

New VMS Database and iGlance Server VMS Ai Solution and Integration

C5104-DBS2, C5104-IGS2, C6101-VLC

GVD VMS Database Server is the center of GVD VMS 4.0. It is designed for Cloud-and-Hybrid architecture. The new GVD Database Server and iGlance Server move GVD VMS platform to the next level with completed Ai function and integration. Such state-of-art architecture can quickly plug-in various third-party Ai Cameras, Ai Servers onto GVD VMS platform, becoming the best of best VMS for Ai surveillance applications.

- Ai LPR: license platform, driver information, vehicle model brand
- Ai Facial: face identification, age, emotion
- Ai Motion Detection
- Ai People Counting, People Detection
- Ai Upper/Lower Clothing Color Detection
- Ai Virtual Line, Directional Detection

Many other the best Ai cameras or Ai applications to enrich GVD VMS and your solutions in no time.

It allows the VMS to smartly manage large-scale projects that need to run a lot of Ai and integrates numerous sub-systems, including workstations, NVRs, video walls, and 3rd-party systems.



GVD VMS supports standard & open protocols for such quick Ai integration

- JSON: lightweight data-interchange format
- REST: HTTP based protocols allow stateless Client-Server communication
- Generic ONVIF: Ai camera integration interface using ONVIF protocols.
- Modbus: Simple and Reliable Master-Slave architecture protocols
- POS with Text: Using printing port and output with text for quick integration
- SNMP: the popular IT protocol for monitoring and managing devices on a network
- GVD Web Docker: a quick Add-on function to GVD VMS Platform via HTTP URL

Another highlight of this product is an application called "iGlance Dashboard", powered by Elasticsearch, a real-time big data search and analytics engine built on Apache Lucene.

The iGlance Dashboard can visualize every system detail with graphics and put system information in a nutshell very quickly.

All system health, device status, device recording status, Ai LPR, Ai meta data, etc., can be quantified through pies and charts easily.



Product Features

System Integration & Communication

With a new architecture allowed by GVD **VMS Database Servers**, GVD **VMS 4.0** is easy to grow, both vertically and horizontally. Vertically, the VMS can quickly swell with more workstations, video walls, NVRs, failover / archive servers, storage, IP cameras (up to 1000,000), and 3rdparty applications. Horizontally, more features can be plugged in, such as AI modules from GVD and 3rd-parties, including IBM, NEC, ITRI, SONY, etc.

Modbus
AppPackWeb
AppPackREST
AppPackJSON
AppPackONVIF
AppPackVMS 4.0 PlatformVMS 4.0 PlatformAccs
AppPackAlarm
AppPackAi LPR
AppPackAi Facial
AppPackAi Cam
AppPack

100,000 IP cameras support



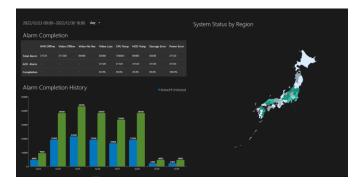
Based on the cluster and redundant designs, GVD **VMS 4.0** can easily expand by stacking up **VMS Database Servers**. The more database servers are thrown in, the

more NVRs and IP cameras can be accumulated. A set (3 pieces) of **VMS Database Servers** supports 10,000 IP cameras and 1,000 NVRs. A total of up to 100,000 IP cameras are allowed. System scale-up is easier than usual.

iGlance Dashboard powered by *Elasticsearch*

As the configuration of all devices and components are centralized in the **VMS Database Servers**, an "*iGlance Dashboard*" is allowed to visualize the big data of system health and device statuses with simple graphs. Pies and bars let you draw conclusions quickly and provide clues that words can't. When dealing with massive data, graphics particularly show trends, gaps, and clusters.







Product Features

Easy Ai and 3rd Party Integration

GVD VMS supports open protocols: JSON, REST, Generic ONVIF, SNAMP for plug-in integrations with Ai cameras, Ai Applications, e.g. Facial, LRP, Human Detection and many other Ai applications. New VMS also comes with new Web HTTP interface: GVD Web Docker, a URL plug-in to GVD VMS 4.0 in no time, working with 3rd party applications right on the same VMS monitors and machines, no need from technical eng or coding to integrate.

Redundant Designs



Unlike conventional VMS, GVD VMS has the VMS Database Servers based on "RAID-1 Redundant design for both Database and OS, which means the server is to deliver fault tolerance. When one HDD fails, its work is

continuing with the other HDD either OS or Database. Such designs can effectively prevent system failure, so the system can be recovered before entire systems are down.



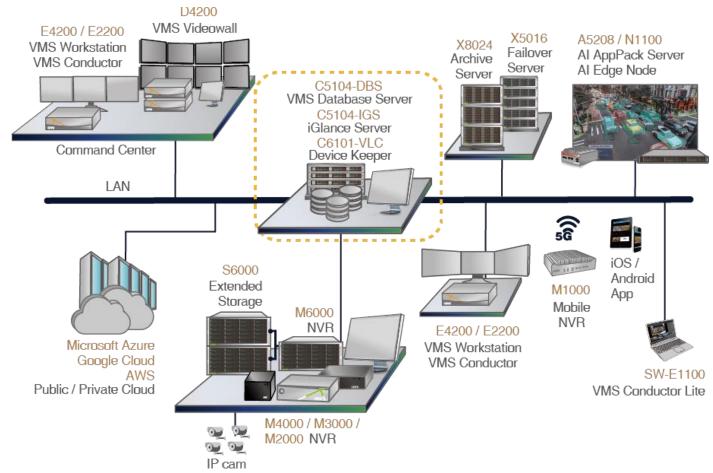


Secured Design to Protect Your DB

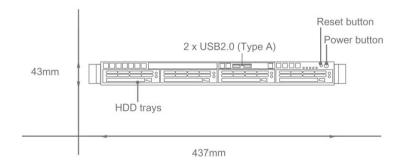
GVD **VMS Database Servers and all other GVD Servers** are with every 6x months vulnerability-scan to ensure your servers safety. With the antivirus pre-installed and encrypted data and communication constructing the best and safest systems for your projects.

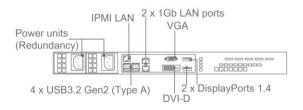
	LTFM ×			1		💼 🔒 👬 10:25 🎚
$\epsilon \rightarrow a$						
	UA 476 United Altitude	23:59	06:11	SFO Sen Trancisco		
	AC 4372 Ar-Cenada / Operated by United Address 475	23:59	06:11	SFO fen franklen		
	NZ 9307 Air Now Zesland / Operation by United Airlines 476	23:59	06:11	SPO See Francisco		
	VA 8101 Virgin Audralia / Operated by United At lives 475	23:59	06:11	SFO Sea Principaa		
	5X 7824 UIS	06:35	06:19	LAN Luting		
	UA 5799 United Attines / Constanting September Archives on the	05:15 ef of United African		MKE	•	
	NZ 2632 Ar New Zeeland / Operated by SigNiest Arrives on b	05:15 metrial Debug Arrines 5750	06:23	MKE		
	AA 2014 American Alithes	00:18	06:24	LAX Los Angeles		
	El 7357 Avec Ungas / Operated by American Althres 2014	00:18	06:24	LAX Los Jogeins		
	MH 9477 Meagelia Arithms / Operated by American Arithmas 201	00:18	06:24	LAX Los Angeles		
	TN 1266 Alt: Tartet Nat / Operated by American Altheor 2014	00:18	06:24	LAX Los Registers		
	6G 360 Southern Almere Express	06:05	06:25	LAF Lafayatta		
	UA 3404 United Althies / Operated by Republic Altways on be	06:15 Net of United Atlines	06:27	GRR Grend Repf ds		
	1781 Juni 2014 Avares 11 dans 100m gras. 1040000	06:15	06:27	GRR		

System Architecture



Hardware dimensions





Hardware Specifications

Product		C5104-DBS2	C5104-IGS2	C6101-VLC	
Description		VMS Database Server	iGlance Server	Device Keeper	
		Intel [®] 8 Core	Intel [®] 6 Core	Intel [®] Core™ i3, 4 Core	
	Memory	32G		16G	
	Operating System	Win Server 2019 on 2 x 240GB SSD (RAID1)	Windows [®] 10 IoT on 2 x 2400	GB SSD (RAID1)	
	Watchdog	Hardware & software watchdog	S		
Storage	Interface	3.5" SATA			
	HDD trays (hot-swappable)	4 pcs			
	Pre-installed storage	2 x 1TB SSD			
	Capacity	4 x 10TB			
	RAID	RAID1			
Display	Output	1 x VGA, 1 x DVI-D, 2 x DisplayPort 1.4			
	Local display resolution	4096 x 2160			
Interface	USB	Front: 2 x USB2.0; Rear: 4 x USB3.2 Gen2 (All Type A)			
	Audio outputs	N/A			
Network	LAN port	2 x 1Gb LAN			
Power	Voltage	100~240 Vac, 50-60Hz			
	Average consumption	190W			
	Power-supply redundancy	Yes, 1+1 400W redundant power supply			
-	Form factor	1U rackmount			
	Dimensions (W)x(H)x(D)	437 x 43 x 503 mm			
	Net weight (w/o storage)	12.65 kg			

Software Specifications

Software (VMS	S Manager)	C5104-DBS2		
Management	No. of connected cameras per system	10,000		
	No. of connected NVRs per system	1,024		
	No. of users	No restriction		
	No. of connected video wall screens	40		
	No. of monitors	3		
	NVR management	Yes, supported via SW-E2200-CW03		
	Camera management	Yes, supported via SW-E2200-CW03		
	Alarm management	Yes		
	Device management and search	Yes		
	Vehicle management	Yes		
	Failover Server (X5016)	Supported		
	Archive Server (X6024)	Supported		
	Integration Gateway (C5001 Series)	Supported		
	Video Wall Decoder (D4200 Series)	Supported		
	LPR NVR (M4106-LPR)	Supported		
	POS NVR (M-Series NVR)	Supported		
	ATM NVR (M-Series NVR)	Supported		
	Keyboard with joystick	Yes, GVD K1000 for PTZ controls		
Video controls	Video codec	H.265, H.264+, H.264, MPEG4, M-JPEG, MxPEG		
	Audio codec	G.711, G.726, AAC		
	2-way audio	Yes		
	Display resolution	CIF ~ 20 megapixels		
	Display performance (AVS enabled)	1800@D1 (E4200); 1800 @D1 (D4200-CW02); 2100@D1 (D4200- CW04)		
	Streaming type	Unicast		
	Encryption	Yes, AES-128bits		
	Metadata	Yes		
	Adaptive Video Streams	Yes		
	HW acceleration (GPU decoding)	Yes (Intel, nVIDIA)		
	Video stream down sampling (resolution & FPS) option	Yes		
	Maintenance of image aspect ratio	Yes		
	Video buffering	Yes		
	Sanpshot	Yes		
	Digital zoom	Yes		
	ROI	Yes		
	VCA metadata overlays on-video	Yes		
	Uninterrupted live video from NVR/Failover Server	Yes		
	Uninterrupted video playback from cameras/NVRs/Failover/Archive Servers	Yes		
	Fisheye video display	1P, 2P, 1x1, 2x2, and original view		
	Display pattern	1, 4, 5, 6, 8, 9, 12, 13, 16, 18, 24, 25 (A 64-video pattern (max.) is supported via SW-E2200-CW03)		
	View operation	ROI & ePTZ, software de-warp & ePTZ, digital zoom in/out, on-screen PTZ		
	Playback control	General playback (forward/backward/pause), jump to the next / previous frame, go to a certain date, speed controls (0.25x, 0.5x, 1x, 2x, 4x, 8x, 16x, 32x)		

Software Specifications

Video well controls Remote video payback controls Yes User's remote control of oud-officat controls Yes User's remote control of oud-officat controls Yes User's remote control of pushing video Yes User's remote control of pushing video Yes User's remote control of pushing video Yes Quer's remote control of pushing video Yes Adaptive Video Streams Yes Video wall Control of pushing video Video video control video control of video fiscality map Yes Video wall Synchronous video control of video fiscality map Video wall Yes Video wall Yes Uninterrupted video playback from camerars/NFXFailover/NF			The second
Video wall control Remote video patkack controls Yes User's remote control of video digital zoom Yes User's remote control of panoramic fish-ray de varp Yes User's remote control of pushing video Yes User's remote control of pushing video Yes User's remote control of pushing video Yes Synchronous video controls (E4200 vs. D4200) Yes Video varian down sampling (resolution & FPS) Yes Video varian down sampling (resolution & FPS) Yes Video varian down sampling (resolution & FPS) Yes Ninterrupted video playback from carmeras/NYES-allover/AtvinyEs-allover/AtvinyEs-allover Yes Alarm Alarm video popup Yes Atarm video instant playback from carmeras/NYES-allover/AtvinyEs Servers Yes Atarm video instant playback from carmeras/NYES-allover/AtvinyEs Servers Yes Atarm video instant playback mode Yes Atarm video instant playback mode Yes CaseEulider Yes (yes 16 channels via SW-E2200-CW03 EverVident list in recording Yes Roldari tarm video instant playback mode Yes CaseEulider	Software (VMS	Manager)	C5104-DBS2
Idea's remote video playback controls Yes User's remote control of paporamic fish-eye devant Yes Variant Yes User's remote control of pushing GISF-Bailly may Yes User's remote control of pushing GISF-Bailly may Yes Synchronous video controls (E4200 vs. D4200) Yes Adaptive Video Streams Yes Video stream down sampling (resolution & FPS) Yes Video aution toring panel Yes Video vali Yes Uninterrupted live video from NVRFBailover Yes Sinver Yes Uninterrupted live video from NVRFBailover/Achive Servers Yes Alarm video popup Yes Marm video popup Yes Alarm video instant playback from Yes Alarm video instant playback Yes Alarm video instant playback mode		Video export	Yes, Download Manager (*.MKV, *.AVI and *.AVA support)
Idea's remote control of video digital zoom Yes User's remote control of panoramic fish-eye de warp to video wall Yes User's remote control of pushing GISF-adilly me to video wall Yes Adaptive Video Streams Yes Video video control (E4200 vs. D4200) Yes Adaptive Video Streams Yes Video video control (F4200 vs. D4200) Yes Video video direm down sampling (resolution & FFS) Yes Video video from NVR/Failover Savver Yes Video video papup Yes Alarm message popup Yes Alarm video popup Yes Alarm video instant playback from cameras/NKPRS-failover/Archive Servers Yes Alarm video instant playback from cameras inst (on map) Yes Alarm video instant playback mode Yes Alarm video instant playback Yes Alarm video instant playback Yes Independent playback in playback mode Yes Independent playback in playback mode Yes Ioping Yes, via SW-E2200-CW03 Ioping Yes, via SW-E2200-CW03 Iopital Zoom Yes	Video wall controls	Remote video pattern manipulation	Yes
User's remote control of panoramic fish-eye de wayn Ves User's remote control of pushing video Yes User's remote control of pushing GIS/Facility map to video vall Ves Synchronous video controls (E4200 vs. D4200) Yes Adaptive Video Steams Yes Video aream down sampling (resolution & FPS) option Yes Video vall control panel Yes Video vall control panel Yes Visitarrupted Video from NVR/Failover Server Yes Visitarrupted Video from NVR/Failover Server Yes Visitarrupted Video playback from comercas/NVRs/Failover/Archive Servers Yes Alarm doe opoup Yes Alarm doe opoup Yes Adres alarm list (on neg) Yes Active alarm list (on neg) Yes Active alarm list (on neg) Yes Synchronous playback mode Yes up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes Adjut playback speed Yes Alary doe overaps on video Yes Poiplad Yes Digital Zoom Yes Ropping </td <td></td> <td>User's remote video playback controls</td> <td>Yes</td>		User's remote video playback controls	Yes
warp res User's renote control of pushing GIS/Facility may Yes User's renote control of pushing GIS/Facility may Yes Synchronous video controls (E4200 vs. D4200) Yes Adaptive Video Stream Yes Video wall control panel Yes Video wall control panel Yes Uninterrupted live video from NVR/Failover Yes Server Yes Atam video popup Yes CaseBuilder Yes CaseBuilder Yes CaseBuilder Yes Casono Yes Qius		User's remote control of video digital zoom	Yes
Base's remote control of pushing GIS/Facility was ves Synchronous video controls (E4200 vs. D4200) Yes Adaptive Video Streams Yes Video stream down sampling (resolution & FPS) Yes Oldeo and control panel Yes Uninterrupted video playback from commers/MVRs/Failover/Archive Servers Yes Alarm management Alarm video popup Yes Alarm video popup Yes Alarn video instant playback Yes Alarn video instant playback from cameras/MVRs/Failover/Archive Servers Yes Alarn video instant playback Yes Alarn video instant playback Yes Alarn video instant playback mode Yes Alarn video instant playback mode Yes Alarn video instant playback mode Yes Synchronous playback mode Yes Synchronous playback mode Yes Event/set tilt in recording Yes Alguis playback speed Yes Iopinal Zoom Yes Net Sector Yes Alard acoverlays on-video Yes Iopinal Zoom			Yes
to video wall res Synchronous video controls (E4200 vs. D4200) Yes Adaptiv Video Stream down sampling (resolution & FPS) Yes Video vall control panel Yes (Dispatch single/multiple videos, video patterns, tourin pattern layout, change screen settings) Alarm Yes Miniterrupted video from NVR/Failover Server Yes Alarm Yes Alarm Yes Alarm message popup Yes Alarm video instant playback from cameras/NVRs/Failover/Archive Servers Yes Alarm video instant playback Yes Alarm video instant playback nom Yes Adrew alarm list (on one full screen) Yes Adrew alarm list (on nang) Yes Ves up to 16 channels via SW-E2200-CW03 Yes Event/alert list in recording Yes Ev		User's remote control of pushing video	Yes
Adaptive Video Streams Yes Video stream down sampling (resolution & FPS) Yes Video wall control panel Yes (Dispatch single/multiple videos, video patterns, tourin pattern layout, change screen settings) Viniterrupted video from NVR/Failover Yes Marm video popup Yes Alarm message popup Yes Alarm video popup Yes Alarm video instant playback from cameras/NVRs/Failover/Archive Servers Yes Alarm video instant playback from cameras/NVRs/Failover/Archive Servers Yes Alarm video instant playback from cameras/NVRs/Failover/Archive Servers Yes Alarm video instant playback Yes Active alarm list (on one full screen) Yes Video instant playback mode Yes, up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes Event/alert list in recording Yes Algus playback speed Yes Algus playback speed Yes Ves Yes Vortetadata overlays on-video Yes Yes Search formissing objects, foreign objects, ATM/POS tranvia SW-E2200-CW03 Facility map Yes			Yes
Video stream down sampling (resolution & FPS) Yes Video wall control panel Yes (Dispatch single/multiple videos, video patterns, tourin pattern layout, change screen settings) Uninterrupted live video from NVR/Failover Server Yes Uninterrupted video playback from cameras/NVRs/Failover/Archive Serverss Yes Alarm management Alarm message popup Yes Ative alarm list (on one full screen) Yes Ative oilarm playback Yes Ative dalarm list (on map) Yes Atam doe oinstant playback Yes Alarn doe oinstant playback mode Yes Yes Yes Synchronous playback mode Yes Yes Yes Graphola timelina Yes Graphola timelina Yes Algust playback speed Yes Yes Yes Ioping Yes Yes Yes Yes Yes Graphola timelina Yes Ioping Yes Yes Yes Graphola Yes Yes		Synchronous video controls (E4200 vs. D4200)	Yes
option res Video wall control panel 'Yes (Dispatch single/milliple videos, video patterns, tourn pattern layout, change screen settings) Uninterrupted live video from NVR/Failover Server Yes Alarm management Alarm message popup Yes Alarm message popup Yes Alarm video jopup Yes Alarm message popup Yes Alarn video instant playback from caseBuilder Yes Alarn video instant playback mode Yes Alarn video instant playback mode Yes Synchronous playback mode Yes, via SW-E2200-CW03 Event/alert list in recording Yes, via SW-E2200-CW03 Event/alert list in recording Yes, via SW-E2200-CW03 Graphical timeline Yes, via SW-E2200-CW03 Idigit Jayback speed Yes, via SW-E2200-CW03 Idigit Jayback speed Yes, via SW-E2200-CW03 Idigit Jayback mode Yes VCA metadata overlays on-video Yes Via Metadata overlays on-video Yes Via Metadata overlays on-video Yes Via Metadata overlays on-video Yes If Manp		Adaptive Video Streams	Yes
Model wall control panel pattern layout, change screen settings) Viniterrupted live video from NVR/Failover Yes Uninterrupted video playback from cameras/NVR&Failover/Archive Servers Yes Alarm Alarm message popup Yes Alarm message popup Yes Ative alarm list (on one full screen) Yes Ative alarm list (on map) Yes Ative alarm list (on map) Yes (by media "notes") Ative alarm list (on map) Yes (by media "notes") Ative alarm list (on map) Yes Ative alarn list (on map) Yes (by media "notes") Ative alarn list (on map) Yes Ative alarn list (on map) Yes CaseBuilder Yes (by media "notes") Ative alarn list (on map) Yes Synchronous playback mode Yes, up to 16 channels via SW-E2200-CW03 Graphical timeline Yes, via SW-E2200-CW03 Adjust playback speed Yes, via SW-E2200-CW03 Digital Zoom Yes, via SW-E2200-CW03 Map Yes, via SW-E2200-CW03 Map Yes, via SW-E2200-CW03 Map Yes, via SW-E			Yes
Server res Uninterrupted video playback from cameras/NVRs/Fallover/Archive Servers Yes Alarm management Alarm moissage popup Yes Alarm message popup Yes Active alarm list (on one full screen) Yes Adarw video instant playback Yes Alarm video instant playback Yes Alare video instant playback mode Yes Synchronous playback mode Yes Synchronous playback mode Yes Synchronous playback speed Yes Algus playback speed Yes Algus playback speed Yes Iogial Zoom Yes ROI Yes Yes Yes ROI Yes ROI Yes Yes Yes ROI Yes Smart search Yes Yes was W-E2200-CW03 Yes Rol Yes GaseBuilder Yes Yes Yes Mart search Yes vis SW-E2200-CW03 Yes		Video wall control panel	Yes (Dispatch single/multiple videos, video patterns, touring, change pattern layout, change screen settings)
cameras/NVRs/Failover/Archive Servers res Alarm management Alarm video popup Yes Alarm message popup Yes Active alarm list (on one full screen) Yes Active alarm list (on map) Yes Alarm video instant playback Yes Alarm video instant playback mode Yes Playback Synchronous playback mode Yes Synchronous playback mode Yes Yes Graphical timeline Yes Yes Adjust playback speed Yes Yes Aloge talave video de-warp Yes Yes YCA metadata overlays on-video Yes Yes YCA metadata overlays on-video Yes Yes YCA metadata overlays on-video Yes Yes Yes Yes Yes Alard graphical maps Yes (by media "notes") Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes			Yes
Management Alarm message popup Yes Active alarm list (on one full screen) Yes Active alarm list (on map) Yes Alarm video instant playback Yes CaseBuilder Yes (by media "notes") Playback Independent playback in playback mode Yes, up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes Yes Graphical timeline Yes Yes Adjust playback speed Yes, via SW-E2200-CW03 Yes Digital Zoom Yes Yes Yes ROI Yes Yes Yes ROI Yes Yes Yes Ward graphical averlagy on-video Yes Yes Yes Yes Yes Yes Map Yes Yes Yes Yes Yes			Yes
Active alarm list (on one full screen) Yes Active alarm list (on map) Yes Alarm video instant playback Yes (by media "notes") Playback Independent playback in playback mode Yes, up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes, via SW-E2200-CW03 Event/alert list in recording Yes, via SW-E2200-CW03 Graphical timeline Yes, via SW-E2200-CW03 Iogital Zoom Yes, via SW-E2200-CW03 Digital Zoom Yes, via SW-E2200-CW03 Flobye video de-warp Yes VCA metadata overlays on-video Yes Smart search Search for missing objects, foreign objects, ATM/POS transing via SW-E2200-CW03 Map CaseBuilder Yes, via SW-E2200-CW03 Facility map Yes, via SW-E2200-CW03 GlS map Yes Glader graphical maps Yes Number of linked map layers Yes Video preview and instant playback Yes <	Alarm	Alarm video popup	Yes
Active alarm list (on map) Yes Alarm video instant playback Yes (by media "notes") CaseBuilder Yes (by media "notes") Playback Independent playback mode Yes, up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes, up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes, up to 16 channels via SW-E2200-CW03 Icoping Yes, via SW-E2200-CW03 Digital Zoom Yes, via SW-E2200-CW03 Bigital Zoom Yes Rol Yes VCA metadata overlays on-video Yes Yes, via SW-E2200-CW03 Yes Smart search Search for missing objects, foreign objects, ATM/POS transing SW-E2200-CW03 Map CaseBuilder Yes (by media "notes") Map Yes (by media "notes") Facility map Yes (video media "notes") Facility map Yes (video media "notes") Yes (Standard graphical maps) Yes Yes (Standard graphical maps) Yes Yes (Video preview and instant playback Yes Yes (Preview and instant playback Yes Yei	management	Alarm message popup	Yes
Alarm video instant playback Yes CaseBuilder Yes (by media "notes") Playback Independent playback in playback mode Yes, up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes Yes Graphical timeline Yes Yes Adjust playback speed Yes Yes Looping Yes, via SW-E2200-CW03 Yes Digital Zoom Yes Yes ROI Yes Yes Yes via SW-E2200-CW03 Yes Pisheye video de-warp Yes Yes YCA metadata overlays on-video Yes Yes Smart search Search for missing objects, foreign objects, ATM/POS trans Yes Yes Yes GIS map Yes Yes GIS map Yes Yes Number of linked map layers Yes Yes Video preview and instant playback Yes Yes Quick-find of a device on map Yes Yes		Active alarm list (on one full screen)	Yes
CaseBuilder Yes (by media "notes") Playback Independent playback in playback mode Yes Synchronous playback mode Yes, up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes Graphical timeline Yes Adjust playback speed Yes Looping Yes, via SW-E2200-CW03 Digital Zoom Yes ROI Yes Yes Yes VCA metadata overlays on-video Yes Smart search Search for missing objects, foreign objects, ATM/POS transitor Mapp CaseBuilder Yes ITML map Yes, via SW-E2200-CW03 Itaging and and graphical maps Yes GIS map Yes GIS map Yes Video preview and instant playback Yes Video preview and instant playback Yes Video preview and instant playback Yes Quick-find of a device on map Yes Quick-find of an alert device on map Yes		Active alarm list (on map)	Yes
Playback Independent playback in playback mode Yes Synchronous playback mode Yes, up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes Graphical timeline Yes Adjust playback speed Yes, via SW-E2200-CW03 Looping Yes, via SW-E2200-CW03 Digital Zoom Yes ROI Yes YCA metadata overlays on-video Yes VCA metadata overlays on-video Yes Smart search Search for missing objects, foreign objects, ATM/POS transing SW-E2200-CW03 Map CaseBuilder Yes (by media "notes") HTML map Yes, via SW-E2200-CW03 Yes GIS map Yes Yes Standard graphical maps Yes Yes Number of linked map layers Yes Yes Video preview and instant playback Yes Yes Device status (alert, video lost, etc.) Yes Yes Quick-find of a device on map Yes Yes		Alarm video instant playback	Yes
Nybetic Synchronous playback mode Yes, up to 16 channels via SW-E2200-CW03 Event/alert list in recording Yes Graphical timeline Yes Adjust playback speed Yes Looping Yes, via SW-E2200-CW03 Digital Zoom Yes ROI Yes VCA metadata overlays on-video Yes Smart search Search for missing objects, foreign objects, ATIM/POS transvia SW-E2200-CW03 Map CaseBuilder Yes (by media "notes") HTML map Yes (vide of a device on map Yes Video preview and instant playback Yes Yes Video preview and instant playback Yes Yes Quick-find of a alert device on map Yes Yes		CaseBuilder	Yes (by media " <i>notes</i> ")
Event/alert list in recordingYesGraphical timelineYesAdjust playback speedYesLoopingYes, via SW-E2200-CW03Digital ZoomYesROIYesFisheye video de-warpYesVCA metadata overlays on-videoYesSmart searchSearch for missing objects, foreign objects, ATM/POS transvia SW-E2200-CW03MapCaseBuilderFishity mapYes (by media "notes")HTML mapYes, via SW-E2200-CW03Facility mapYesGIS mapYesStandard graphical mapsYesNumber of linked map layersYesVideo preview and instant playbackYesOuick-find of a device on mapYesQuick-find of an alert device on mapYes	Playback	Independent playback in playback mode	Yes
Graphical timelineYesAdjust playback speedYes, via SW-E2200-CW03LoopingYes, via SW-E2200-CW03Digital ZoomYesROIYesYCA metadat overlays on-videoYesSmart searchYes (by media "notes")HTML mapYes, via SW-E2200-CW03Facility mapYes, via SW-E2200-CW03GIS mapYes, via SW-E2200-CW03Standard graphical mapsYesVideo preview and instant playbackYesVideo preview and instant playbackYesVideo preview and instant playbackYesOuice-find of a device on mapYesVesYes <tr< td=""><td rowspan="2"></td><td>Synchronous playback mode</td><td>Yes, up to 16 channels via SW-E2200-CW03</td></tr<>		Synchronous playback mode	Yes, up to 16 channels via SW-E2200-CW03
Adjust playback speedYesLoopingYes, via SW-E2200-CW03Digital ZoomYesROIYesROIYesYeA metadata overlays on-videoYesVCA metadata overlays on-videoYesSmart searchSearch for missing objects, foreign objects, ATM/POS transvia SW-E2200-CW03MapCaseBuilderFicility mapYes (by media "notes")Facility mapYes, via SW-E2200-CW03GIS mapYesGlandard graphical mapsYesVideo preview and instant playbackYesVideo preview and instant playbackYesDevice status (alert, video lost, etc.)YesQuick-find of a device on mapYesQuick-find of an alert device on mapYes<		Event/alert list in recording	Yes
Looping Yes, via SW-E2200-CW03 Digital Zoom Yes ROI Yes ROI Yes Fisheye video de-warp Yes VCA metadata overlays on-video Yes Smart search Search for missing objects, foreign objects, ATM/POS transvia SW-E2200-CW03 Map CaseBuilder HTML map Yes (by media "notes") Facility map Yes GIS map Yes Standard graphical maps Yes Video preview and instant playback Yes Video preview and instant playback Yes Quick-find of a device on map Yes Quick-find of an alert device on map Yes		Graphical timeline	Yes
Digital ZoomYesROIYesFisheye video de-warpYesVCA metadata overlays on-videoYesSmart searchSearch for missing objects, foreign objects, ATM/POS transing SW-E2200-CW03MapCaseBuilderHTML mapYes, via SW-E2200-CW03Facility mapYes, via SW-E2200-CW03GIS mapYesStandard graphical mapsYesNumber of linked map layersYesVideo preview and instant playbackYesVideo preview and instant playbackYesQuick-find of a device on mapYesQuick-find of an alert device on mapYesYesYesStandard graphical mapsYesYesYesStandard graphical mapsYesYideo preview and instant playbackYesYesYesQuick-find of a device on mapYes <td></td> <td>Adjust playback speed</td> <td>Yes</td>		Adjust playback speed	Yes
ROI Yes Fisheye video de-warp Yes VCA metadata overlays on-video Yes Smart search Search for missing objects, foreign objects, ATM/POS transvia SW-E2200-CW03 Map CaseBuilder Yes (by media "notes") HTML map Yes, via SW-E2200-CW03 Notes Facility map Yes, via SW-E2200-CW03 Notes GIS map Yes Yes Standard graphical maps Yes Yes Number of linked map layers Yes Yes Video preview and instant playback Yes Pevice status (alert, video lost, etc.) Quick-find of a device on map Yes Yes Quick-find of an alert device on map Yes Yes		Looping	Yes, via SW-E2200-CW03
Fisheye video de-warp Yes VCA metadata overlays on-video Search for missing objects, foreign objects, ATM/POS transvia SW-E2200-CW03 Map CaseBuilder Yes (by media "notes") HTML map Yes, via SW-E2200-CW03 Facility map Yes, via SW-E2200-CW03 GIS map Yes Standard graphical maps Yes Number of linked map layers Yes Video preview and instant playback Yes Device status (alert, video lost, etc.) Yes Quick-find of a device on map Yes Quick-find of an alert device on map Yes		Digital Zoom	Yes
VCA metadata overlays on-video Yes Smart search Search for missing objects, foreign objects, ATM/POS transvia SW-E2200-CW03 Map CaseBuilder Yes (by media "notes") HTML map Yes, via SW-E2200-CW03 Facility map Yes GIS map Yes Standard graphical maps Yes Number of linked map layers Yes Video preview and instant playback Yes Device status (alert, video lost, etc.) Yes Quick-find of a device on map Yes Quick-find of an alert device on map Yes		ROI	Yes
Smart search Search for missing objects, foreign objects, ATM/POS transvia SW-E2200-CW03 Map CaseBuilder Yes (by media "notes") HTML map Yes, via SW-E2200-CW03 Notestand Facility map Yes, via SW-E2200-CW03 Notestand GIS map Yes Yes Standard graphical maps Yes Yes Number of linked map layers Yes Yes Video preview and instant playback Yes Yes Device status (alert, video lost, etc.) Yes Yes Quick-find of a device on map Yes Yes Quick-find of an alert device on map Yes Yes		Fisheye video de-warp	Yes
MapCaseBuilderYes (by media "notes")HTML mapYes, via SW-E2200-CW03Facility mapYes, via SW-E2200-CW03GIS mapYesStandard graphical mapsYesNumber of linked map layersYesVideo preview and instant playbackYesDevice status (alert, video lost, etc.)YesQuick-find of an alert device on mapYesYesYes		VCA metadata overlays on-video	
HTML mapYes, via SW-E2200-CW03Facility mapYesGIS mapYesStandard graphical mapsYesNumber of linked map layersYesVideo preview and instant playbackYesDevice status (alert, video lost, etc.)YesQuick-find of a device on mapYesQuick-find of an alert device on mapYes		Smart search	Search for missing objects, foreign objects, ATM/POS transaction data via SW-E2200-CW03
Facility mapYesGIS mapYesStandard graphical mapsYesNumber of linked map layersYesVideo preview and instant playbackYesDevice status (alert, video lost, etc.)YesQuick-find of a device on mapYesQuick-find of an alert device on mapYes	Мар	CaseBuilder	Yes (by media " <i>notes</i> ")
GIS mapYesStandard graphical mapsYesNumber of linked map layersYesVideo preview and instant playbackYesDevice status (alert, video lost, etc.)YesQuick-find of a device on mapYesQuick-find of an alert device on mapYes		HTML map	Yes, via SW-E2200-CW03
Standard graphical mapsYesNumber of linked map layersYesVideo preview and instant playbackYesDevice status (alert, video lost, etc.)YesQuick-find of a device on mapYesQuick-find of an alert device on mapYes		Facility map	Yes
Number of linked map layersYesVideo preview and instant playbackYesDevice status (alert, video lost, etc.)YesQuick-find of a device on mapYesQuick-find of an alert device on mapYes		GIS map	Yes
Video preview and instant playbackYesDevice status (alert, video lost, etc.)YesQuick-find of a device on mapYesQuick-find of an alert device on mapYes		Standard graphical maps	Yes
Device status (alert, video lost, etc.)YesQuick-find of a device on mapYesQuick-find of an alert device on mapYes		Number of linked map layers	Yes
Quick-find of a device on mapYesQuick-find of an alert device on mapYes		Video preview and instant playback	Yes
Quick-find of an alert device on map Yes		Device status (alert, video lost, etc.)	Yes
		Quick-find of a device on map	Yes
		Quick-find of an alert device on map	Yes
Integrated PTZ controls Yes		Integrated PTZ controls	Yes
Map navigator Yes		Map navigator	Yes

Software Specifications

		Children and a country and the
Software (VMS Manager)		C5104-DBS2
PTZ	PTZ controls	Mouse & GVD K1000 (A keyboard with a joystick)
	PTZ operation	Direction controls, zoom in/out, preset, patrol, to center position, auxiliary commands
Language	Languages	SW-E2200-CW03 supports 20+ languages. TheVMS Manager` supports English, Simplified Chinese, Traditional Chinese, Korean, and Japanese.