

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 cameras and around 800 ~ 1250 NVRs), and 3rd-party applications. Horizontally, more features can be plugged in, such as AI modules from GVD and 3rdparties, including IBM, NEC, ITRI, SONY, etc.

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. One VMS Database Servers supports 10,000 IP cameras and 800~1250 NVRs. 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.



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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.



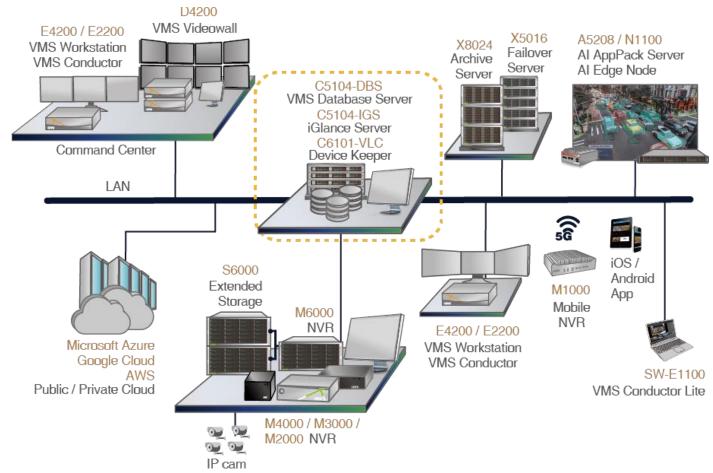


Secured Design to Protect Your DB

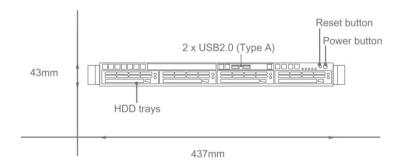
GVD **VMS Database Servers and all other GVD Servers** are with every 6x months vulnerability-scan to ensure your servers safety. With the antivirus pre-installed and encrypted data and communication constructing the best and safest systems for your projects.

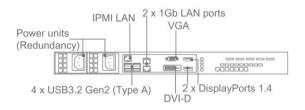
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System Architecture



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 240GB SSD (RAID1)			
Watchdog		Hardware & software watchdogs				
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 Monitor				
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				
Mechanic	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	1,250 ~800 depend on # of IP cams per NVR				
	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

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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.