

GP5W-Shell and CSView

Overview

GP5W-SHELL is an easy-2-use software interface for our wireless data loggers. Included in GP5W-Shell is CSView, a graphical viewer. The software can be used for local access of data loggers as well as remote access (for GSM/GPRS based INTERNET data, only for special version, not described in this shortform manual)

Requirements

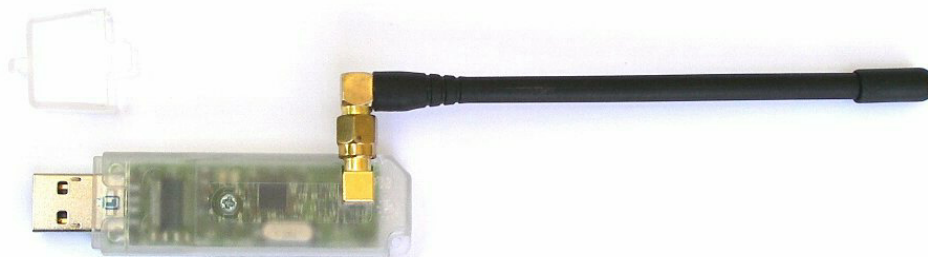
The GP5W-Shell package was tested on WIN 98 SE, XP, VISTA. and Win 7 and Win 8. It was designed for low CPU load, so it even will run on very small Sub-Notebooks and Netbooks.

Please note: The devices are available with several different radio frequencies, depending on the local regulations of the country (e.g.: 433 MHz in Europe, parts of Africa and Asia, 905 MHz in USA and Canada, ...). It is in the responsibility of the user, not to use devices that are not allowed in the country of usage.

Installation

The latest version can be downloaded for free from our homepage. This manual describes GP5W-Shell V2.00.xx

Please start the Setup-Program and follow the instructions **before connecting** the wireless USB-Dongle!

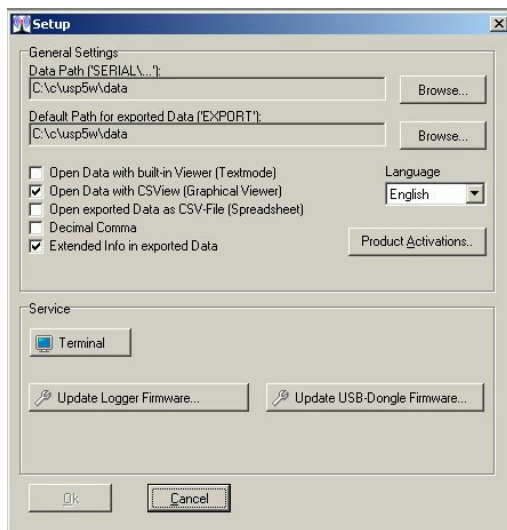


The wireless USB-Dongle (here with 433MHz Antenna for use in Europe/Africa/Asia)..

On Request other types of antennas might be available (e.g. beam antennas for longer ranges). The normal range is between 10 and up to 100 meters (depending on the environment, with special

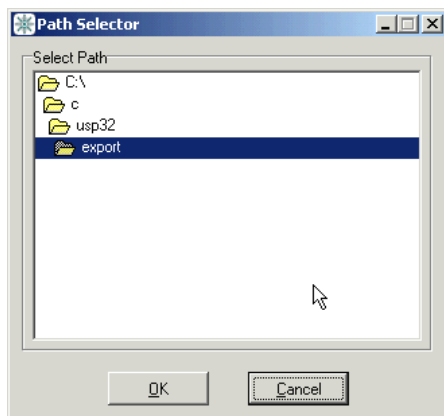
antennas up to 300 meters is possible). The used radio frequencies have been selected for optimal rugged and outdoor usage, even for loggers buried under soil, water or snow.

After starting GP5W-SHELL, we recommend to set up the parameters: Click on the button „Setup“:



The Setup Form

We recommend to install the used paths: In „Data Path“ the raw data are stored (in a compressed format), the other path is where the exported data are stored. Exported data are in the commonly used CSV format („Comma separated values“), which can be read by almost all spread sheet calculation software or databases.



Selecting a path

Format settings: Two checkboxes control the format of the exported data: Some European areas use a decimal comma instead of a decimal point. The other checkbox controls, if extended information should (like the results of GPRS transmission, ...) should be included in the exported data.

All settings are saved on exit.

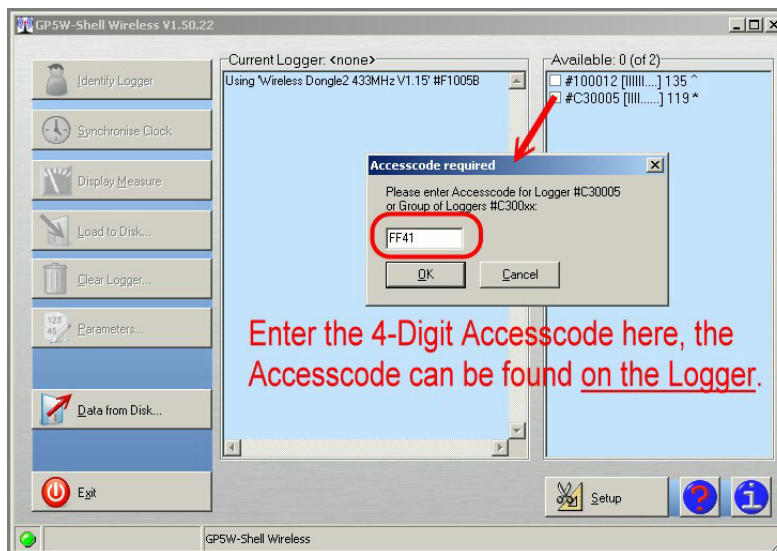
Communication with the loggers

After starting the software, it might need several seconds until all available loggers are displayed in the tab on the right side.

Entering the Access-Code

The loggers are protected against unauthorised access by a small accesscode. The GP5W-Shell will remember all entered accesscodes. This is how it works:

Before connecting the USB dongles to the PC, please install the software (GP5W-Shell) first. To access the Logger, enter the 4-Digit Accesscode as found on the Logger.



Click on the unchecked checkbox and enter the 4-Digit-Accesscode, as it can be found on the logger.

Normal usage for local communication

Select one logger and press „Identify“.

After successful identification some of the dynamic parameters of the logger (used memory size, clock deviation, ...) are shown.

The time of the logger is compared to the PC time. After power on and if the logger does not include a battery backup for its real time clock, the logger starts at January 1st 1998, 00:00:00, so GP5W-SHELL will show a huge deviation.

The menu item „Display Measure“ will start a measure, that is not recorded and only displayed.

With „Upload Data“ the logger is read and the uploaded data are stored on the PC.

Upload types „Incremental“ und „Full“: for local uploads the user can decide if all data (= full) should be read or if only the new data (since the last upload (= incremental)) should be uploaded.

The logger uses non volatile memory („Flash memory“). The contents of this memory are keep even during power off (only the clock might be reset). The Flash memory is organised like traditional data recorders: Only new data can be added. The user must manually clear the memory (with menu item „Clear Logger“.

Data representation

The data loggers use a compressed data format (also called „raw“ format) for communication. This format has the file extension „.G2D“. Compared to a textual representation it requires only 10-20% of memory. Also the „.G2D“ format includes other logger information.

Normally the „.G2D“-files are automatically expanded as text into a directory the user can select in the GP-Shell's „Setup“-Menu (as already mentioned). It is also possible to read raw data files later with the GP-Shell2 with „Data from Disk“.

Parameters

There are two kinds of parameters:

1. Parameters concerning settings for logging („Global Parameters“)
2. Probe/version specific parameters („Channel Parameters“ and optionally „Sensor Power“).

After selecting the „Parameters“ button, a form containing type 1.) and 2.) will be displayed:

Parameter form

The displayed buttons and edit field are depending on the logger's configuration. Here only the „Global Parameters“ are explained, the Probe/version specific parameters are described in a separate addendum to this document.

„Period“ is the logging period. Together with „Offset“ the times for logging can be selected very easily: The „Period“ is the distance between two measures, „Offset“ may shift the absolute time: As an example: If the „Period“ might be 12 hours, the logging times without „Offset“ would be: 00:00h, 12:00h, 00:00h, ... „Offset“ can shift this interval: If e.g. „Offset“ is set to 1h, the new logging times would be 01:00h, 13:00h, 01:00h, 13:00h, ... It is obvious, that Offset hence must be smaller than „Period“.

With „Name“ the logger can be named. Avoid special characters.

The logger monitors periodically some housekeeping-data, like battery voltages, internal temperature and others. The „HK-Counter“ is decremented every logged measure. If it reaches zero, the housekeeping-data (as marked in the checkboxes) are recorded in addition to the regular data. Please not, that the HK-Temperature is only calibrated on demand.

To manage different settings („Parameter Sets“), each parameter set is marked with a (almost) unique name. This field is only informative.

Technical data / Logger specific instructions

This manual describes only the Software and the use of the Wireless-USB-Dongle. Since GP5W-Shell was designed for use with different types of loggers, all loggers are equipped with a small „Short-form-instruction manual“ for technical and logger specific data.

Compliance informations (only for USA/Canada):

a) User Information according to FCC 15.21:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

b) Part 15 Statement according FCC 15.19/RSS Gen Issue 3 Sect. 7.1.3

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

USB-Dongle (US): FCC-ID 2AAREUSB905R10 / IC Certification No IC: 11303A-USB905R10



(Label assembled on bottom side of the transparent enclosure. See picture to the right)

