

Leica Viva CS & GS Driver Installation



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Introduction

A driver is some software which informs a computer how to communicate with a certain hardware. For the Leica Viva CS and GS hardware, drivers are required so that a computer can connect to the hardware, to:

- Directly transfer data using ActiveSync (for windows XP) or Mobile Device Centre (for Windows Vista)
- Share a internet connection from a computer with a CS
- Allow a computer to view the webserver of a GS
- Use myWorld to connect to the CS or GS

Two driver installation packages have been created (one for the CS and one for the GS) to not only install the drivers but also to setup the CS/GS connection to the computer.



The first part of this guide concentrates on the installation of the driver packages, the second part features some troubleshooting FAQs.



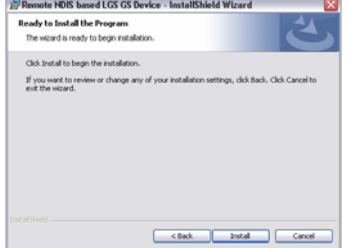
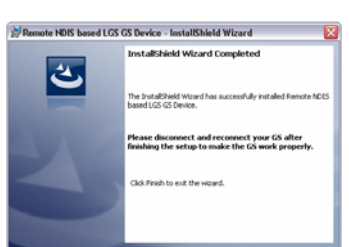

Note: Before beginning the installation it is advised to have either ActiveSync (XP) or Mobile Device Centre (Vista) installed. These can be downloaded from the Microsoft website: www.microsoft.com

Driver Installation

To install the device drivers please follow the steps below carefully, making sure to connect the **correct** device to the computer and only when prompted. The cables which can be used for the connection are covered in FAQ 9.

Please Note: This installation process requires the computer to have XP SP2 or newer, also it should be noted that in some cases Windows hot fixes will be installed during the installation process.

Step	Descriptions	Image
.1.	From the folder containing the device driver files select to run either the CS or the GS setup file <i>Note: If both drivers are needed, it does not matter which driver is installed first.</i>	
.2.	When “Welcome to the Install Wizard...” box is shown follow the instructions and plug in the CS or GS to the computer	

Step	Descriptions	Image
.3.	Two Microsoft “ Found New Hardware Wizard ” boxes will open – cancel these <i>(be patient as the second box may take a few moments to open)</i>	
.4.	Now select “ Next > ” in the “ Welcome to the Install Wizard... ” box	
.5.	Continue through the wizard, following the onscreen prompts, using: “ Install ”, “ Next ” and “ Continue Anyway ”	
.6.	Once the package has finished installing the wizard press “ Finish ” on this screen to complete the wizard <i>Note: It may be that a computer restart is needed, if this is the case please do this after finishing the wizard and before proceeding to step 7</i>	
.7.	Disconnect and reconnect the CS or GS to finish the installation process. <i>Note: To have both the CS and the GS drivers installed the process needs to be completed twice, once each for CS & GS</i>	

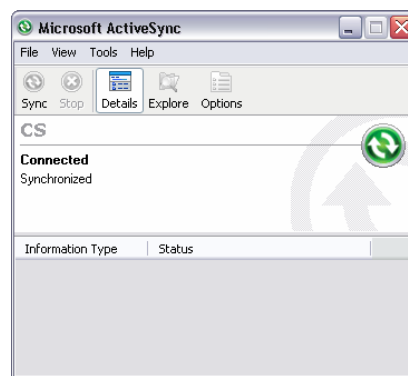
Once the driver packages have finished installing the next step is to test the connection...

Testing the Connection

The two best methods of testing the driver package has installed properly and the connection is working are:

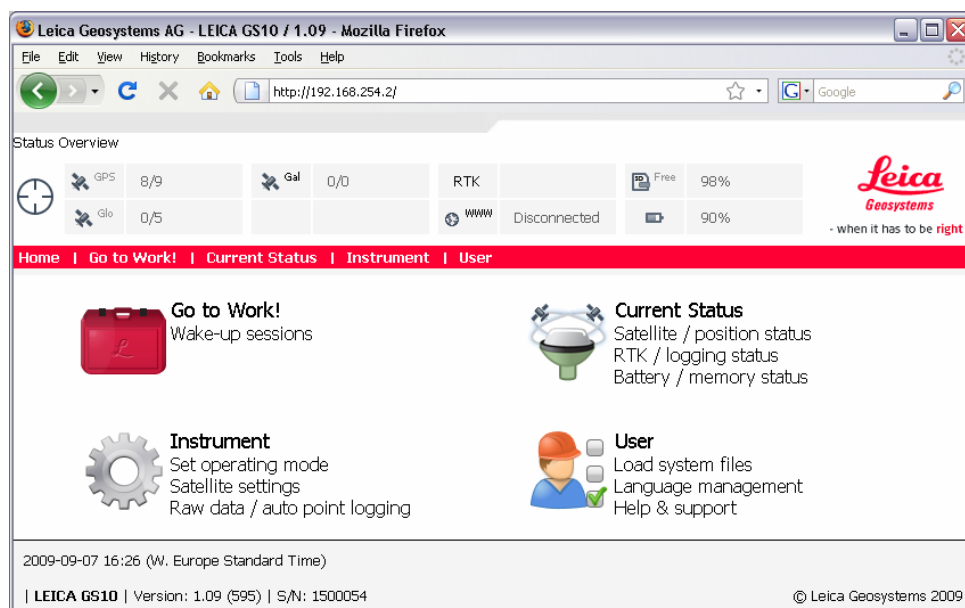
- Connect to the CS/GS using ActiveSync (XP) or Mobile device centre (Vista)

To do this open ActiveSync or Mobile device centre, make sure that it is configured to automatically detect USB connections and then connect the CS/GS to the computer via cable (*the cables which can be used are covered in FAQ 9*). The computer software should react to the connection and allow the CS/GS to be setup as a sync partner and the contents of the hardware be viewed and data can be transferred back and forth.



- To access the webserver of the GS.

For this ensure to have the GS connected via cable (*the cables which can be used are covered in FAQ 9*) then open a web browser and enter the address as: **192.168.254.2**, the image below shows how the Webserver should look:

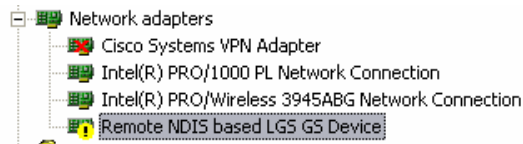


FAQs

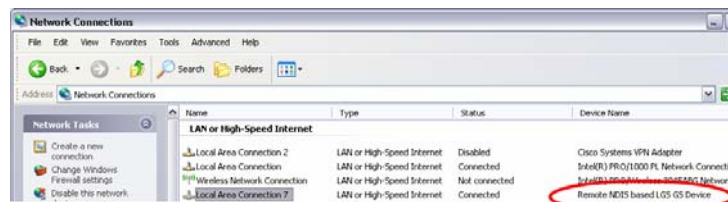
Q.1. The drivers seem to be installed correctly but I can not view the GS webserver – can this issue be resolved?

A.1. For this situation there are a few steps to follow:

1. Disconnect then reconnect the GS to the computer; is a found new hardware wizard shown?
 - If “Yes” follow the steps in FAQ 2
 - If “No” continue to step 2
2. Enter: **Control Panel > System > Hardware > Device Manager**
3. Check if the Remote NDIS based LGS GS Device is in the list (in Network adapters) and if it has a warning symbol next to it?



- If it is not in the list then do a complete reinstall of the driver (using the GS driver installation package and the main section of this guide).
 - If the device is in the list but has a warning symbol right click on it, select “update driver” and follow FAQ 2 (from step 3).
 - If the device is in the list and no warning triangle exists then close Device Manager and continue to step 4.
4. Enter: **Control Panel > Network Connections**
 5. Check if a RNDIS connection is present in this list? (at this stage it does not matter if it has limited or no connectivity)



- If there is no RNDIS entry in the connections list, run the two windows hot fixes (FAQ 4), reboot and continue from step 4
 - If the RNDIS connection is present but disabled, enable it and test the webserver (if it does not work then return to this step)
 - If the RNDIS connection is there continue to step 6
6. Right click on the connection, select properties and complete the steps in FAQ 3
 7. After completing the final step of FAQ 3 the computer will take a few moments to reconnect the device and assign the correct IP address, now the webserver should be working as required.

If problems persist please contact your local Leica Geosystems technical support team.

Q.2.

I am able to install and work with either the GS or the CS drivers, but not both. When I connect and install the drivers for one it works fine, I disconnect this device and then install the other device, this seems to have worked also, however, when I switch back to the first device type it is not working and windows begins the “found new hardware wizard”

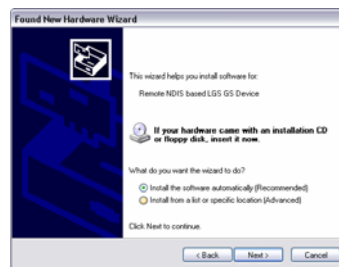
Has this been seen before, is there anything I can do to resolve this?

A.2.

Yes this behaviour has been known to occur occasionally, it can be resolved following the steps below:

Note: These steps assume that the driver for one device type was installed successful and then the other device driver was installed (again successfully)...

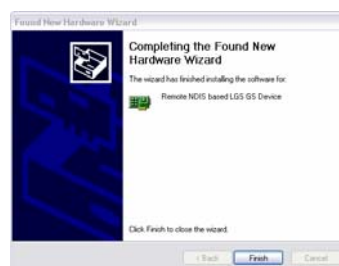
1. Plug in the device which was installed first but no longer works
2. When the windows found new hardware wizard starts select “no, not this time” to Windows Update then press “Next >”
3. Select to Install the software automatically (as windows already has the drivers – it is just not associating them properly)



4. Wait while the wizard searches and then installs the driver



5. Press Finish to complete the installation



Note: You may have to repeat this for both the RNDIS and the Active Sync drivers – also it may need to be repeated once for each device.

Q.3.

What is an RNDIS connection and can it be manually checked / setup?

A.3.

RNDIS stands for Remote Network Driver Interface Specification. It is used to assist the connection between the CS or GS and a computer. The main role of RNDIS is to simplify the connection and enable a network connection to exist.

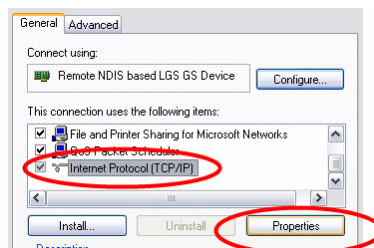
More detailed information about RNDIS can be found at:

<http://www.microsoft.com/whdc/device/network/ndis/rmndis.mspx>

Yes, provided that the drivers are installed (either manually or using the driver installation package) so that the GS / CS connects to the computer (and the RNDIS hot fixes are installed, if required) then the RNDIS connection will be created and can be checked / setup.

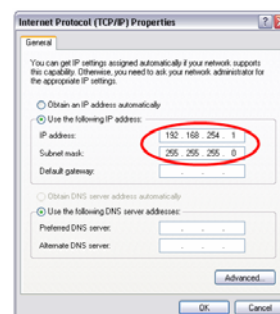
When the driver files are manually installed (i.e. not using the driver installation package) the RNDIS network connection will only have limited or no connectivity, so configuration of the RNDIS is required. The steps below explain how to check and configure the connection:

1. Navigate to: **Control Panel > Network Connections**
2. Right click on the RNDIS connection and select Properties
3. In the middle of the pop-up properties box scroll down and select the Internet Protocol (TCP/IP)



4. Click on the Properties button
5. In the New pop-up box enter the following settings

- **IP address:** 192.168.254.1
- **Subnet mask:** 255.255.255.0



6. Confirm the changes by pressing OK on each pop-up box

Q.4.	What Windows hot fixes are installed, when / why are they installed?
A.4.	<p>Depending on the current state of the Windows operating system on the computer the drivers are being installed on two windows hot fixes may be needed:</p> <ol style="list-style-type: none"> 1. WindowsXP-KB890927-v3-x86-ENU.exe 2. WindowsXP-KB901122-x86-ENU.exe <p>Both files are RNDIS hot fixes, the full description of them, what they do and why they are needed can be found at: http://support.microsoft.com/kb/901122/en-us</p> <p><i>Please Note: These hot fixes are only required if the computer is running Windows XP SP2 and has not had them installed previously.</i></p>

Q.5.	I do not have Windows ActiveSync or Mobile Device Centre, is this a problem?
A.5.	<p>This is not a problem for the driver installation, provided that the computer the drivers are being installed on has at least Windows XP with SP2, then the driver installation packages will run.</p> <p>However, without ActiveSync or Mobile Device Centre it is harder to test that the drivers are working correctly and also data transfer between the computer and the Leica Viva hardware is not as easy.</p> <p>More information about these programs (and how to install them) can be found at www.microsoft.com</p>

Q.6.	Can ActiveSync / Mobile Device Centre have multiple partnerships stored?
A.6.	Yes, this is not a problem, for more information on these programs, partnerships, synchronisation and limitations please view the Microsoft website and the program help files.

Q.7.	Can I connect two devices at the same time?
A.7.	No, this is not possible, the driver works actively with the connection in real time, so it can not run dual connections.

Q.8.	Is there an alternative to using the full installation packages (i.e. are the individual driver files available)?
A.8.	<p>Yes, these files exist and can be distributed, but installing the drivers this way will require manual setup of the RNDIS connection within network connections and it could also require the manual installation of some windows hot fixes.</p> <p>To do this method you will first need the driver files (contact Leica technical support for these) then to use the Windows found new hardware wizard (or enter into the Control Panel > System > Hardware > Device Manager and select to install drivers) when prompted for the driver, navigate to the individual files.</p> <p>To get the most out of the connection (and for ease of use) the setup packages are the recommended method of driver installation.</p>

Q.9.	What cables can be used with these drivers for the CS/GS to computer connection?															
A.9.	<p>There are two cables which can be used for the connection from CS or GS to the PC, the table below summarises these:</p> <table border="1"> <thead> <tr> <th>Article No.</th> <th>Name</th> <th>Connector 1</th> <th>Connector 2</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>767899</td> <td>GEV234</td> <td>Lemo1, 8pin, 135°</td> <td>USB type A</td> <td>This 1.65m cable allows: <ul style="list-style-type: none"> • A high speed USB connection between a PC to a GS (port 1). • A high speed USB connection between a PC to a CS (with Lemo CBC01 connector module). </td> </tr> <tr> <td>764700</td> <td>GEV223</td> <td>USB type A</td> <td>Mini USB type B</td> <td>This 1.8m cable allows: <ul style="list-style-type: none"> • A high speed USB connection between a PC and a CS (either connector module) • A high speed USB connection between a PC and a CS in a docking station </td> </tr> </tbody> </table> <p><i>Note: Although a GEV161 cable may also work, the connection speed would be significantly reduced, so it is not recommended.</i></p> <p><i>Note: The USB cables GEV195 (Art: 723755) & GEV218 (Art:758468) will not work for this connection type as they USB to serial converters.</i></p>	Article No.	Name	Connector 1	Connector 2	Description	767899	GEV234	Lemo1, 8pin, 135°	USB type A	This 1.65m cable allows: <ul style="list-style-type: none"> • A high speed USB connection between a PC to a GS (port 1). • A high speed USB connection between a PC to a CS (with Lemo CBC01 connector module). 	764700	GEV223	USB type A	Mini USB type B	This 1.8m cable allows: <ul style="list-style-type: none"> • A high speed USB connection between a PC and a CS (either connector module) • A high speed USB connection between a PC and a CS in a docking station
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