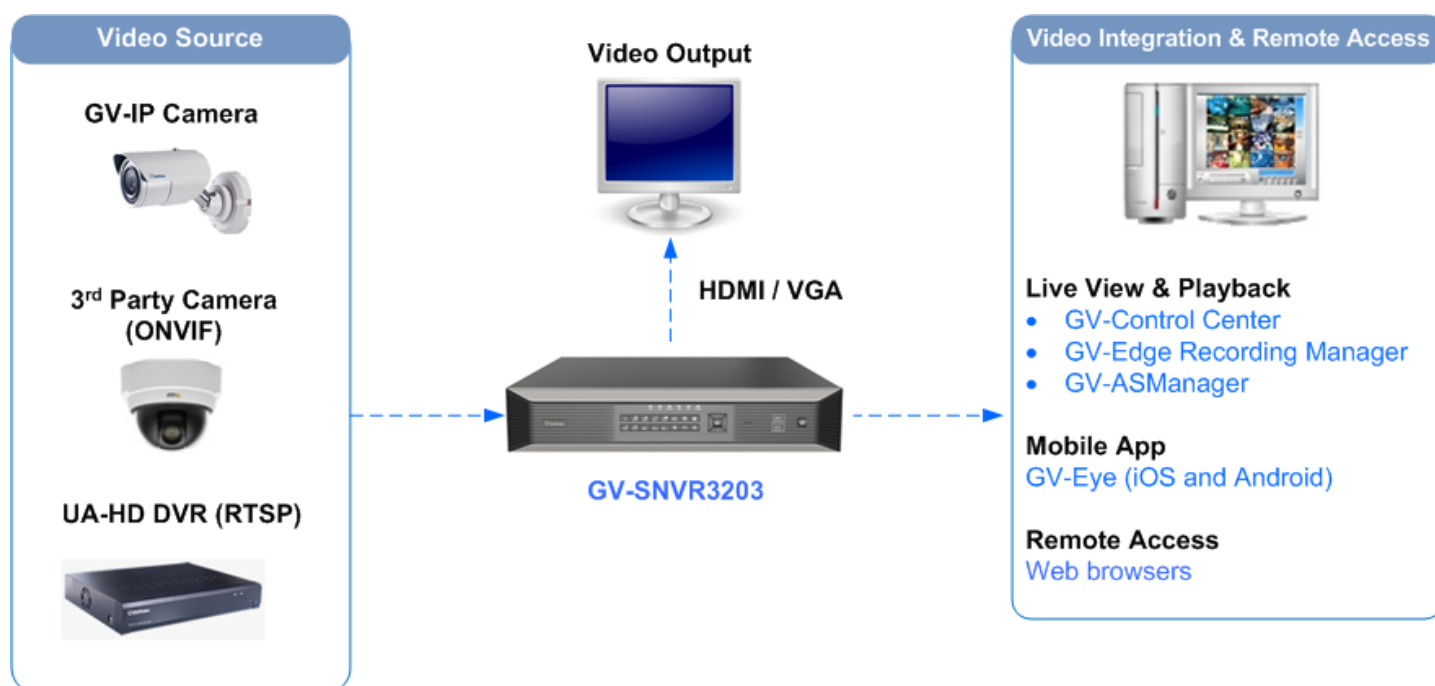


## GV-SNVR3203



### Introduction

GV-SNVR3203 is a standalone network video recorder with Linux embedded that records video files directly to the internal hard drive and supports up to 32 IP camera channels for video surveillance. Thanks to its up to 4K resolution video output, GV-SNVR3203 eliminates the need of a separate PC to view and play back video from the unit. It has USB ports that can be used to import or export system settings, update firmware, store snapshot files and back up videos.



### Features

- 32-channel video recording
- Up to 4000 x 3000 resolution for each channel
- Dual stream support
- Triple display from 3 video outputs with distinct layouts: one 4K (HDMI), two 1080p (HDMI / VGA)
- 4 SATA HDD drawers (3.5") for up to 80 TB storage
- Two-way audio
- 16 sensor inputs and 4 alarm outputs
- Automatic search and setup for IP cameras
- Support for third-party IP cameras through ONVIF and RTSP protocol
- Continuous, motion, alarm, and scheduled recordings
- Timeline playback
- Multi-channel playback
- Display of HDD status and temperature
- DST (Daylight Saving Time) support
- NTP (Network Time Protocol) support
- GeoVision DDNS server support
- E-mail notification for recording error
- Recording export
- Remote live view through Web browser
- Smart device access (iOS and Android)
- Support for 12 languages

## Specifications

### Hardware

| System                 |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OS                     |                  | Embedded Linux                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| No. of Drive Bay       |                  | 4 (3.5" HDD), up to 80 TB<br>*See the <i>Recommended Hard Disks</i> section below for details.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Power Source           |                  | Input: AC 100 ~ 240V, 50 ~ 60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Connectors             | Gigabit Ethernet | 2 ports, RJ-45 10/100/1000 Mbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                        | Video Output     | HDMI output ports x 2, VGA output port x 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                        | Audio            | RCA, Audio In/Out                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                        | USB              | Front: USB 2.0 x 2 ports, Rear: USB 3.0 x 1 port                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                        | RS-485           | Not functional                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| I/O Terminal Block     |                  | 16 inputs, 4 outputs, DC 12V out (1A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| LED Indicators         |                  | 6 LEDs: RUN, NET, GUARD, HD, ALM, CLOUD (not functional)                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Operating Temperature  |                  | -10°C ~ 55°C (14°F ~ 131°F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Humidity               |                  | 0% ~ 90% RH (non-condensing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Dimensions (L x W x H) |                  | 442 mm x 426 mm x 89 mm (17.4" x 16.8" x 3.5")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Net Weight             |                  | 5.7 kg (12.57 lb)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Certification          |                  | FCC, CE, BSMI, RoHS, UL compliant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Video and Audio        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Video Compression      |                  | H.264, H.265                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Video Stream           |                  | Dual streams from H.264, H265                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Video Output           |                  | 4K (HDMI), 1080p (HDMI / VGA),<br>*Up to three video outputs with distinct user-defined layouts are supported, subject to the SNVR's maximum channel number and frame rate.                                                                                                                                                                                                                                                                                                                                                         |
| Audio Compression      |                  | G.711                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Audio Support          |                  | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Two-Way Audio          |                  | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Disk Array             |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Array Type             |                  | RAID 1, 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Interface              |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Monitors               | VGA Output       | 1 port (1920 x 1080p / 60 Hz, 1920 x 1080p / 50 Hz, 1600 x 1200 / 60 Hz, 1280 x 1024 / 60 Hz, 1280 x 720 / 60 Hz, 1024 x 768 / 60 Hz)                                                                                                                                                                                                                                                                                                                                                                                               |
|                        | HDMI Output      | 2 ports (3840 x 2160 / 30 Hz, 1920 x 1080p / 60 Hz, 1920 x 1080p / 50 Hz, 1600 x 1200 / 60 Hz, 1280 x 1024 / 60 Hz, 1280 x 720 / 60 Hz, 1024 x 768 / 60 Hz)<br>*HDMI audio output is not supported                                                                                                                                                                                                                                                                                                                                  |
| Decoding               |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Frame Rate             | Main             | 12 MP: up to 30 fps/CH, 60 fps in total (2 CH max.)<br>8 MP: up to 30 fps/CH, 120 fps in total (4 CH max.)<br>5 MP: up to 30 fps/CH, 180 fps in total (6 CH max.)<br>4 MP: up to 30 fps/CH, 240 fps in total (8 CH max.)<br>4 MP: up to 25 fps/CH, 225 fps in total (9 CH max.)<br>1080P: up to 30 fps/CH, 480 fps in total (16 CH max.)<br>960P: up to 25 fps/CH, 800 fps in total (32 CH max.)<br>*When connected to more than one monitor, live view images for multiple windows will automatically be converted to sub streams. |
|                        | Sub              | 720P: up to 30 fps/CH, 960 fps in total (32 CH max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Playback               |                  | Max. 16-ch playback                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Fisheye Dewarping      |                  | A total of 3-ch (live view + playback)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Operation              |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Recording Bandwidth    | Input            | Max. 384 Mbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                        | Output           | Max. 384 Mbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Recording Mode         |                  | Normal, Motion Detection, Alarm Input, Alarm Output, Manual Alarm, Audio Detection Recording, Schedule Recording, Event recording, Snapshot, Manual recording                                                                                                                                                                                                                                                                                                                                                                       |
| Pre-Recording          |                  | 0 ~ 60 sec. / Default 10 sec.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Post Recording         |                  | 5 ~ 600 sec. / Default 60 sec.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Instant Playback       |                  | 5 minutes and 30 seconds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Backup Type            |                  | USB flash drive of FAT32 or NTFS format                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|                                       |                   |                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Playback Function                     |                   | Fast forward / backward (2x, 4x, 8x, 16x)<br>Slow forward (1/2x, 1/4x, 1/8x,)                                                                                                                                                                                                                                                  |
| Local Viewing                         | Corridor Mode     | 3 / 4 / 5 / 7 / 9 / 10 / 12 / 16 / 32                                                                                                                                                                                                                                                                                          |
|                                       | Multi-Window      | 4 / 6 / 8 / 9 / 16 / 25 / 36                                                                                                                                                                                                                                                                                                   |
| Video Analytics                       |                   | Defocus Detection, Scene Change Detection, Object Removed, Object Left Behind                                                                                                                                                                                                                                                  |
| <b>AI Integrated Function</b>         |                   |                                                                                                                                                                                                                                                                                                                                |
| AI Analytics                          |                   | Intrusion Detection, Cross Line Detection, Enter Area, Face Detection, Leave Area (Human classification), Auto Tracking, People Flow Counting, Crowd Density Monitoring<br>*These functions are only applicable when the NVR is connected to AI-capable IP cameras listed in <i>Compatible GV-AI Capable IP Cameras</i> below. |
| <b>Management</b>                     |                   |                                                                                                                                                                                                                                                                                                                                |
| Language                              |                   | Czech, English, French, German, Hungarian, Italian, Japanese, Polish, Portuguese, Russian, Spanish, Traditional Chinese                                                                                                                                                                                                        |
| Firmware upgrade                      |                   | Upgrade through Web                                                                                                                                                                                                                                                                                                            |
| Web Browser                           |                   | IE 10 or above<br>Firefox V52 or above<br>Google Chrome V45 or above<br>Edge V79 or above                                                                                                                                                                                                                                      |
| <b>Network</b>                        |                   |                                                                                                                                                                                                                                                                                                                                |
| Protocol                              |                   | 802.1x, ARP, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMP, IPv4, IPv6, NTP, PPPoE, QoS, RTCP, RTP, RTSP, SMTP, SNMP, TCP, UDP, UPnP                                                                                                                                                                                           |
| <b>System Monitoring and Recovery</b> |                   |                                                                                                                                                                                                                                                                                                                                |
| Power Restoration                     |                   | Automatic restart after power outage                                                                                                                                                                                                                                                                                           |
| <b>Remote Monitoring</b>              |                   |                                                                                                                                                                                                                                                                                                                                |
| Multi-Window                          |                   | 1 / 4 / 6 / 8 / 9 / 10 / 13 / 16 / 25 / 36                                                                                                                                                                                                                                                                                     |
| Monitoring Environment                |                   | IE browser, non-IE browsers (Chrome, Edge, Firefox), Mobile app                                                                                                                                                                                                                                                                |
| Access from Web Browsers              |                   | Live View, Image Snapshot, Playback, Digital PTZ, System Configurations                                                                                                                                                                                                                                                        |
| Live View                             | PC-Based Software | Max. connection subject to the total output bandwidth of GV-SNVR3203 <sup>Note5</sup>                                                                                                                                                                                                                                          |
|                                       | Mobile APP        | Max. connection subject to the total output bandwidth of GV-SNVR3203 <sup>Note5</sup>                                                                                                                                                                                                                                          |
| Playback                              | PC-Based Software | Max. connection subject to the total output bandwidth of GV-SNVR3203 <sup>Note5</sup>                                                                                                                                                                                                                                          |
|                                       | Mobile APP        | Max. connection subject to the total output bandwidth of GV-SNVR3203 <sup>Note5</sup>                                                                                                                                                                                                                                          |
| <b>Application</b>                    |                   |                                                                                                                                                                                                                                                                                                                                |
| Software Supported                    |                   | GV-Control Center (V4.1.1 or later), GV-Edge Recording Manager Windows Version (V2.2.4 or later), GV-ASManager (V6.0.2 or later)                                                                                                                                                                                               |
| Smart Device Access                   |                   | GV-Eye for iOS and Android (V3.0.0 or later)                                                                                                                                                                                                                                                                                   |

**Note:**

1. Fisheye dewarping is only supported by GV-FER5702.
2. GV-SNVR3203 does not support the thermal camera GV-TMEB5800.
3. Certain GV-IP cameras are not supported by GV-SNVR3203. See the [technical notice](#) for details.
4. GV-SNVR3203 may support third-party IP cameras for motion recording, depending on the IP cameras' ONVIF capabilities.
5. The maximum remote connection is subject to the total output bandwidth of GV-SNVR3203. To access the output bandwidth data, see the [technical notice](#).
6. ANR function is supported when connected to certain GV-IP cameras. See *Appendix E* in the *User's Manual* for more details.
7. Specifications are subject to change without notice.

## Compatible AI Capable GV-IP Cameras

- GV-BLFC5800, EBD4813, EBFC5800, TBL4810, TDR4803, TFD4800, TVD4810: Firmware V1.04 or later
- GV-EBD8813, EBD8800, TBL8804, TBL8810, TDR8805, TVD8810: Firmware V1.05 or later
- GV-SD4825-IR, SD4834-IR: Firmware V1.02 or later
- GV-PTZ5810-IR: Firmware V1.01 or later
- GV-TBL4807: Firmware V1.06 or later
- GV-TMS8800, TMS20811: Firmware V1.00 or later

## Recommended Hard Disks

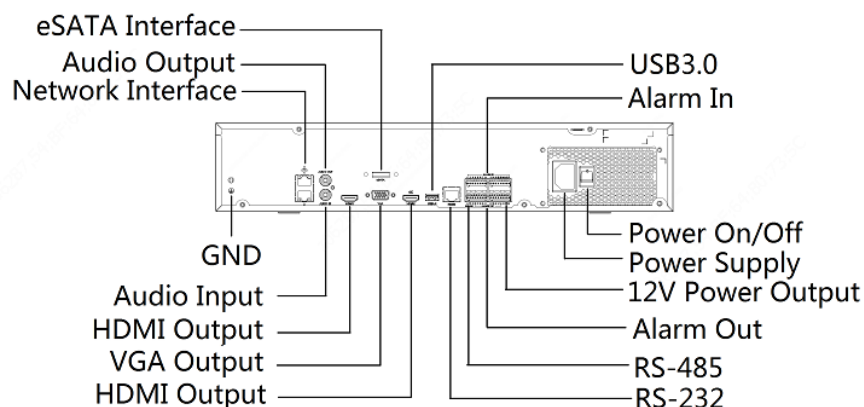
GV-SNVR3203 supports 4 SATA HDD (3.5") with up to 80 TB of storage capacity. For system efficiency, it is recommended to use enterprise-level hard disk drives instead of desktop-level or green HDD.

### Note:

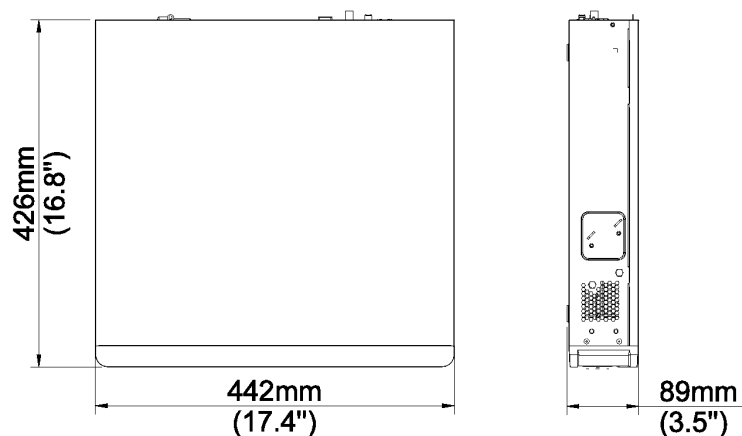
1. GV-SNVR3203 does not support 2.5" SATA HDD.
2. It is recommended to use the supported HDDs to ensure the compatibility. See [GV-SNVR HDD Compatibility Table](#).
3. It is suggested to use HDDs with high capacity in low-temperature / dust-free / low-humidity environments to ensure the smooth operation.

## Overview

### Back Panel



## Dimensions



## Packing List

1. GV-SNVR3203
2. SATA cable x 4
3. USB mouse
4. Screw x 16 (for HDD)
5. AC power cord
6. Phoenix Terminal x 4
7. Rack Mounting Bracket x 2
8. Screw M4 (6 mm) x 4
9. Download Guide

## Accessories

| GV-POE Switch | GV-POE Switch is designed to provide power along with network connection for IP devices. It is available in various models with different numbers and types of ports. |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|