

# V-Net GPS Module

Part Number: 220-VM-GPS

<b>Module Type: GPS</b>		<b>Module Configuration Setup:</b>	
		<b>Serial Number:</b>	
<b>Channel Number</b>	<b>Channel Name</b>	<b>V-Net ID #</b>	<b>Units</b>
1	GPS Speed	0x85	MPH/KPH/Knots
2	GPS Heading	0x84	Degrees
3	GPS Sats	0x87	
4	GPS Altitude	0x82	Feet/Meters
5	GPS Time	0x83	

## Antenna Installation:

The antenna should be mounted at the highest point of the vehicle and level front / rear and left / right. Ensure the GPS antenna cable will reach GPS module before final mounting of the antenna. Excess cable should be looped, **NOT BUNDLED** as illustrated in the photo shown to the right.



The GPS antenna is provided with a magnetic mounting base and should be mounted on the roof of the vehicle if possible. In the event of a vehicle with a composite roof, Velcro can be utilized. Place a strip of masking tape on the roof of the vehicle. A small piece of Velcro on the antenna and the tape will be sufficient to hold the antenna in place.

Ensure the cable end is screwed tightly to the GPS connector. A small wrench can be used to slightly SNUG the connector. Excessive force can damage the connector, resulting in failure of GPS signal reception.

## Module Installation:

The V-Net connector module can be inserted at any location in the V-Net cable in your vehicle. Select locations where the connector module can be mounted safely. Avoid mounting near heat sources and high voltage ignition wires. The connector module must be mounted in a location the temperature does not exceed 185 degrees or the module will be damaged. Route and secure the sensor cable from the module and connect the sensor element. If there is excess cable, simply loop and secure the excess cable. Do not attempt to shorten the shielded cable.



## Module Setup:

The module has been factory configured as described in the setup box located at the top of this page. No further setup is required to begin using the module. In stand-alone V-Net systems you must insure, however, that no other modules in your system have been assigned to the same V-Net ID as this module. If you already have a module in your system assigned to this ID you will either need to change the ID as described on the back of this setup sheet or exchange this module for one programmed with an appropriate ID.

If you are using the RacePak DataLink program to configure your V-Net system or to upload data from the system using a Sportsman, V300SD or V500SD data logger you will need to update your car configuration file before you will be able to access the information from this module. Please refer to the setup instructions on the back of this installation sheet.

## Software Setup and Module Configuration

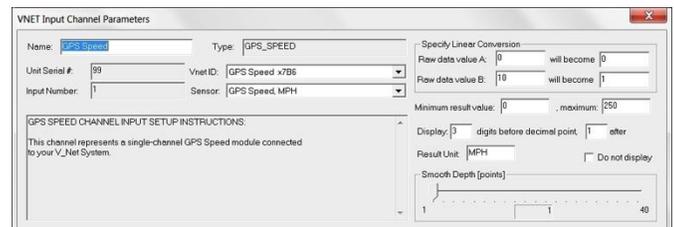
Before you can use this module as an upgrade to an existing V50 Module, V300 or V500 Data Logger you will need to update the Car Configuration File in your PC. To perform this step you will need to connect the V50 module or data logger to your PC using the unit's serial interface cable (See your unit's instruction manual for details). Next start the RacePak DataLink program. If you selected your car configuration file as the default configuration file, the file will be opened and the file tab for the car configuration file will be selected. If it is not, open your car configuration file by selecting the **Open Car Configuration** menu item located in the **Files** main menu selection.

Next apply power to your the board system, wait 10 seconds and select the **Read VNET Config** menu item located in the **Edit** main menu selection. The DataLink program will read in the configuration of your system. If everything works properly, three new channel buttons, "GPS Speed", "GPS Heading", "GPS Sats", "GPS Altitude" and "GPS Time" will be added to the configuration file.

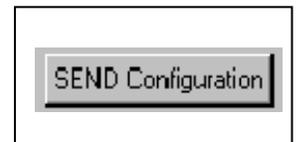
However, if the new button is captioned as the module serial number (example: SN\_129000), you have two modules in your system programmed using the same V-Net ID "GPS Speed". You must change the V-Net ID on one of the modules to something else like "Speed x3BC" in the "Vehicle Dynamics" category. If you cannot find an appropriate V-Net ID in the list to match what the module is measuring you can use one of the User Custom ID's found under the V-Net ID list.

To edit the setup parameters on this sensor module, position the mouse cursor over the channel button and click the right mouse button. The VNET Input Channel Parameters dialog box will be displayed. A Portion of this dialog box is show below.

Locate the box labeled **Unit Serial #**. Make sure the serial number is the same as the serial number of the module as shown in the module configuration box on the opposite side of this installation work sheet. If it is not, you are not editing the correct channel/sensor module. Check the other channel buttons to locate the correct sensor module.



When you have finished editing the configuration on your PC, you will need to send the information to the sensor module. Be sure the serial interface cable is connected to your data logger and power is applied to the system. To send the information position the mouse cursor over the **Send Configuration** button and click the left mouse button. The progress box as shown above will be displayed.

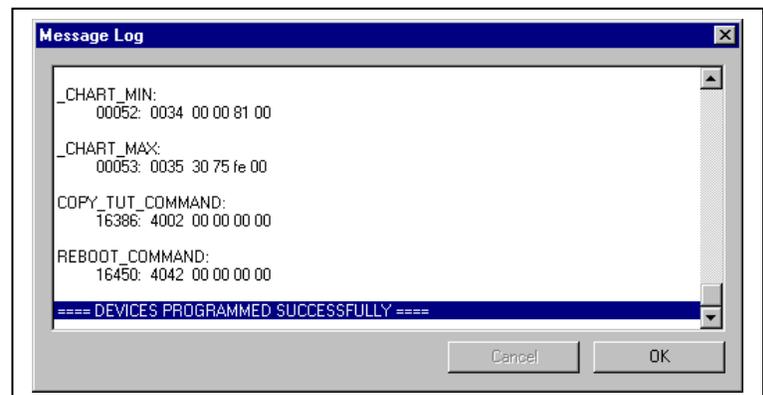


When finished sending the message "**Device Programmed Successfully**" should be displayed at the bottom of the progress box. If you receive an error message, turn power to the system off and then back on and repeat the send configuration process. If problems persist, check the troubleshooting section in your manual and then contact RacePak.

Update the Module Configuration Setup Box on the front of this worksheet with the new setup configuration.

### IMPORTANT:

**Save this Installation Worksheet in your System Manual in Appendix V. This worksheet is part of your system documentation. You may need this worksheet when modifying or trouble shooting your system.**



## GPS Time Channel

The GPS time channel is only for display purposes when using a Racepak IQ3 or UDX series dash. Recording of the GPS Time channel is not supported at this time. A firmware update for your IQ3 or UDX series dash may be required to properly display the time. See below for requirements. To correctly display the GPS time you may also need to adjust the GMT Time Offset setting by right clicking on the “GPS Time” channel in your DataLink configuration file. The default setting is -8 hours which is the correct setting for US Pacific Standard time.

<b>Minimum firmware version requirement to display the GPS time.</b>			
<b>Dash</b>	<b>Banner on Power-up</b>	<b>Product Version</b>	<b>Can User Update Firmware?</b>
UDX Street	UDXV	42 or higher	No, dash must be returned to Racepak for firmware update.
UDX Replay	UDXY	42 or higher	No, dash must be returned to Racepak for firmware update.
UDX Logger	UDXY	42 or higher	No, dash must be returned to Racepak for firmware update.
IQ3 Display	FW: 27	27 or higher	Yes, download firmware update from <a href="http://www.racepak.com/downloads">www.racepak.com/downloads</a>

### **IMPORTANT INFORMATION FOR V300 AND V500 DATA LOGGERS:**

V300 Data Loggers Require Firmware Version 36 or Higher.

V500 Data Loggers Require Firmware Version 53 or Higher.

If you do not know how to check the firmware version currently installed in your V300 or V500 data logger, please call us 949-709-5555 for assistance.

If you have a V300 or V500 data logger and do not meet the minimum firmware version requirement, you will need to send your data logger to Racepak to have the firmware upgraded.

All other Racepak data loggers, including V300SD, will work with all firmware versions and do not require any firmware updates to work properly with this module.