

# Safeguarding Your Best Interests

# GVD Standalone

## NVR Series M3104

The Standalone and Mini-Enterprise are GVD's turnkey NVRs powered by the preinstalled HD NVR to deliver essential and high-end IP video surveillance. These NVRs are smartly designed to quickly join GVD's VMS 4.0 Suites, a cloud-based AI video system to manage up to 100,000 channels.

If your project is large and complex, you can choose to scale up to GVD VMS 4.0 Suites, a cloud-based AI video system capable of controlling 100,000 cameras while in the meantime brings hybrid storage for the flexible deployment of large video systems.





# Product Highlights

## ■ Total Solution with VMS 4.0

GVD M6 Enterprise NVR Servers are parts of the solution of VMS platform, seamlessly working with other key IP surveillance systems by stacking up your projects: X5 Failover Server, X6 Archive Server, E Series Workstations, D Series VideoWall, Smart phone Apps, cross-platforms Browsers etc.

## ■ Industrial Server with Auto- Maintenance

The True Enterprise with dual LAN and power redundancy and RAID storage with hot-swappable to tolerate any faults and prevent data loss. M6 also supports VMS ToolSet kits for your important configuration and systems periodically restart automatically. VMS Toolset will show all of important messages from OS and your NVR for any necessary NVR maintenance steps.

## ■ Time Sector Engine (TSE)

Unlike conventional NVRs with a centralized database, GVD NVR adopts an exclusive TSE (Time Sector Engine) to handle high bandwidth throughput and to deter latency for massive HD video processing, so that it gets superb video display, whether live or playback. The NVR has a max. recording rate of 512Mbps, handles up to 256 IP cameras, and processes video at high speed with 150ms~190ms latency for a D1 resolution with full frame rate display, and the NVR gives you the best real-time PTZ control by this exclusive TSE.



## ■ Dual-Eng NVR Value-Driven Pricing

A powerful NVR recording engine that can handle more IP camera streams on a single NVR machine, no need for Virtual Machine support. Increases total IP cams I/O bitrate by 70% ~ 100%, supports 70% ~ 90% more IP cameras on a single NVR

It helps customers save massive costs on surveillance system installation — perfect for Cloud projects and large enterprises.

## ■ Open Protocols for Integration

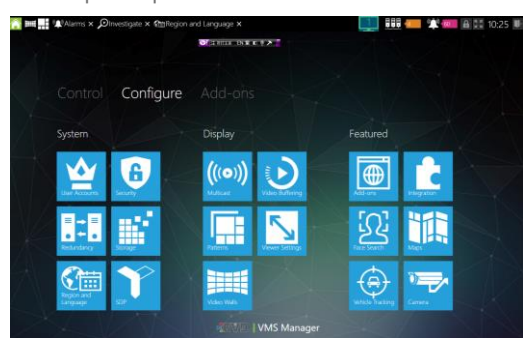
The NVR supports Modbus, JSON, TCP Text, REST popular open protocols widely-used in various systems and industrial electronic devices. They are pre-built in with NVR, users don't need to invest extra effort and cost to integrate a 3rd-party system. The NVR also features powerful alarm management that is capable of sending TCP messages to alert security operators. These advantages make the NVR highly eligible for many promising solutions such as SmartCity, Green Building, Traffic Control, Automation Production etc.

## ■ Ai Plug-in Solution

The NVR is designed to support quick Ai cameras and Ai Server plug-in solution by ONVIF Generic or GVD Ai Agent connectivity.

ONVIF Generic is to allow any ONVIF supported-compliant cameras but without Ai good proper interface to be integrated. Using existing ONVIF interface to integrate cams' Ai functions, saving a lot of your engineering effort.

GVD ready-to-go Ai Agent is JSON-based solution. Easy to implement their own Ai integration by simply modifying GVD JSON sample scripts. That it is done.

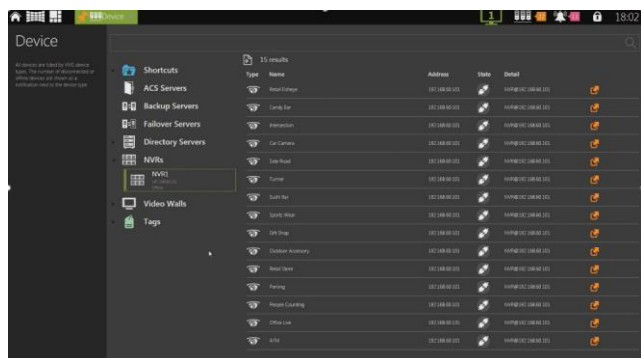




# VMS Features

## 100,000 IP cameras support

GVD E4200 can team up with a variety of NVR models featured by GVD to handle 64~100,000 channels with unique "Device Management" & "Tag Management" functions.



## Ai Meta Data Search

The GVD's new AI Smart Search offers powerful integration through a simple, standard JSON-based interface, can easily connect any AI cameras to GVD VMS platform.

The GVD VMS 4.0 AI Data Search GUI features an intuitive, user-friendly design that allows users to get hands-on quickly and efficiently.



## Videowall synchronous display

An operator sitting at the management console (E4200) of VMS platform can freely change what to output on the videowall, by using Drag-and-drop to view live-video, play recorded video, change video pattern, start/stop video touring, etc.

## iGlance Dashboard

iGlance is to give operators a quick comprehensive view of system status: Alarm, NVR, IP cams, network statistics, video analytics to ensure all operation and future maintenance.

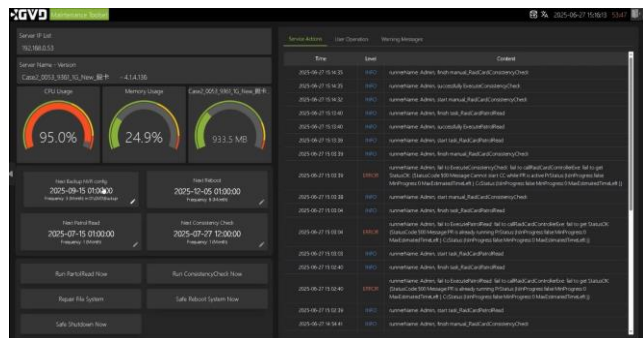


## Seamless Video on eMap

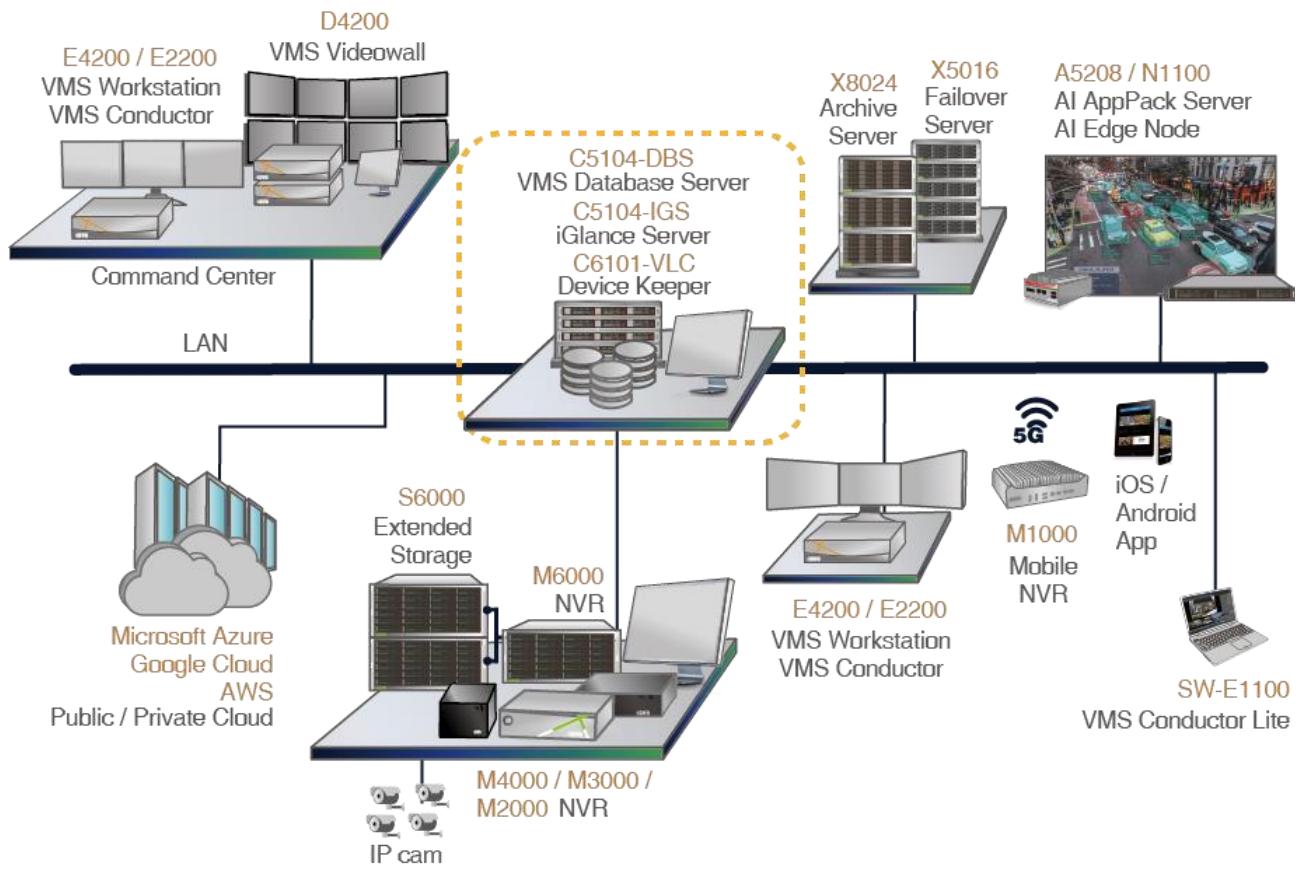
GVD VMS designed for video HA (high availability) to fetch the sources of the video from NVR or the redundant systems such as Failover server. Such HA videos are embedded on GVD eMap for easy and intuitive operation.

## Automatic Self Maintenance

VMS 4.0 ToolSet kits for your important configuration and systems periodically restart automatically. VMS Toolset will show all of important messages from OS and your NVR for any necessary NVR maintenance steps.



# System Architecture



# Hardware Specifications



Product		M3104-VS
Description	Standalone NVR	
System	CPU	Intel® Core™ Ultra Processors (Series 2)
	Memory	16G
	Operating System	Windows® 11 IoT Enterprise
	Watchdog	Hardware watchdog & software watchdog
Storage	Interface	3.5" SATA III HDD
	Hard disk trays (bays)	4 pcs
	Storage capacity	4 x 20TB
Display	Output	2 x HDMI; 2 x DisplayPort
	Local display resolution	4K
Interface	USB port	Front: 2 x USB3.2 + 2 x USB2.0; Rear: 4 x USB3.2 + 2 x USB2.0;
	Audio port	Front: 1 x mic-in Rear: 1 x mic-in, 1 x SPK out, 1 x line-in
	Serial COM port	N/A
Network	LAN port	2 x Gigabit Ethernet
Power	Voltage	100~240 Vac, 50-60 Hz
	PSU	500W
	Consumption (w/o HDD)	110W
Environment	Operating temp.	0°C~40°C (32°F~104°F)
	Storage temp.	-10°C~60°C (14°F~140°F)
	Operating humidity	0%~90%
	Storage humidity	5%~95%
Mechanic	Form factor	Tiny Cube
	Dimensions(W)x(H)x(D)	216 x 198 x 332 mm
	Certification	Safety certification : CB , BSMI , cTUVus EMI certification : FCC , CE , BSMI , RCM , VCCI
	Net weight w/o HDD	3.5 Kg

# Software Specifications



Software		M3104-VS
<b>Description</b>		NVR Manager
<b>Video Recording</b>	IP cam license	8,16,24,32
	Recording rate	Max. 128Mbps
	Rec. resolutions	D1, 1.3~20 megapixels
	Recording mode	Full-time recording, manual recording, recording by schedule, event, alarm, video motion detection
	Video codec	H.265, H.264, MPEG4, M-JPEG, MxPEG
	Audio codec	G.711, G.726, AAC
	Streaming type	Unicast & Multicast
	<b>Video display &amp; management</b>	Local Display (AVS enabled)
No. of live video streams		64
Display pattern		1, 2, 3, 4, 5, 6, 8, 9, 12, 13, 16, 18, 24, 25, 36, 48, 64
Live-view operation		ROI, ePTZ, corridor mode, software de-warp, digital zoom in/out, onscreen PTZ
ONVIF		ONVIF Profile-S
Synchronous playback		Up to 16 channels
Playback controls		Forward/backward playback, pause, jump to next/previous frame, go to date, speed controls, go to some time later/ago (0.5/1/5 minutes)
Video export		Via USB (*.AVI, *.AVA & *.MKV supported), digital watermark
Video search		By time, alarm, event, missing object, foreign object, E-Fence, people counting, transaction data from POS
<b>PTZ</b>		Controlling device
	Operation	Direction controls, zoom in/out, preset, patrol
<b>VCA</b>	Features	E-Fence, video motion detection, people counting, missing/foreign object search
	Event search	Search for a missing or foreign object; search for an event of people counting, video motion, or E-Fence
	Trigger source	Video loss, sensor trigger, HDD crash, system crash, abnormal transaction from POS, E-Fence, video motion detection, people counting
	Reaction	User-definable text message, video pattern popup, e-mail, output alarm signal, trigger recording, PTZ preset
	Setup	A Rule Wizard for flexible setup
<b>Alarm</b>	Trigger source	Video loss, sensor trigger, HDD crash, system crash, abnormal transaction from POS, E-Fence, video motion detection, people counting
	Reaction	User-definable text message, video pattern popup, e-mail, output alarm signal, trigger recording, PTZ preset
	Setup	A Rule Wizard for flexible setup
	DI / DO points	48 x inputs; 48 x outputs
<b>Remote Access Clients</b>	Web client	IE 9.0, 10.0, 11.0
	App client	iOS 10 and above; Android 5.0 and above
	PC thin client	VMS (E4200), CMS (SW-E2200-CW03), CMS Lite (E90-Windows 8 & 10)
	Number of clients	5
<b>POS</b>	License	8 units
	Integration	Integrable with all brands via POS filters
	Transaction data view	Pattern-view with both transaction data and relevant videos
	Data search/retrieval	Search by time, keyword or price to retrieve transaction data with relevant video
	POS alarm	Alarm setup by item or value; supporting popup alarm, email alarm, text message alarm, etc.
<b>System</b>	System update	NVR software update
	Backup & recovery	Yes, by VHD (virtual hard disk)
	Event logs	Event logs of system, cameras, users, etc.
	Languages	20+ languages are supported, including English, Spanish, French, Dutch, Italian, Japanese, Chinese, etc.