



VAST 2

View, Search, Control,
Integrate



LPR Solution & Data Magnet • Smart Search II • Smart VCA •
Cybersecurity Management Solution • Add-on Solutions

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 & cybersecurity attack events from VIVOTEK cameras and substations (such as NVRs) in a hierarchical system structure.

VAST 2 is integrated with LPR Solution, Cybersecurity Management Solution, Smart VCA and Smart Search II. Cybersecurity attack and Smart VCA events can be searched and replayed in Event Search and be set as triggers in Alarm Management. In addition, Smart Search II allows users to search for objects or people related videos and provides an option to draw a custom zone to focus on a critical area. 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.

Key Features

- Cybersecurity Management Solution
- Smart Search II: Powerful Search for Smart Motion Detection
- Smart VCA: AI Powered Video Analytics
- Multi-Monitor Support with Tabbed Windows
- Evidence Lock: Automatically Bookmark Related Recordings when Alarm Triggered
- 2.5D Visualization eMap
- Evidence Export: Manually Export Video Recordings or Alarm Clips
- New Matrix for Video Wall Solution
- Automatic Problem Feedback Mechanism
- Multiple Fisheye Dewarp Modes
- System Overview Dashboard
- Add-on Solutions: Failover, Transportation, Transaction and Data Magnet

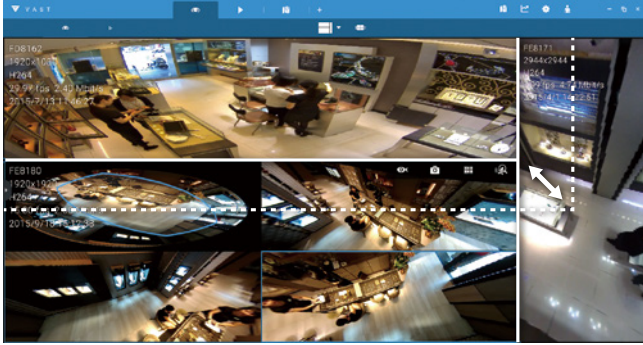
New Features

- License Plate Recognition Solution & Data Magnet
 - Show Related Data in Live View
 - Edit Types of Data Displayed
 - Link Saved Data with Recordings
 - Display or Export Search Results in Line Graph & Table
 - Trigger a Data Magnet Alarm with Preset Criteria
 - Send the Live Streaming from Event-Triggering Cameras to Alarm Tab
- Alarm Grouping for Enormous Number of Alarms
- Mute Alarm Notifications
- Multi-Sensor Display Modes: 1P, 1R, 1P2R, 1P3R
- Easy-to-Use Interface for MAC License Users
- Customize the Accessible Time Range of Playback by Users

Highlight Features

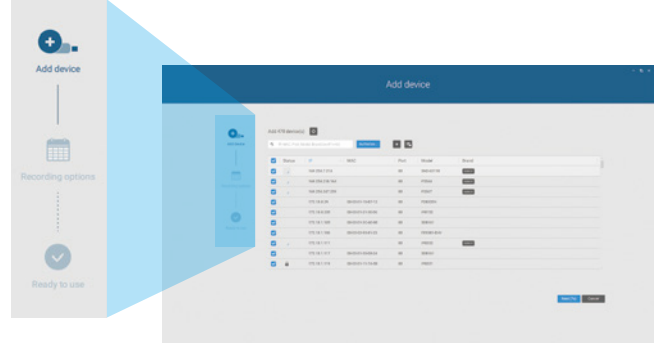
Intuitive UI Design

Custom layout adjustment and fisheye ROI control for better security management experience.



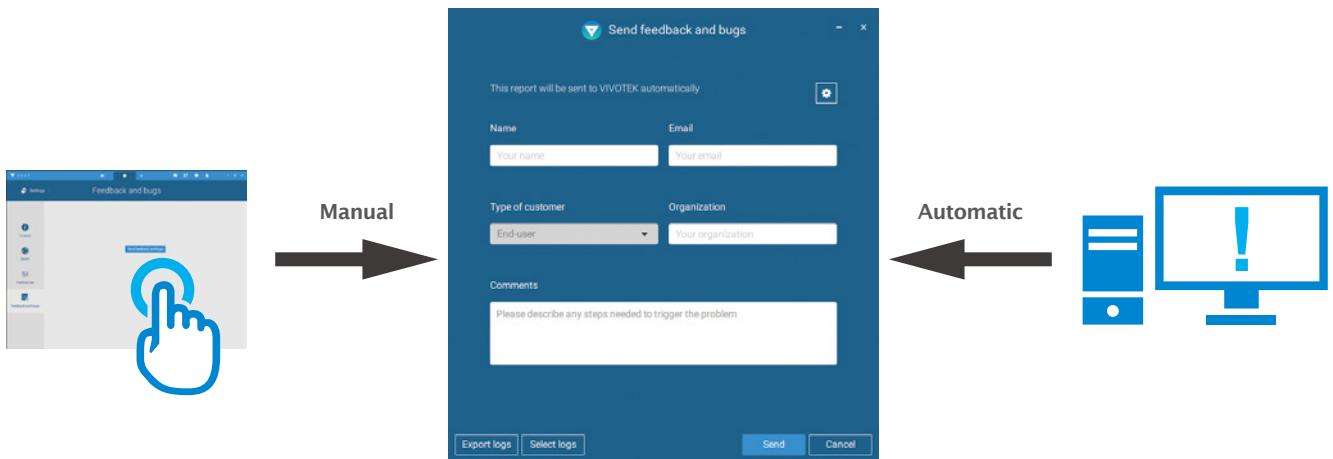
Auto Setup

Easy configuration through a fully automated process, saving users' time and cost to install surveillance devices.



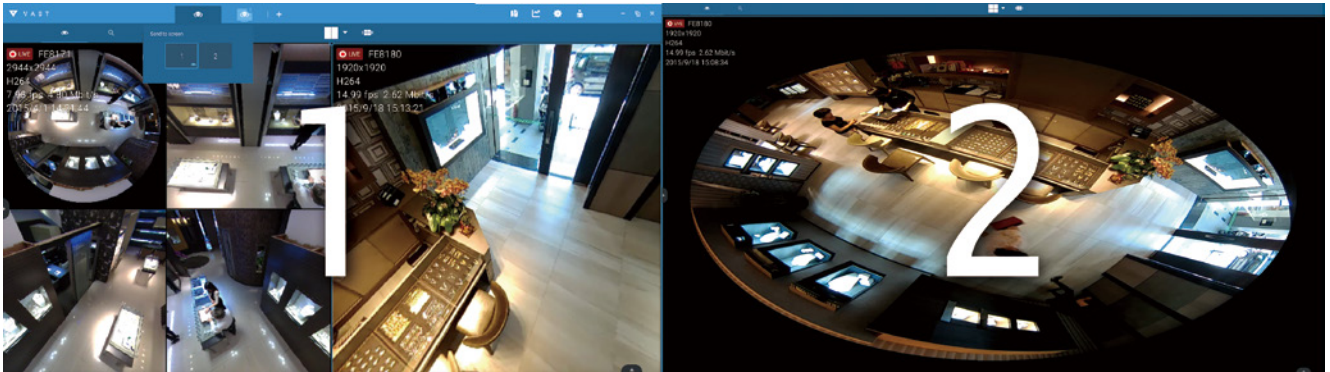
Problem Feedback Mechanism

Quickly detect system problem and feedback to VIVOTEK Technical Support via automatic popup or manual operation.



Multi-Monitor & Tabs

Manage unlimited tasks with multiple screens for intuitive and easy surveillance.



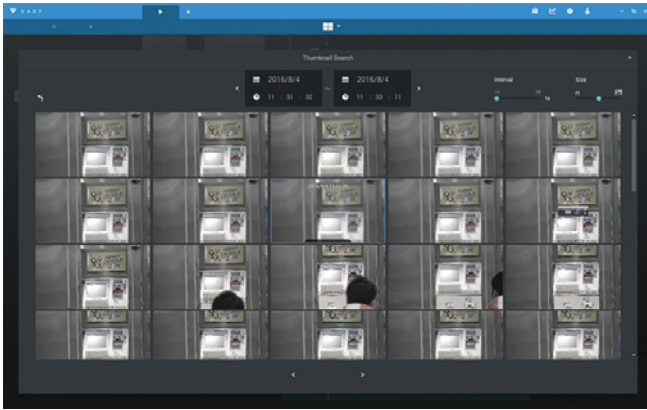
Screen 1

Screen 2

Highlight Features

Thumbnail Search

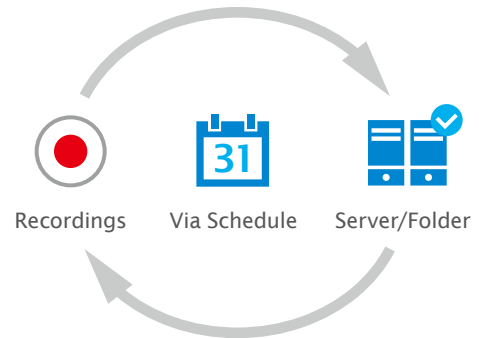
Efficiently search suspicious video and specific events with thumbnail view.



Thumbnail Search

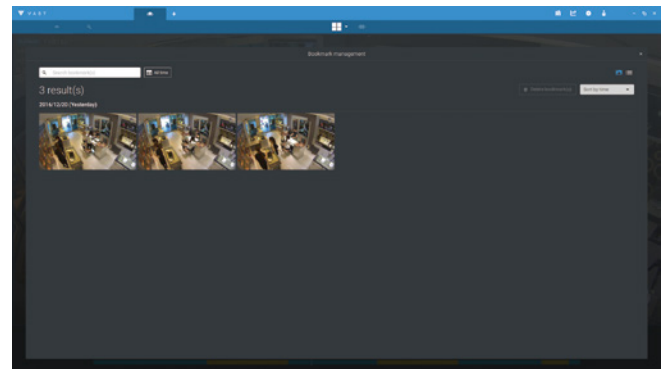
Scheduled Backup

Automatically back-up of the recording video clip to another network storage device.



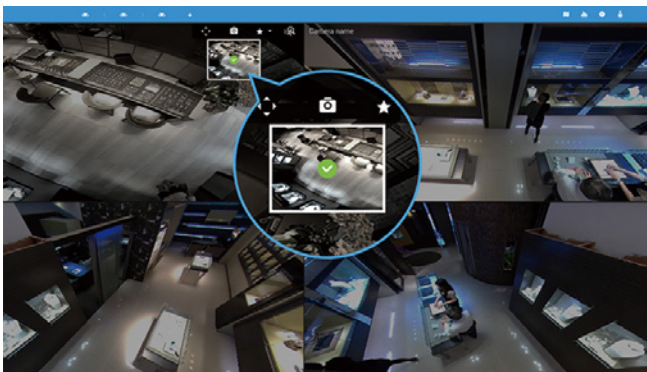
Evidence Lock

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

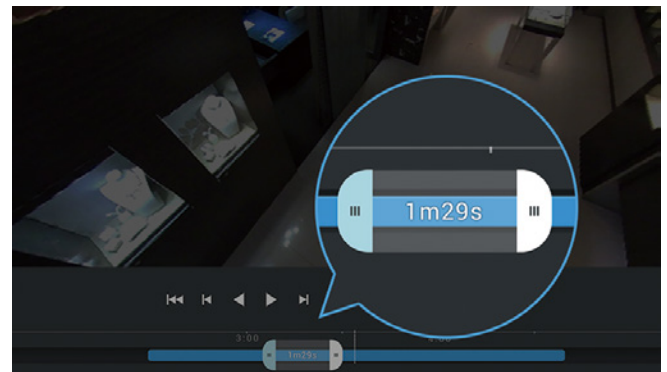


Evidence Export

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



Snapshot

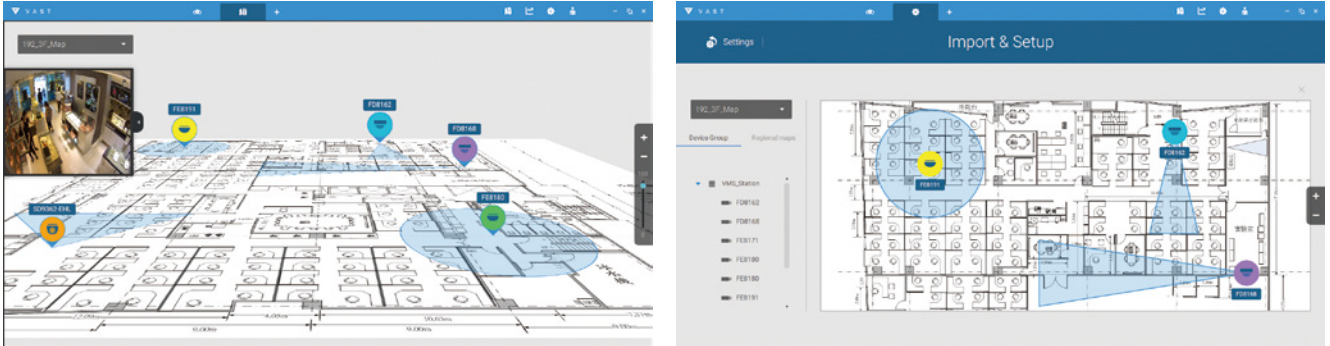


Video

Highlight Features

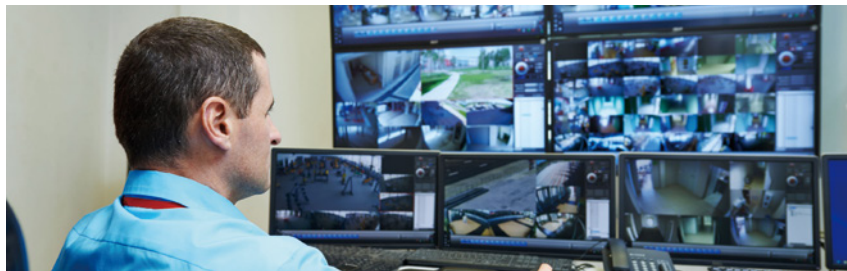
2.5D Visualization eMap

Multiple layers and camera FOV views allow users to instantly pinpoint a selected camera and the location on the map.



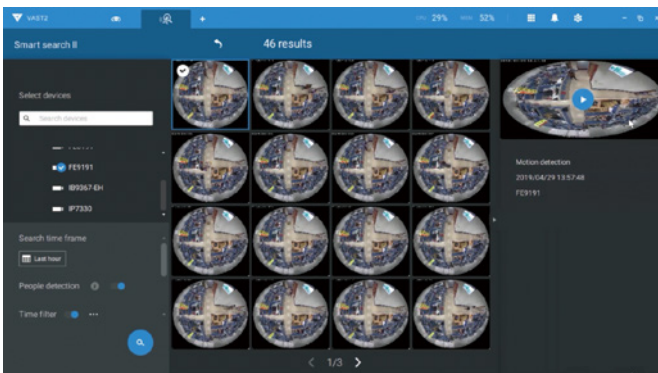
All New Matrix

New Matrix provides a video wall feature to view cameras streaming from a VAST 2 server. Users can manage the matrix client(s) directly through the VAST 2 server.



Smart Search II

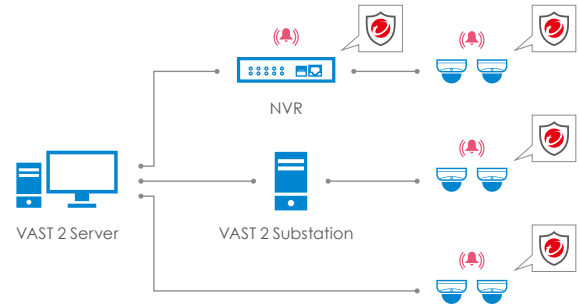
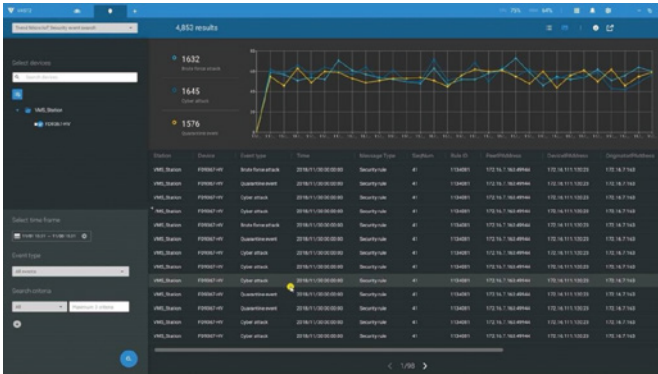
Allow users to search for objects or people related videos according to the VCA (Video Content Analysis) metadata from camera videos. Users can quickly sort through large amounts of evidence to find precisely what is needed.



Highlight Features

Cybersecurity Management Solution

Integrate cybersecurity attack events from VIVOTEK cameras and NVR to VAST 2 alarm management. In addition to alarm action and notification, VAST 2 becomes the central management site to recognize attack trends and status, as well as acquire attack information.



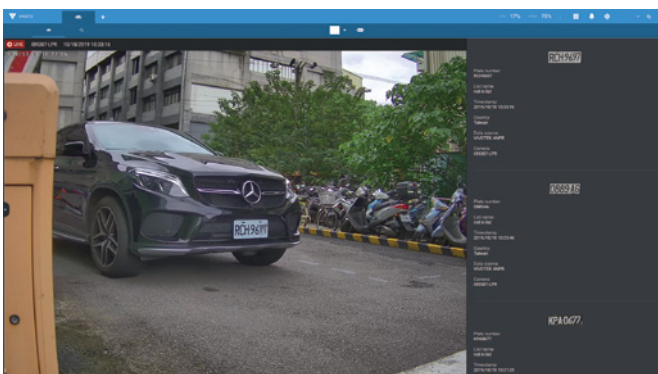
Data Magnet

Data Magnet enables VIVOTEK's License Plate Recognition cameras or third-party data sources to integrate into VAST 2, providing rapid access to recording data and supporting simultaneous data display during live streaming. Additionally, users can also utilize Data Magnet's alarm management to customize alarm triggering rules and actions, enabling users to receive alarm notifications immediately upon preset alarm criteria triggering.



License Plate Recognition Solution

VAST 2 can link license plate information with live streaming and recordings via integration with VIVOTEK's License Plate Recognition cameras (such as IB9387-LPR). Users can search and analyze historical data and display the number of recognized license plates data in line graphs, export search results or display live streaming video data from alarm event-triggering cameras when license plate information matches preset alarm criteria.

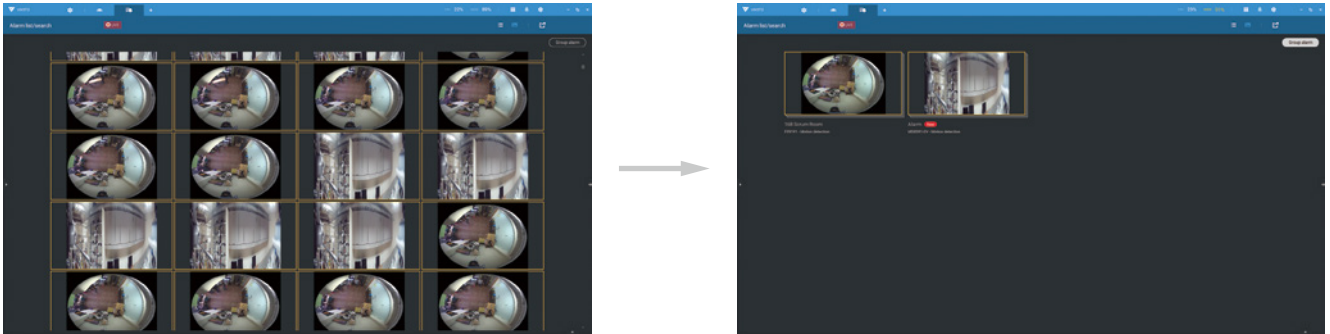


list name = BLACKLIST
confidence level > 90

Highlight Features

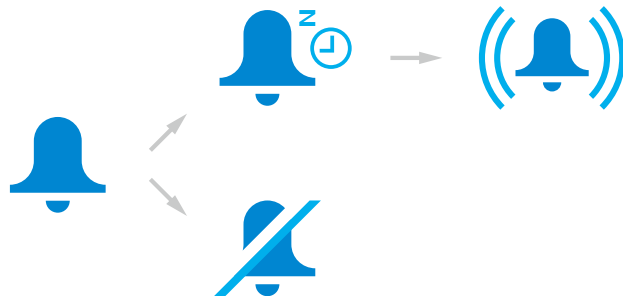
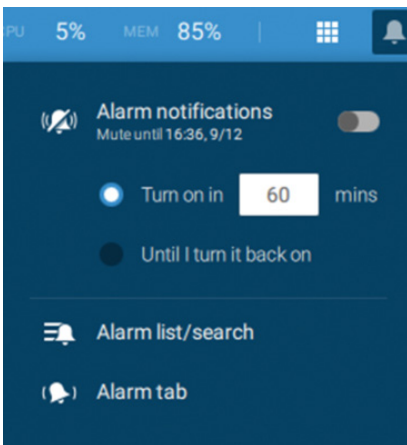
Alarm Grouping

Users can organize an enormous number of alarms by devices and event types with a one-click-function in the VAST 2 Alarm List. They can also send or pin the live streaming from the same camera in one viewing cell on the VAST 2 Alarm Tab.



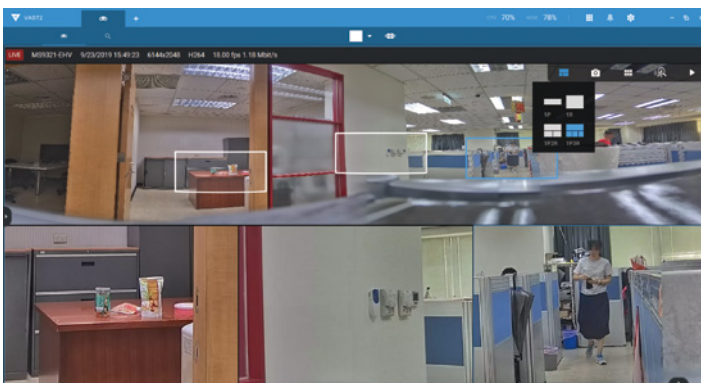
Mute Alarm Notifications

Allow users to disable alarm notifications until they are turned back on. They can also set alarm notifications to automatically turn on after a selected period of time.



Multi-Sensor Display Modes

To maximize the high-resolution characteristic of multi-sensor cameras, VAST 2 provides multiple display modes for VIVOTEK's multi-sensor cameras: 1P, 1R, 1P2R, 1P3R. It allows users to monitor video details in several fields of view simultaneously.



Add-on Solutions

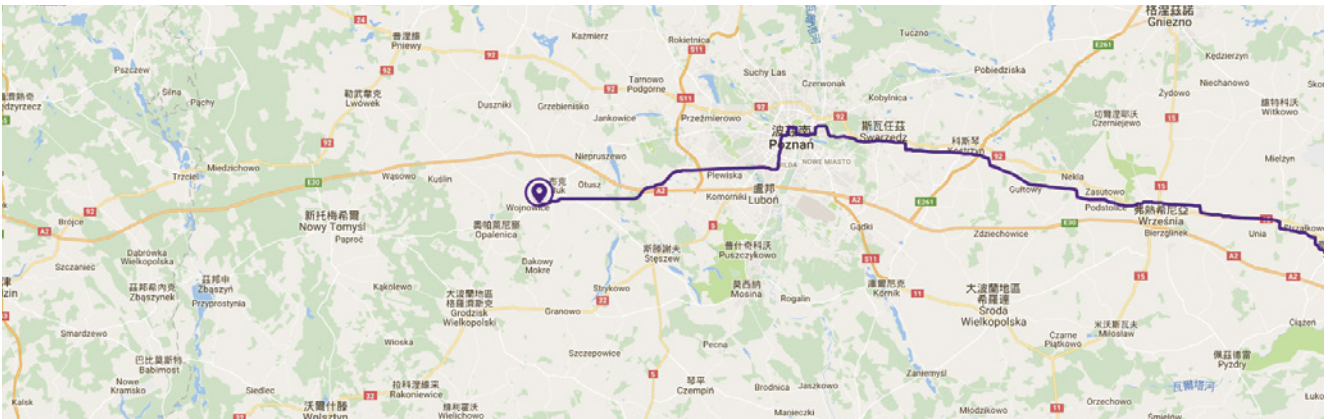
Failover Solution

Reliable backup system designed to transfer recording tasks from N sites to M sites upon the rare occurrence of disk or other mal-function.



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.



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.



Name	Unit	Subtotal
Tomato	1	8
Banana	1	12
Drink	2	24
Cookies	4	28

Total: 72

Technical Specifications

Model	VAST 2
Series	Change the Way You Experience VMS
Software	VAST 2
Version	2.6
General	
Auto Wizard	Plug & Play Auto Setup
Maximum Number of Cameras*	Unlimited
Maximum Number of Servers*	Unlimited
Maximum Number of Clients	Unlimited
Supported OS	Windows 10, 7 Windows Server 2012, 2016, 2019 mac OS Mojave 10.14 (Client Only)
Supported Mobile App	iViewer (iOS/Android)
Virtual Matrix*	Supported (VAST 2 Matrix)
Tabbed Browsing*	Supported
Devices Pack	Ver. 5.9.276
LiveView (Local Display)	
Max. Channels*	64-channel per Monitor (Supports up to 8 Monitors)
Layout	Equal: 1x1, 2x2, 3x3, 4x4, 5x5, 6x6, 7x7, 8x8 Panorama: 1P+6, 2P, 2P+3, 3P Focus: 1+12, 1+16, 1+3, 1+5, 1+7, 1+9, 2+8 Vertical: 1V+6, 2V+2, 2V+3, 3V, 3V+4, 4V, 4V+4, 5V Single Layout display
Custom Layout	Supported
Layout Configuration Saving	Supported
Layout Rotation	Supported
Stream Application	Stream Selection & Auto Streaming Size
View Application	E-Map Embedded Drag & Drop Remote I/O Control PIP (Digital Zoom) Instant Playback Video Display Mode (Aspect Ratio & Camera information) Metadata Display (VCA, POS and Data Magnet)
Fisheye Dewarp Mode	1O, 1P, 1R, 1O3R, 4R, 2P, 4R Pro, 1O8R
Fisheye Auto-Pan	Supported
Multi-Sensor Display Mode	1P, 1R, 1P2R, 1P3R

Playback	
Max. Channels*	64-channel per monitor (the max. number of monitors supported depends on the decoding capability of your system)
Layout	Equal: 1x1, 2x2, 3x3, 4x4, 5x5, 6x6, 7x7, 8x8 Panorama: 1P+6, 2P, 2P+3, 3P Focus: 1+12, 1+16, 1+3, 1+5, 1+7, 1+9, 2+8 Vertical: 1V+6, 2V+2, 2V+3, 3V, 3V+4, 4V, 4V+4, 5V Single Layout Display
Custom Layout	Supported
Playback Mode	Asynchronous & Synchronous
Playback Control	Play, Rewind, Pause, Stop, Next/Previous Frame, 1/64X ~ 64X Speed Control, Bookmark
Playback Timeline	Scale Adjustment Event Timeline Interval Display
Search Mode	Calendar, Event, Alarm, Bookmark, Thumbnail, Smart Search II, Transaction (POS), Data Magnet, Log
Evidence Lock	Supported
Video	
Video Format	MJPEG, MPEG4, H.264 AVC, H.264 SVC, H.265
Video Resolution	Up to 12 Megapixels
Audio	
Audio Format	G.711, G.726, AMR, AAC
Audio Capability	Two-Way Audio
Audio Control	Mute
Record	
Additional Recording Time for Event Recording (sec.)	Pre-Record: 3-15, Post-Record: 10-60
Recording Stream Type	Unicast
Recording Stream	Single
Max. Number of Recording Channels	256 channels per recording group (Please refer to system requirement when designing your surveillance deployments)
Recording Mode	Continuous, Event, Customized Schedule, Activity Adaptive Streaming
Recycle Options	Recycling time depends on the remaining storage space or the set number of days
Recording File Format	3 GP
External Storage Recording	NAS (SMB & CIFS)

Technical Specifications

Alarm Management		Source	Import Picture & Folder
Alarm Period (sec.)	Max. 30	Supported Image Format	BMP, GIF, JPG, PNG, SVG
Alarm Filter	Time, Trigger Type (Camera/Substation/System), Status, Name, Trigger Source	Supported Items	Camera, Camera DI/DO, DI/DO Device (includes NVR DI/DO), Regional map
Alarm Setting	Realtime System Notification (Enable/Disable/Disable for a time period)	Adjustment	Vertical Angle Adjustment
Schedule Type	Continuous, Schedule	Marked	Add, Remove, Direction Control, PTZ Control, FOV Control, LiveView & Playback
Camera Source	General: motion detection, camera DI, camera DO, IR (infrared), PIR (passive infrared), tampering detection, temperature, camera disconnected, recording error, stop recording, video loss (video server only), SD card life expectancy detection, audio detection, shock detection Smart VCA: intrusion detection, loitering detection, line crossing detection, unattended object detection, missing object detection, face detection Smart 360 VCA: intrusion detection, crowd detection, loitering detection Trend Micro IoT Security: brute force attack, cyberattack, quarantine event	Event Notification	One or more Live Streaming
Substation Source	NV Series NVR: Abnormal G-sensor Motion, Speeding, GPS Disconnected ND Series NVR: Fan Status, Network Disconnected, Storage Failure, Storage Full, Number of remaining people, Brute force attack, Cyber attack, Quarantine event NR Series NVR: Network Disconnected, Storage Failure, Storage Full	PTZ	
External Devices Event	DI/O (With I/O Box), TCP Message, Data Magnet	PTZ Control	Mouse Draw & Drag Control
Action	Starting to record videos, Setting DO status, Going to camera presets, Send HTTP requests, Send live streaming, Send email with snapshot of assigned camera(s), Go to E-Map, Sound the alarm and Add bookmark	PTZ Operation	Direction Control, Home, Zoom, Focus, Preset, Patrol (Group), Tracking, Pan, Stop, Speed
Alarm Result Display	List View, Thumbnail View; Group Mode	PTZ Operation Mode	Click to Move & Continuous Move
Alarm Status	New, In Progress, False alarm and Close	Wiper Blade Control	Supported
Alarm Result Export	.csv / .3gp file	Export	
Additional Time for Exported Alarm Clip (min.)	Pre-Triggered: 1~10; Post-Triggered: 1~60	Snapshot	PNG & JPEG
Data Magnet		Export File	3GP & EXE
Data Source Type	VIVOTEK License Plate Recognition, Third party data source	Player	
Search Result Display	List View, Chart View	Layout	Single & Multiple layout display
Search Result Export	.csv / .png file	Custom Layout	According to playback export layout configuration
eMap		Drag to Play	Supported (VIVOTEK 3GP & MP4 files)
		Playlist	Drag & drop, Play selected videos, Play all videos, Delete selected videos, Delete all videos
		Playback Mode	Asynchronous & Synchronous
		Playback Control	Play, Rewind, Pause, Stop, Next/Previous Frame, 1/64X ~ 64X Speed Control
		Playback Timeline	Scale Adjustment
			Event Timeline Interval Display
		Snapshot	PNG & JPEG Snapshot for Dewarped Fisheye Camera
		Export Video	3GP
		Backup	
		Schedule	NAS (SMB & CIFS)
		User Management	
		Authentication	Basic Account/Windows AD Account

Technical Specifications

User Level	Administrator, Customized User	Connection Setting	Configuration Protocol: HTTP, HTTPS
User Control	Client Permission (Operation & Configuration) & Camera Permission		Streaming Protocol: TCP, UDP, HTTP, HTTPS
System			
Dashboard	Supported	Video Setting	Video Stream, Codec, Resolution, Maximum frame rate, I-frame period, video quality, FPS, Maximum bit rate
System Error List	Supported	Image Setting	Timestamp, Video title, Video orientation, Mount type (fisheye only), Color, Power line-frequency
Server System Status Display	CPU/Memory/Network	Motion Detection Setting	Supported
Client System Status Display	CPU/Memory	ONVIF Profile	Profile S
Date & Time	Sync PC	ONVIF Stream	Video (H.264, MPEG4 & MJPEG) & Audio (G.711, One Way)
Network	SMTP & HTTPS	ONVIF Control	PTZ Control (Up, Down, Left, Right & Zoom In/Out)
Language	Czech, English, French, German, Italian, Japanese, Korean, Persian, Portuguese, Russian, Spanish, Simplified Chinese, Traditional Chinese	ONVIF Discovery	Supported
Diagnostic Service	Supported	ONVIF Event	Motion Event, DI/O, Video Lost/Restore
Log Management	Supported	VCA Solution	
MAC Client	Supported*	Security Intelligence	Line Crossing Detection, Loitering Detection, Intrusion detection, Face detection, Missing object detection, Unattended object detection, Crowd detection
	* Limitations of MAC Client 1. Video can only be exported in 3GP format. 2. AD login cannot be setup in MAC client. 3. MAC client only supports the joystick AJ001.	Business Intelligence	People Counting
Device Integration			
VIVOTEK's Camera	8000 & 9000 Series	Advanced Features	
VIVOTEK's NVR	ND & NR & NV Series (ND8321 excluded)	VIVOTEK Exclusives	Panoramic PTZ Seamless Recording Activity Adaptive Stream Smart Search II Smart VCA integration Cybersecurity management solution integration VCA Counting
VIVOTEK's Software	VAST 2	Add-ons**	
Joystick	VIVOTEK Joystick AJ002	Failover Solution	N x M System Structure
I/O Box	Advantech ADAM-6000 Series CHIYU CYT-133SC MOXA ioLogik E1210, E1211 and E1212	3rd Party Integration	TCP Message, Data Magnet
POS (Add-ons)	POSNET Lafresh Allsense (Implement in NVR, Searchable in VAST2)	Transportation Solution	Google Map and User-Defined Maps Support Vehicle GPS Tracking Tracks Playback
Camera Integration			
Camera Insert	Manual & Search	Transaction Solution	POS Terminal Integration (Serial or Network Ports) Live Printing of Transactional Data Transaction Corresponding Video Search
Refresh Devices	Manual	Integration Solution	TCP Trigger
Video Source	VIVOTEK, ONVIF & RTSP Streaming		
Basic Setting	User Name, Password & Camera Model Detection		

* Please refer to System Requirements Page (<http://www.vivotek.com/vast2/#system>)
** Advanced license is required. (Additional charges may apply)

System Requirements

VAST 2 Server

Operating System	Windows 10, 7 Windows Server 2019, 2016, 2012		
Server (Recording Channels)	Up to 64-CH	Up to 128-CH	Up to 256-CH
CPU	6 th Generation Intel® Core™ i3 Processors or above		6 th Generation Intel® Core™ i5 Processors or above
RAM****	4 GB or above	8 GB or above	8 GB or above
Hard Drive (Enterprise Model Only) Suggestion	1 Volume Group*	2 Volume Group*	4 Volume Group*
Recording Throughput	1 Volume Group: Max. 200 Mbps**		
Network Interface Card	Ethernet, 1Gbit recommended***		

* The size of volume group depends on the total recording server throughput.

** The combined maximum bitrate of cameras cannot exceed the total recording throughput.

*** Please consider the throughput of viewing, recording and server's network bandwidth when designing your surveillance deployments.

**** Please use a dual-channel memory configuration.

VAST 2 LiveView & Playback

Operating System	Windows 10, 7 Windows Server 2019, 2016, 2012 * macOS Mojave 10.14			
Client (Display Channels)	H.264, 720P, 2Mbps for Each Channel**	8-CH	16-CH	32-CH
	H.264, 1080P, 4Mbps for Each Channel***	6-CH	10-CH	18-CH
	H.265, 1080P, 4Mbps for Each Channel	3-CH	5-CH	9-CH
CPU	6 th Generation Intel® Core™ i3 Processors	6 th Generation Intel® Core™ i5 Processors	6 th Generation Intel® Core™ i7 Processors	
RAM****	8 GB or above	8 GB or above	16 GB or above	
Graphics Card*****	1GB RAM, with Direct3D acceleration			
Network Interface Card	Ethernet, 1Gbit recommended			

* Independent graphics card is necessary when using Windows Server OS.

** 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 use a dual-channel memory configuration.

***** Please update to the latest GPU driver.

If you plan to install both VAST 2 Server & Client on the same PC, please remember to consider the combined loading when evaluating system requirements.

- 60-day trial includes 256-channel camera license and all advanced license features.

