookmark, Thumbnail, Smart &amp; Transaction (POS), Log</td>
</tr>
<tr>
<td><strong>Evidence Lock</strong></td>
<td>Supported</td>
</tr>
<tr>
<td><strong>Video</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Video Format</strong></td>
<td>MJPEG, MPEG4, H.264 AVC, H.264 SVC, H.265</td>
</tr>
<tr>
<td><strong>Video Resolution</strong></td>
<td>Up to 12 Megapixels</td>
</tr>
<tr>
<td><strong>Audio</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Audio Format</strong></td>
<td>G.711, G.726, AMR, AAC</td>
</tr>
<tr>
<td><strong>Audio Capability</strong></td>
<td>Two-way Audio</td>
</tr>
<tr>
<td><strong>Audio Control</strong></td>
<td>Mute</td>
</tr>
<tr>
<td><strong>Record</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Recording Time (sec.)</strong></td>
<td>Pre-Record: 3-15, Post-Record: 10-60</td>
</tr>
<tr>
<td><strong>Recording Stream Type</strong></td>
<td>Unicast</td>
</tr>
<tr>
<td><strong>Recording Stream</strong></td>
<td>Single</td>
</tr>
<tr>
<td><strong>Recording Mode</strong></td>
<td>Continuous, Event, Customized Schedule, Activity Adaptive Streaming</td>
</tr>
<tr>
<td><strong>Recording Setting</strong></td>
<td>Recycle (Depends on Storage Size)</td>
</tr>
<tr>
<td><strong>Recording File Format</strong></td>
<td>3GP</td>
</tr>
<tr>
<td><strong>External Storage Recording</strong></td>
<td>NAS (SMB &amp; CIFS)</td>
</tr>
<tr>
<td><strong>Alarm Management</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Alarm Period (sec.)</strong></td>
<td>Max. 30</td>
</tr>
<tr>
<td><strong>Alarm Filter</strong></td>
<td>Name, Time, Trigger Type (Camera/Substation/System)</td>
</tr>
<tr>
<td><strong>Alarm Setting</strong></td>
<td>Realtime System Notification</td>
</tr>
<tr>
<td><strong>Schedule Type</strong></td>
<td>Continuous, Schedule</td>
</tr>
</tbody>
</table>
Technical Specifications

**Camera Source**
- Camera Disconnected, Camera DI, Camera DO, Crowd Detection, Field Detection (VCA), IR (Infrared), Line Crossing (VCA), Loitering (VCA), Motion Detection, Smart Motion Detection (Human Detection, Time Filter), PIR (Passive Infrared), Recording Error, Stop Recording, Tampering Detection, Temperature, Video Loss (Video server only), ONVIF Motion Event, ONVIF DI/O, ONVIF Video Lost/Restore

**Substation Source**
- NV Series NVR**: Abnormal G-sensor Motion, Speeding, GPS Disconnected
- ND Series NVR: Fan Status, Network Disconnected, Storage Failure, Storage Full
- NR Series NVR: Network Disconnected, Storage Failure, Storage Full

**External Devices Event**
- DI/O (with I/O Box), TCP Message Action
  - Start to record videos, Set DO status, Go to camera presets, Send HTTP requests, Send live streaming, Send mail, Go to eMap and Alarm sound

**Alarm State for Management**
- New, In Progress, False Alarm and Close

**Alarm Result Export**
- .csv file

**eMap**

**Source**
- Import Picture & Folder

**Adjustment**
- Vertical Angle Adjustment

**Marked**
- Add, Remove, Direction Control, PTZ Control, FOV Control, LiveView & Playback

**Event Notification**
- One or More Live Streaming

**PTZ**

**PTZ Control**
- Mouse Draw & Drag Control

**PTZ Operation**
- Direction Control, Home, Zoom, Focus, Preset, Patrol (Group), Tracking, Pan, Stop, Speed

**PTZ Operation Mode**
- Click to Move & Continuous Move

**Export**

**Snapshot**
- PNG & JPEG

**Export File**
- 3GP & EXE

**Player**

**Layout**
- Single & Multiple layout display

**Custom Layout**
- According to playback export layout configuration

**Playback Mode**
- Asynchronous & Synchronous

**Playback Control**
- Play, Rewind, Pause, Stop, Next/Previous Frame, 1/64X ~ 64X Speed Control

**Playback Timeline**
- Scale Adjustment/events Timeline Interval Display

**Snapshot**
- PNG & JPEG

**Export Video**
- 3GP

**Backup**

**Schedule**
- NAS (SMB & CIFS)

**User Management**

**Authentication**
- Basic Account/Windows AD Account

**User Level**
- Administrator, Customized User

**User Control**
- Client Permission (LiveView, Playback, Setting) & Camera Permission

**System**

**Date & Time**
- Sync PC

**Network**
- SMTP & HTTPS

**Language**
- Czech, English, French, German, Italian, Japanese, Korean, Persian, Portuguese, Russian, Spanish, Simplified Chinese, Traditional Chinese

**Diagnostic Service**
- Supported

**Log Management**
- Supported

**Device Integration**

**VIVOTEK Network Camera**
- 8000 & 9000 Series

**VIVOTEK NVR**
- ND & NR & NV Series** (ND8321 excluded)

**VIVOTEK Software**
- VAST 2

**VIVOTEK Joystick**
- AJ-002

**I/O Box**
- Advantech ADAM-6000 Series CHYU CYT-133SC

**POS (Add-ons)**
- POSNET
- Lfresh
- Allsense (Implement in NVR, Searchable in VAST 2)

**Camera Integration**

**Camera Insert**
- Manual & Search

**Video Source**
- VIVOTEK, ONVIF & RTSP Streaming

**Basic Setting**
- User Name, Password & Camera Model Detection

**Connection Setting**
- Configuration Protocol: HTTP, HTTPS
- Streaming Protocol: TCP, UDP, HTTP, HTTPS

**Video Setting**
- Video stream, codec, resolution, maximum frame rate, I-frame period, video quality, FPS, Maximum bit rate
Technical Specifications

Image Setting
- Time stamp, Video title, Video orientation, Mount type (fisheye only), Color, Power line-frequency

Motion Detection Setting
- Supported

ONVIF Core Spec
- Version 2.2 or above (request by project)

ONVIF Stream
- Video (H.264, MPEG4 & MJPEG) & Audio (G.711, One-way)

ONVIF Control
- PTZ Control (Up, Down, Left, Right & Zoom In/Out)

ONVIF Discovery
- Supported

ONVIF Event
- Motion Event, DI/O, Video Lost/Restore

VCA Solution

VCA for Surveillance
- Line Crossing Detection, Loitering Detection, Field Detection

VCA for Business Intelligence
- People Counting

Advanced Features

VIVOTEK Exclusives
- Panoramic PTZ
- Seamless Recording
- Standard VCA Integration (Line Crossing & Loitering & Field Detection)
- VCA Counting

Add-ons***

Failover Solution
- N x M System Structure

3rd Party Integration
- TCP Message, Data Magnet

Transportation Solution
- Google Map and User-Defined Maps Support, Vehicle GPS Tracking, Tracks Playback

Transaction Solution
- POS Terminal Integration (Serial or Network Ports), Live Printing of Transactional Data, Transaction Corresponding Video Search

Integration Solution
- TCP Trigger

* Please refer to System Requirements Page (http://www.vivotek.com/vast2/#system)
** VIVOTEK’s NV series NVR will be available soon.
*** Advanced license is required. (Additional charges may apply)

System Requirements

VAST 2 Server

<table>
<thead>
<tr>
<th>Server (Recording Channels)</th>
<th>Up to 64-CH</th>
<th>Up to 128-CH</th>
<th>Up to 256-CH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>4th Generation Intel® Core™ i3 Processors or above</td>
<td>4th Generation Intel® Core™ i5 Processors or above</td>
<td></td>
</tr>
<tr>
<td>RAM</td>
<td>4 GB or above</td>
<td>8 GB or above</td>
<td>8 GB or above</td>
</tr>
<tr>
<td>Hard Drive (Enterprise Model Only) Suggestion</td>
<td>1 Volume Group*</td>
<td>2 Volume Group*</td>
<td>4 Volume Group*</td>
</tr>
<tr>
<td>Recording Throughput</td>
<td>1 Volume Group: Max. 200 Mbps**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Interface Card</td>
<td>1000/100/10 Ethernet***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Volume group depends on total recording server throughput.
** Maximum number bitrate of cameras not to go over total recording throughput.
*** Please consider the throughput of viewing, recording and server’s network.
## System Requirements

### VAST 2 LiveView & Playback

<table>
<thead>
<tr>
<th>Client (Display Channels)</th>
<th>8-CH</th>
<th>16-CH</th>
<th>32-CH</th>
</tr>
</thead>
<tbody>
<tr>
<td>H.264, 720P, 2Mbps for Each Channel*</td>
<td>6-CH</td>
<td>10-CH</td>
<td>18-CH</td>
</tr>
<tr>
<td>H.264, 1080P, 4Mbps for Each Channel**</td>
<td>3-CH</td>
<td>5-CH</td>
<td>9-CH</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CPU</th>
<th>4th Generation Intel® Core™ i3 Processors</th>
<th>4th Generation Intel® Core™ i5 Processors</th>
<th>4th Generation Intel® Core™ i7 Processors</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAM</td>
<td>4 GB or above</td>
<td>4 GB or above</td>
<td>4 GB or above</td>
</tr>
<tr>
<td>Graphics Processing Unit (GPU)***</td>
<td>Support Direct3D acceleration with 1GB Video RAM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Interface Card</td>
<td>1000/100/10 Ethernet</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Display requirements of a 3MP fisheye camera is equal to a 720P camera.
** Display requirements of a 5MP fisheye camera is equal to a 1080P camera.
*** Please update to the latest version of GPU driver.

If installing Server & Client in the same PC, overall loading of the PC will be evaluated.

- 60-day trial camera license (256-channels)
- 60-day trial add-on advanced license

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