

GV-GPS Receiver

The GV-GPS Receiver can work with GV-Video Server and GV-Compact DVR to perform GPS vehicle tracking.

Packing List

1. GV-GPS Receiver x 1
2. Suction Cup x 1
3. Installation Guide x 1

Model

The GV-GPS receiver has two types of models: UART and RS-232. Each model can only work with appropriate Hardware and Firmware version as described below.

Model	Interface	Baud Rate	Compatible IP Device	
GV-GPS UART	UART	9600	GV-Video Server * (GV-VS02)	Firmware Version 1.43 or later
			GV-Video Server (GV-VS02A)	Firmware Version 1.00 or later
			GV-Video Server (GV-VS04A)	
GV-GPS 232	RS-232 Wires	9600	GV-Video Server (GV-VS12)	Firmware Version 1.52 or later
			GV-Compact DVR V1	
			GV-Compact DVR V2	Standard Model
	Anti-Vibration Model of ACC Version	Firmware Version 1.05 or later		
	PS/2 Connector	9600		

* GV-GPS Receiver is NOT compatible with GV-Video Server (Hardware Version 1).

Overview

- UART / RS-232 Wires
- PS/2 Connector



LED Off	Receiver switched off
LED On	Signal searching
LED Flashing	GPS position fixed

Connecting to GV-Video Server GV-VS02 / GV-VS02A / GV-VS04A

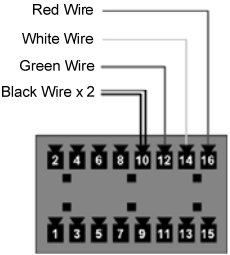
GV-GPS UART	GV-Video Server (GV-VS02 / GV-VS02A / GV-VS04A) Terminal Block	
1 x Red Wire	Pin 9 (DC 5V Out)	
2 x Black Wire	Pin 10 (Ground)	
1 x White Wire	Pin 12 (GPS RX)	
1 x Green Wire	Pin 14 (GPS TX)	

Connecting to GV-Video Server GV-VS12


GV-GPS 232 RS-232 Wires	GV-Video Server (GV-VS12) Terminal Block	
1 x White Wire	TX (GPS RX)	
1 x Green Wire	RX (GPS TX)	
2 x Black Wire	G (Ground)	
1 x Red Wire	5V (DC 5V Out)	

Connecting to GV-Compact DVR V1 / V2

GV-GPS 232 RS-232 Wires	GV-Compact DVR V1 Terminal Block	GV-Compact DVR V2 Terminal Block	
		Standard Model	Anti-Vibration Model
2 x Black Wire	Pin 10 (Ground)		
1 x Green Wire	Pin 12 (GPS TX)		
1 x White Wire	Pin 14 (GPS RX)		
1 x Red Wire	Pin 16 (DC 5V Out)		



GV-GPS 232 PS/2 Connector	GV-Compact DVR V2
	Anti-Vibration Model of ACC Version

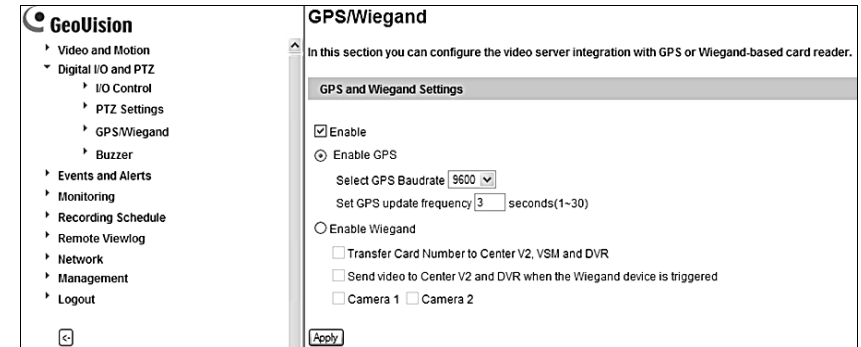


Activating the GPS Function

To activate the GPS function, go to the Web interface of GV-Video Server or GV-Compact DVR, and select **Enable GPS**.

For details on GPS tracking, see GPS Tracking in GV-Video Server or GV-Compact DVR User's Manual.

GV-Video Server's Web Interface

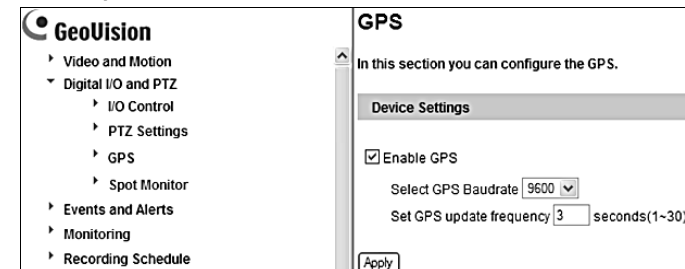


The screenshot shows the 'GPS/Wiegand' configuration page. The left sidebar lists navigation options: Video and Motion, Digital I/O and PTZ (I/O Control, PTZ Settings, GPS/Wiegand, Buzzer), Events and Alerts, Monitoring, Recording Schedule, Remote Viewlog, Network, Management, and Logout. The main content area is titled 'GPS/Wiegand' and contains the following settings:

- Enable
- Enable GPS
 - Select GPS Baudrate: 9600
 - Set GPS update frequency: 3 seconds(1~30)
- Enable Wiegand
 - Transfer Card Number to Center V2, VSM and DVR
 - Send video to Center V2 and DVR when the Wiegand device is triggered
 - Camera 1 Camera 2

An 'Apply' button is located at the bottom right of the settings area.

GV-Compact DVR's Web Interface



The screenshot shows the 'GPS' configuration page. The left sidebar lists navigation options: Video and Motion, Digital I/O and PTZ (I/O Control, PTZ Settings, GPS, Spot Monitor), Events and Alerts, Monitoring, and Recording Schedule. The main content area is titled 'GPS' and contains the following settings:

- Enable GPS
- Select GPS Baudrate: 9600
- Set GPS update frequency: 3 seconds(1~30)

An 'Apply' button is located at the bottom right of the settings area.

Specifications

Chipset

Chipset	SiRF Start III
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Electrical Characteristics

Frequency	L1, 1575.42 MHz
C/A Code	1.023 MHz chip rate
Channels	20 channel all-in-view tracking
Sensitivity	-159 dBm

Accuracy

Position Horizontal	10m 2D RMS (SA off)
Velocity	0.1m/sec 95% (SA off)
Time	1 micro-second synchronized to GPS time
WAAS enabled	5m 2D RMS

Datum

Datum	WGS-84
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Acquisition Rate

Hot Start	1 sec. average (with ephemeris and almanac valid)
Warm Start	38 sec. average (with almanac but not ephemeris)
Cold Start	42 sec. average (neither almanac nor ephemeris)
Reacquisition	0.1 sec. average (interruption recovery time)

Protocol

GPS Protocol	Default: NMEA 0183 (Secondary: SiRF binary)
GPS Output Data	SiRF binary >> position, velocity, altitude, status and control ; NMEA 0183 protocol supports command: GGA, GSA, GSV, RMC, VTG, GLL (VTG and GLL are optional)
GPS Transfer Rate	Default : 9600,n,8,1 for NMEA

Dynamic Condition

Acceleration Limit	Less than 4g
Altitude Limit	18,000 meters (60,000 feet) max.
Velocity Limit	515 meters/sec. (1,000 knots) max.
Jerk Limit	20 m/sec x 3

Temperature

Operating	-40°C ~ 85°C / -40°F ~ 185°F
Storage	-40°C ~ 85°C / -40°F ~ 185°F
Humidity	Up to 95% (non-condensing)

Power

Voltage	4.5V ~ 6.5V
Current	80mA typical (continuous mode)

Physical Characteristics

Dimensions (D x H)	53 x 19.2 mm / 2.09 x 0.76 in
Cable Length	2.7 m / 8.86 ft