

Description of USB Dongle Specifications

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1. Summary

Certain features of GV software are protected by a USB dongle. It is required to insert an appropriate USB dongle to the system for the protected features to work.

There are three kinds of colors in USB dongles: **Blue**, **Yellow** and **Black**. Some software can only use one kind of dongle, and some can use more than one to perform different functions. The below table illustrates the three color dongles and their associated product types.

Only Black Dongle requires the drivers to work and can be upgraded to include more functions. It is also the only dongle that you can use more than one in a single system. See [18. Upgrading the Black Dongle](#) and [19. Rules for Using Multiple Black Dongles Together](#) later in this document.

Click on **Product Type** of interest to link to the related topic in this document.

Dongle	Picture	Product Type
Blue Dongle		<ul style="list-style-type: none"> • POS Applications • GV-LPR System • GV-CMS Applications
Yellow Dongle		<ul style="list-style-type: none"> • GV-CMS Applications
Black Dongle		<ul style="list-style-type: none"> • Hybrid and NVR Solutions • Advanced Video Analysis • POS Applications • GV-4008 / 4008A Cards • GV-Web Report • GV-ASManager • GV-LPR System • GV-CMS Applications • GV-GIS Applications • GV-Backup Center • GV-Video Gateway • GV-Failover Server • GV-Redundant Server • CMS Lite for Content Management System • CMS Server for Content Management System
<p>Note: GV-Recording Server comes in internal dongles only.</p>		

2. Hybrid and NVR Solutions

GeoVision provides two solutions for IP video surveillance:

- **Hybrid Solution:** Integrates analog videos with digital videos from IP video devices.
- **NVR Solution:** A software-based system GV-NVR without requiring a video capture card.

Both Hybrid and NVR Solutions come with 32 free IP channels when connecting to GeoVision IP video devices. To connect to third-party IP devices, you need a **NVR Dongle**.

- The dongle options include: 1, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 IP channel(s).
- The dongle comes in two types, internal and external dongles.

3. Advanced Video Analysis

1. A “Black” AVP (Advanced Video Process) dongle is required for these functions to work:

- Panorama View
- Defog function
- Video Stabilizer
- Crowd Detection
- Advanced Unattended Object
- Advanced Scene Change Detection
- Advanced Missing Object
- Digital Object Tracking
- Face Count

2. The dongle comes in two types, internal and external dongles.

3. It is required to install drivers from the software CD for the AVP dongle to work.

4. If you already have a **NVR dongle**, you can upgrade the dongle to include the AVP functions. For details, see [18. Upgrading the Black Dongle](#).

4. POS Applications

1. **Graphic-Mode POS Device:** An appropriate USB dongle of “Blue” color is required for GV-System connecting with a graphic-mode POS device to receive transaction data.
 - The dongle comes in external dongles.
2. **Window-Based Direct POS Integration:** An appropriate USB dongle of “Black” color is required for GV-System to perform the direct POS integration without requiring a GV-Data Capture Box.
 - The direct POS integration is available only on GV-System version 8.3 or later.
 - It is required to install drivers from the software CD for the USB dongle to work.
 - The dongle comes in two types, internal and external dongles.
 - The following dongle options are available:

GV-System V8.4 or later	GV-USB Dongle with 1, 2, 4, 8, 12, or 16 port(s)
GV-System earlier than V8.4	GV-USB Dongle with 16 ports

For serial port connection, up to 4 POS devices can be connected to one GV-System. For TCP/IP connection, up to 16 POS devices can be connected to one GV-System.

5. GV-4008 / 4008A Video Capture Cards

1. An appropriate USB dongle of “Black” color is required for GV-4008 / GV-4008A Cards to work.
2. The dongle comes in two types, internal and external dongles.
3. It is required to install drivers from the software CD for the USB dongle to work.

6. GV-Web Report

1. An appropriate USB dongle of “Black” color is required for the PC running the GV-Web Report program.
2. The dongle options include: 200, 500 and 1000 units of GV-Systems and GV-Smart Boxes.
3. The dongle comes in external type.
4. It is required to install drivers from the software CD for the USB dongle to work.

Note that if multiple GV-USB Dongles are inserted, the dongle that supports greater number of clients will be used.

7. GV-ASManager

1. An appropriate USB dongle of “Black” color is required for the PC running the GV-ASManager program.
2. The dongle options include: 4, 10, 30, 50, 255 units of GV-AS Controllers.
3. The dongle comes in external type.
4. It is required to install drivers from the software CD for the USB dongle to work.

Note that if multiple GV-USB Dongles are inserted, the dongle that supports greater number of clients will be used.

8. GV-LPR System

1. **With a video capture card on GV-LPR System:** An appropriate USB dongle of “Blue” or “Black” color is required for GV-LPR System to work.
 - The dongle options include: 1, 2, 4, 6, 8 lane(s).
 - The dongle comes in external type.

2. **Combination of GV-LPR System and GV-System:** An appropriate USB dongle of “Blue” or “Black” color is required for the PC running GV-LPR System and GV-System together.
 - The dongle options include: 1, 2, 4, 6, 8 lane(s).
 - The dongle comes in external type.

3. **Without a video capture card on GV-LPR System:** To implement the software-based GV-LPR System, you need an appropriate USB dongle of “Black” color to activate the video stream from GV-DSP LPR.
 - The USB dongle allows the video stream of 8 channels in maximum.
 - The dongle comes in external type.
 - It is required to install drivers from the software CD for the USB dongle to work.

Note that if multiple GV-USB Dongles are inserted, the dongle that supports greater number of clients will be used.

9. GV-CMS Applications

1. GV-CMS applications include four independently developed programs: Center V2, Dispatch Server, Vital Sign Monitor (VSM) and Control Center. An appropriate USB dongle is required for each CMS program to work.
2. The CMS dongle comes in two types, internal and external dongles.
3. There are three types of USB dongles used in CMS applications: **Blue Dongle**, **Yellow Dongle** and **Black Dongle**. Table 1 illustrates the supported CMS software of each dongle.
 - **Blue Dongle:** One computer can only be attached with one type of Blue Dongle. You cannot use more than one Blue Dongle together.
 - **Black Dongle:**
 - a. One computer can be attached with more than one Black Dongle.
 - b. Only Black Dongle can be upgraded to include more functions. For details, see [18. Upgrading the Black Dongle](#).
 - c. It is required to install drivers from the software CD for the USB dongle to work.
 - A combination of Blue Dongle, Yellow Dongle and Black Dongle used on the same computer is possible. But remember the rule that **Control Center** and **Center V2** cannot be run together, and **Center V2** and **Dispatch Server** cannot be run together.

Table 1: Dongle types for CMS Applications

Blue Dongle	1. Control Center (IP Matrix) 2. Center V2 Pro 3. Center V2 Pro + VSM 4. Dispatch Server 5. Dispatch Server + VSM 6. VSM
Yellow Dongle	Control Center (IP Matrix)
Black Dongle	1. Control Center (IP Matrix) 2. Control Center (IP Matrix) + Advanced Video Analysis 3. Control Center (IP Matrix) + VSM 4. Control Center (IP Matrix) + VSM + Advanced Video Analysis 5. Center V2 Pro 6. Center V2 Pro + VSM 7. Dispatch Server

	8. Dispatch Server + VSM 9. VSM 10. VSM + Control Center (IP Matrix) 11. VSM + Center V2 Pro 12. VSM + Dispatch Server
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4. Table 2 illustrates the required dongle type for each CMS software version. Note (*) the IP Matrix function is only available on version 8.2 or later.

Table 2: USB dongle requirement for CMS software version

	Dongle Type	Software Version				
		V6.0 / 6.05	V6.1 / 6.11 / 7.0 / 7.05	V8.0	V8.1 / 8.11 / 8.12	V8.2 or later
Center V2 Pro	Blue Dongle	Yes				
	Black Dongle	No				Yes
Dispatch	Blue Dongle	Yes				
	Black Dongle	No				Yes
VSM	Blue Dongle	N/A	Yes			
	Black Dongle		No			
Control Center (IP Matrix *)	Blue Dongle	N/A		Yes	Yes	Yes
	Yellow Dongle			No	Yes	Yes
	Black Dongle			No	No	Yes

10. GV-GIS Applications

1. An appropriate USB dongle of “Black” color is required for the GV-GIS to work.
2. The primary USB dongle provides 1, 3, 5, 10 vehicle connections. The number limit is 500 connections with the increment of 5 connections at a time.

Inform your sales representative the required number of vehicle connections so the dongle can be delivered upon your requirements. Otherwise, you can upgrade your primary dongle later by following the instructions in the section of [18. Upgrading the Black Dongle](#).

Example: If you need 33 vehicle connections and already have a primary dongle, you need to upgrade the primary dongle from 10 to 35 connections.

3. The dongle comes in two types, internal and external dongles.
4. It is required to install drivers from the software CD for the USB dongle to work.

11. GV-Backup Center

1. An appropriate USB dongle of “Black” color is required for the GV-Backup Center to work.
2. The GV-USB Dongle supports connection with 200 GV-IP Devices.
3. The dongle comes in two types, internal and external dongles.
4. It is required to install drivers from the software CD for the USB dongle to work.

12. GV-Video Gateway

1. An appropriate USB dongle of “Black” color is required for the GV-Video Gateway to work.
2. The GV-USB Dongle supports connection with 128 IP channels of both GV-IP video devices and third-party IP devices.
3. The dongle comes in two types, internal and external dongles.
4. It is required to install drivers from the software CD for the USB dongle to work.

13. GV-Recording Server

1. An appropriate USB dongle of “Black” color is required for the GV-Recording Server to work.
2. The dongle options include:
 - **GV-IP video devices only:** 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100, 104, 108, 112, 116, 120, 124, 128 IP channels.
 - **Third-party IP devices (Includes GV-IP video devices):** 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100, 104, 108, 112, 116, 120, 124, 128 IP channels.
3. The dongle comes in internal type.
4. It is required to install drivers from the software CD for the USB dongle to work.

14. GV-Failover Server

1. An appropriate USB dongle of “Black” color is required for the GV-Failover Server to work.
2. The GV-USB Dongle supports connection with 128 GeoVision and third-party IP channels.
3. The dongle comes in two types, internal and external dongles.
4. It is required to install drivers from the software CD for the USB dongle to work.

15. GV-Redundant Server

1. An appropriate USB dongle of “Black” color is required for the GV-Redundant Server to work.
2. The GV-USB Dongle supports connection with 128 GeoVision and third-party IP channels.
3. The dongle comes in two types, internal and external dongles.
4. It is required to install drivers from the software CD for the USB dongle to work.

16. CMS Lite for Content Management System

1. The CMS Lite supports 50 units of GeoVision digital signage devices for free. To connect more than 50 devices to the CMS Lite, an appropriate USB dongle of “Black” color is required.
2. Different number of connections is available in increments of 10 connections and up to 500 connections maximum.
3. The dongle comes in external dongles.
4. It is required to install drivers from the software CD for the USB dongle to work.

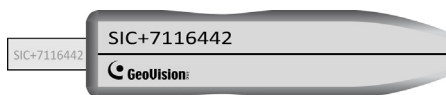
17. CMS Server for Content Management System

1. An appropriate USB dongle of “Black” color is required for the CMS Server to work.
2. Different number of connections is available in increments of 5 connections and up to 1000 connections maximum.
3. The dongle comes in external dongles.
4. It is required to install drivers from the software CD for the USB dongle to work.

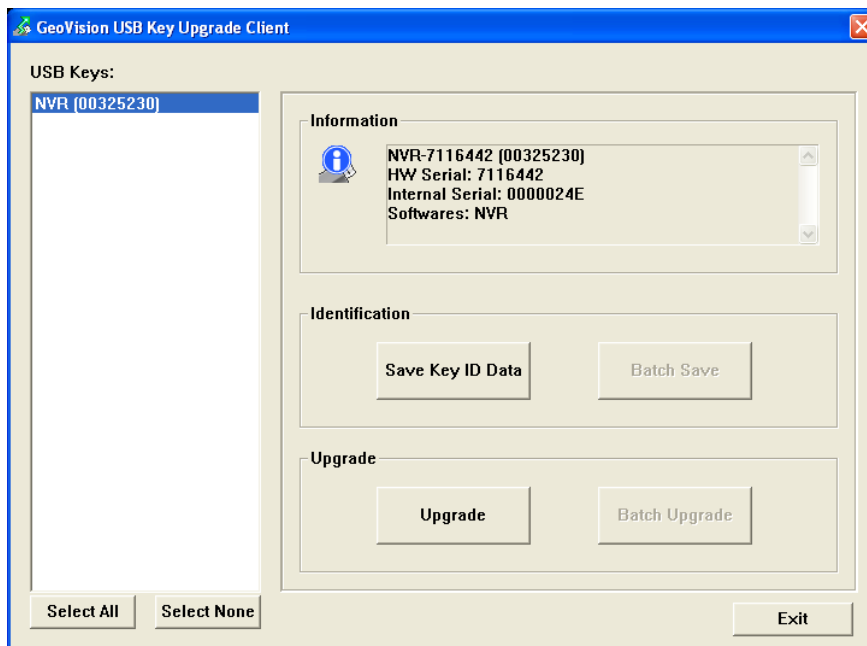
18. Upgrading the Black Dongle

Black Dongles can be upgraded to include more functions or enhance the system. You need to collect the data from your dongle and send it back to GeoVision for an upgrade. To upgrade your dongle, follow these steps:

1. Each dongle has its own serial number. Find it on the side of the dongle. Later this serial number will be used in naming the files for upgrading.



2. Insert the dongle to the computer.
3. In the GV folder, double-click **GVUsbKeyUpClient.exe**. This dialog box appears.



4. To retrieve the data from the dongle, click **Select All**. The information of the dongle is displayed in the information field. Note the displayed number of “HW Serial” should be the same as that on the dongle.
5. To save the data to your local computer, click **Save Key ID Data**. If you have more than one dongle to upgrade, click **Batch Save**. Different dongle data will be saved as separate files. The file will be named after the serial number on the dongle and saved as *.out. For example, if a dongle serial number is 7116442, the file is named “NVR-7116442.out”.

6. Send this data file to GeoVision at sales@geovision.com.tw. The GeoVision will examine the data file and send an *.in file back to you. The file name also includes the serial number of that dongle. In this example, the data file you will receive is named "NVR-7116442.in".
7. After you receive the updated file, insert the correct dongle matching the .in file you receive, and then run **GVUsbKeyUpClient.exe**.
8. Click **Select All** to read the dongle, click **Upgrade** and then open the updated file to upgrade the dongle. You can also select more than one dongle in the list and click **Batch Upgrade** to upgrade them at the same time. Make sure these dongles match the updated files you receive.

19. Rules for Using Multiple Black Dongles Together

Other than upgrading a Black Dongle to expand functionality and capability of your system, you can also use different Black Dongles together to achieve the purpose.

When multiple USB dongles are used, the number of channels supported on each dongle is combined except the following products: **GV-ASManager**, **GV-Web Report** and **GV-LPR System**.

In the following example, **NVR (number)** indicates the number of third-party IP channels supported by NVR Dongle and **AVP** means the AVP (Advanced Video Process) function. The combination of the four dongles gives the GV-System capability of AVP and 24 channels of third-party IP devices in addition to the 32 free channels of GV-IP Devices but limited to 32 channels in total.

Dongle 1	Dongle 2	Dongle 3	Dongle 4
AVP	NVR 4	NVR 4 + AVP	NVR 16 + AVP
Combined Result:			
AVP + NVR 24 (third-party IP devices) + 32 free channels of GV-IP Devices \leq 32 channels			