Environmental monitoring solutions

P1CommNet

User manual
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Summary

1. Introduction

P1CommNet is a program from LSI LASTEM created to manage the data sent to an FTP area by Pluvi-ONE Alpha-Log and E-Log devices.

The program allows:

- To download files generated by the datalogger from the FTP area;
- To save data in the Gidas database;

2. System requirements

The program needs following hardware and software requirements:

Personal computer

- Processor with operating frequency of 600 MHz or more, 1 GHz recommended;
- Display card: SVGA resolution 1024x768 or more; standard screen resolution (96 dpi).
- Operating system (*):
    - Microsoft Windows 7/2003/8/2008/2010
- Microsoft .NET Framework V.3.5 (**);
- Program LSI 3DOM installed;
- Database Gidas available (***)

(*) Operating systems   must be updated with   the   latest update released   by Microsoft and available through Windows Update; for operating systems not listed is not guaranteed correct and complete operation of programs.
 (**)The   Microsoft. NET Framework 3.5 setup is included in the LSI Lastem product USB storage and, if necessary, is automatically installed during the installation. Otherwise you can download the installer   for   the Microsoft. NET Framework 3.5   directly   from   the Microsoft Download Center at   http://www.microsoft.com/downloads/en/default.aspx inserting in the search field. the term ".NET".
On Windows 8 and 10 you can enable. NET Framework 3.5 manually from the Control Panel . In the Control Panel you can use Add Programs and Features, then Enable or disable Windows features and then select the check box Microsoft. NET Framework 3.5.1. . This option requires an Internet connection.
(***) *Gidas* database is installed with *GidasViewer* program and required *SQL Server 2005 Express* or higher. *P1CommNet* can also be connected to *Gidas* database installed on SQL Server remote instance. For further information see the *GidasViewer* user's guide.

3. Software's operations

The program allows:

- To download the data generated by the devices from an FTP area
- To save downloaded data in the configured Gidas database

3.1.   Download from the FTP area

This process can run from an user-defined schedule and, for each configured device, it executes a sequence of steps:

- Files found in the FTP area of the device are downloaded into the folder `C:\ProgramData\LSI-Lastem\LSI.P1CommNet\Data`. It is possible to limit the maximum number of files to download or filter them using the last elaborated date saved value. File will be downloaded starting from the older.
- At the end of the download process, if configured, the files are removed from the FTP area or moved into a backup folder on the same FTP area.

During the steps described above, if another scheduled event must start, it will be skipped.

ATTENTION
It is recommended to configure the software to remove files already downloaded from the FTP area.

ATTENTION
To download older files, it is recommended not to set the control on the date of the last downloaded data provided that the option to remove the downloaded files from the FTP area is also set.

3.2.   Saving data in the Gidas database

When a file is downloaded from the FTP area in a local folder, the fil is processed and saved in the configured Gidas database. At the end of the saving process, each file can be deleted or backed-up into a user-defined folder. In case of errors during the reading of a file, it will be moved in the directory:

`C:\ProgramData\LSI-Lastem\LSI.P1CommNet\Error`

ATTENTION
It is recommended to clean periodically the backup directory, after checking the consistency of the data saved in the Gidas database.

3.3.   File names

3.3.1.   Alpha-Log and Pluvi-ONE devices

The names of the files saved by these devices can be of three types:

- `Cdataconfig-Bnn-Edatafirstelab.txt`
- `Mserial_Cdataconfig-Bnn-Edatafirstelab.txt`
- `Mserial_Cdataconfig-Bnn-Edatafirstelab-Ldatalastelab.txt`

where:

- *serial*: serial number of the instrument
- *dataconfig*: configuration date of elaborated data in the format *yyyyMMddHHmms*
- *nn:* index of the elaborated base written with 2 digits (es: 01,02…)
- *datafirstelab*: date of the first elaborated value recorded in the file in the format *yyyyMMddHHmms*
- *datalasttelab*: date of the last elaborated value recorded in the file in the format *yyyyMMddHHmms*

Examples:
- *C20170327095800-Bnn-E20170327095800.txt*
- *M12345678_C20170327095800-Bnn-E20170327095800.txt*

ATTENTION
During the downloading phase of a device, only the files created with the same serial and the same configuration saved on the computer where the P1CommNet program is installed are downloaded.
If the instrument configuration is changed, it is necessary to stop and restart the program to update the program configuration. Otherwise the files will no longer be downloaded.

3.3.2.   E-Log device

The names of the files saved by this device has this format:

- `serial_datafirstelab.txt`

where:

- *serial*: serial number of the instrument
- *datafirstelab*: date of the first elaborated value recorded in the file in the format *yyMMddHHmmss*

ATTENTION
During the data download phase of a device only the files created with the same serial number and the same configuration date are downloaded to the computer where the P1CommNet program is installed.
If the instrument configuration is changed, it is necessary to stop and restart the program to update the program configuration. Otherwise errors and misalignment of the data in the database may occur because it is not possible to filter the files based on the instrument configuration date (the file name does not contain the instrument configuration date)

When using the program with E-Log it is advisable to pay close attention to changing the configurations.

3.4. User interface

The main window of the software looks like this:
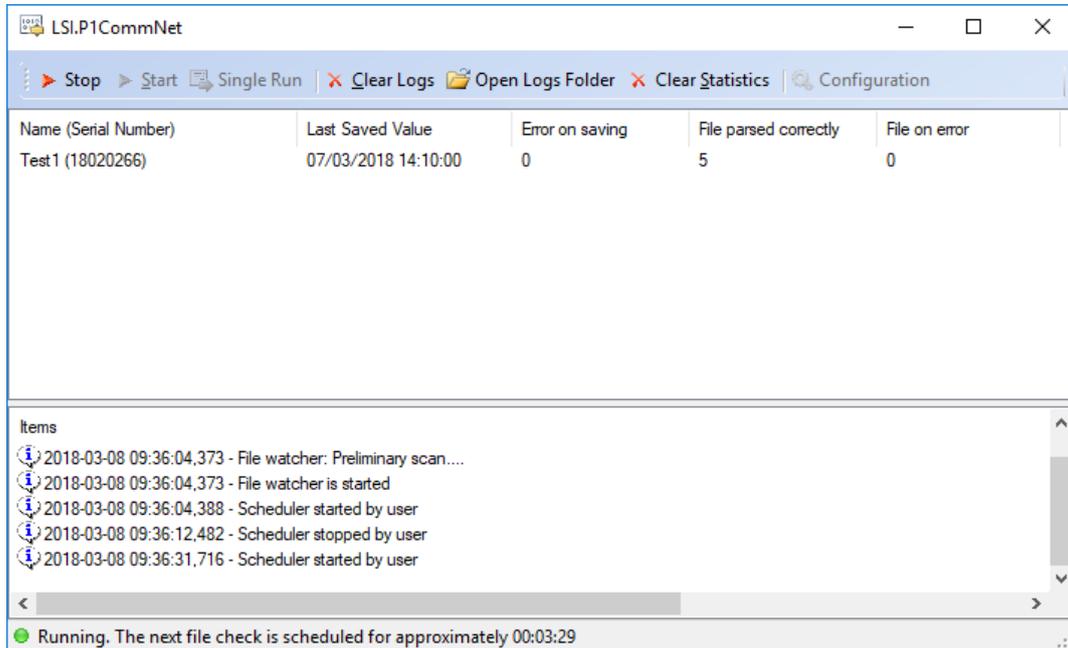
In the upper part the operating statistics are displayed and in the lower part the log messages generated by the program.

On the status bar is visible the operational status of the software, it can be:
- *Running (green)* : indicates that the program is running regularly; in this case the approximate missing time is indicated for the next data download event.
- *Not running (red):* indicates that the schedule is interrupted and there are no pending operations.
- *Waiting for current operations to complete (yellow):* indicates that the scheduling has been interrupted and the program is completing ongoing processes (data download and / or data saving).
- *Fatal error (error icon):* indicates that the program has not started correctly or a fatal error has occurred that needs to be resolved.

Menu items:
- *Start/Stop*: start / stop the schedule to search for new files in the FTP area of the tools.
- *Single Run*: starts a single file download event, only active if the schedule is interrupted. File could be downloaded from the FTP sites of the instruments or from a local folder.
- *Clear Logs*: clear the log messages displayed in the window (not the log files stored in the computer).
- *Open Logs Folder*: opens the folder where the log files are stored.
- *Clear Statisics*: clear the instrument statistics displayed at the top of the program.
- *Configuration*: perform the configuration of the program.

When the program is started the configuration is loaded and, if no errors are found, the scheduling process for data download is started.

3.4.1.   Import file from a local folder

To import file from a local folder:
- Stop the scheduler using the *<Stop>* button.
- Select *<Single Run>* → *<Import form Local Folder>* button
- Select folder that contains files to import and, if requested, specify instrument's serial number
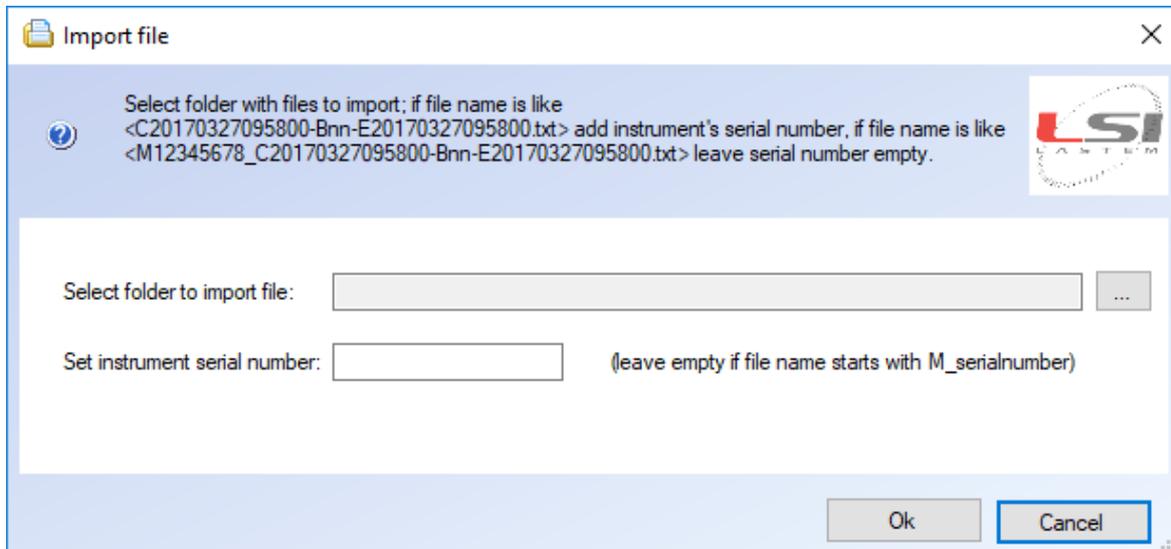
ATTENTION
Insert instrument serial number only if the name of files is without serial number.
To import instrument's file from a local folder the instrument must configured in the program.

3.5.   Log files

The grogram generates a daily log file in the fodler:
`C:\ProgramData\LSI-Lastem\LSI.P1CommNet\Log`

3.6.   Automatic startup

To start the program when Windows starts, set the program to start automatically.

ATTENTION
The program is NOT a service and therefore it still requires user login to start.

3.7.   Program's configuration file

The program configuration file is called *LSI.XlogCommNet.exe.config* and is located in the installation folder of the program. It is a file in xml format that contains some application settings; in particular it is possible to force the program to use a different language from the default one by modifying the value of the *UserDefinedCulture* property:

```xml
<applicationSettings>
    <GidasTEA.UI.Properties.Settings>
        <setting name="UserDefinedCulture" serializeAs="String">
            <value></value>
        </setting>
```

```xml
        <setting name="SupportedInstrument" serializeAs="String">
                <value>ELP,ALP</value>
        </setting>
    </GidasTEA.UI.Properties.Settings>
</applicationSettings>
```

To force the use in English on an Italian computer insert the value `<value>en-us</value>`; for use in Italian on a computer in another language, enter the value `<value>it-it</value>`; no other localizations are available.

Don't change the *SupportedInstrument* value.

4. Configuration

For this chapter is available this tutorial:

Title	Link YouTube	QR Code
P1CommNet Configuration	[#1-P1CommNET configuration - YouTube](#)	

To configure the program, interrupt the schedule and select the *<Configuration>* button to open the configuration window:
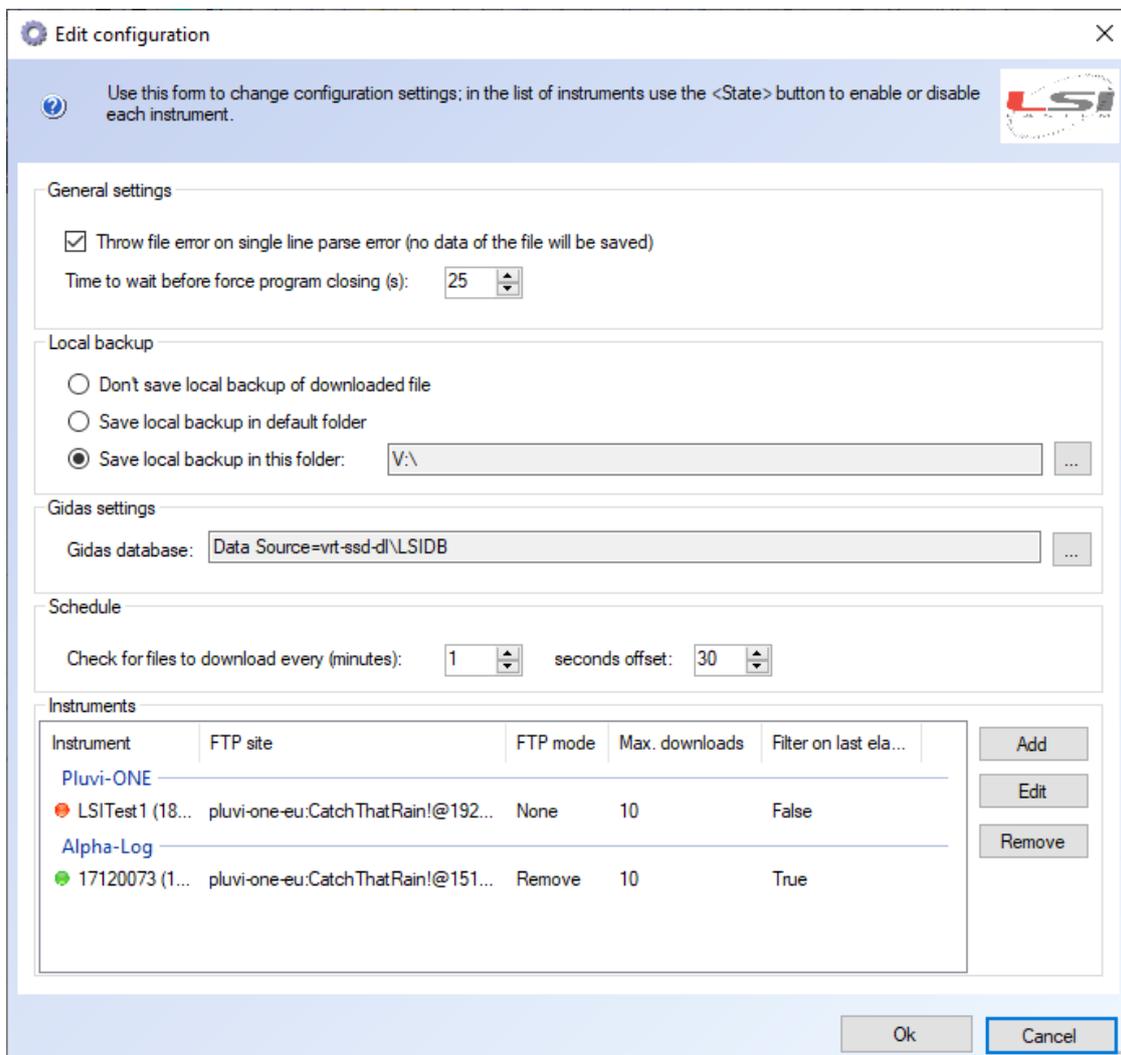
In this window it is possible to set:
- *General settings:*
  - *Throw file error on single line parse error*: select this option to generate a file read error and exclude the file from data import if at least one single line of the file is not

interpreted correctly. When not selected, the lines of the file in error are discarded while the correct ones are imported (default selected).

- o *Time to wait before force program closing*: waiting time in seconds before closing the program; when you decide to close the program any operation in progress is still carried out (data download, data backup), after this time the program forces the closing anyway (default 25).

- *Local Backup:* specify if and where to save the downloaded files after the data they contain has been saved in the Gidas database; the options are:
  - o *Don't save local backup of downloaded file*: the downloaded files are deleted (default).
  - o *Save local backup in default folder*: the downloaded files are saved in the backup folder `C:\ProgramData\LSI-Lastem\LSI.P1CommNet\Backup`.
  - o *Save local backup in this folder*: the downloaded files are saved in the specified backup folder.

- *Gidas Settings*: show and modify the connection to the Gidas database where download files are saved (§ 4.1)

- *Schedule*: sets the time interval, in minutes, to start the process of downloading the files of the configured devices and the delay seconds to start download (for example if you set 10 minutes interval and 120 seconds delay file will be downloaded at minutes 12,22,32,42,52,2)

- *Instruments*: manages the tools from which to download data (§ 4.2); instruments with the red icon are temporarily disabled.

ATTENTION
You can configure ONLY tools whose configuration has been downloaded to the local computer via the 3DOM program.

By closing the window the configuration is saved in the `C:\ProgramData\LSI-Lastem\LSI.P1CommNet\Configuration.xml` file and the program automatically starts the set schedule.

ATTENTION
When the download event is triggered, the program downloads the files of all the configured instruments in sequence. The time interval between an event and the next must be set taking into account the time required to complete the file download process for all configured instruments. If, after the configured time interval, the program is still downloading files, the next scheduled download will be skipped. This parameter must be configured taking into account the settings of the individual instruments (§ 4.2).

4.1. Connection the Gidas database

To configure the *Gidas* database to save data, press the configuration button in the *Gidas settings* section of the configuration window. This action displays the selected *Gidas* database:
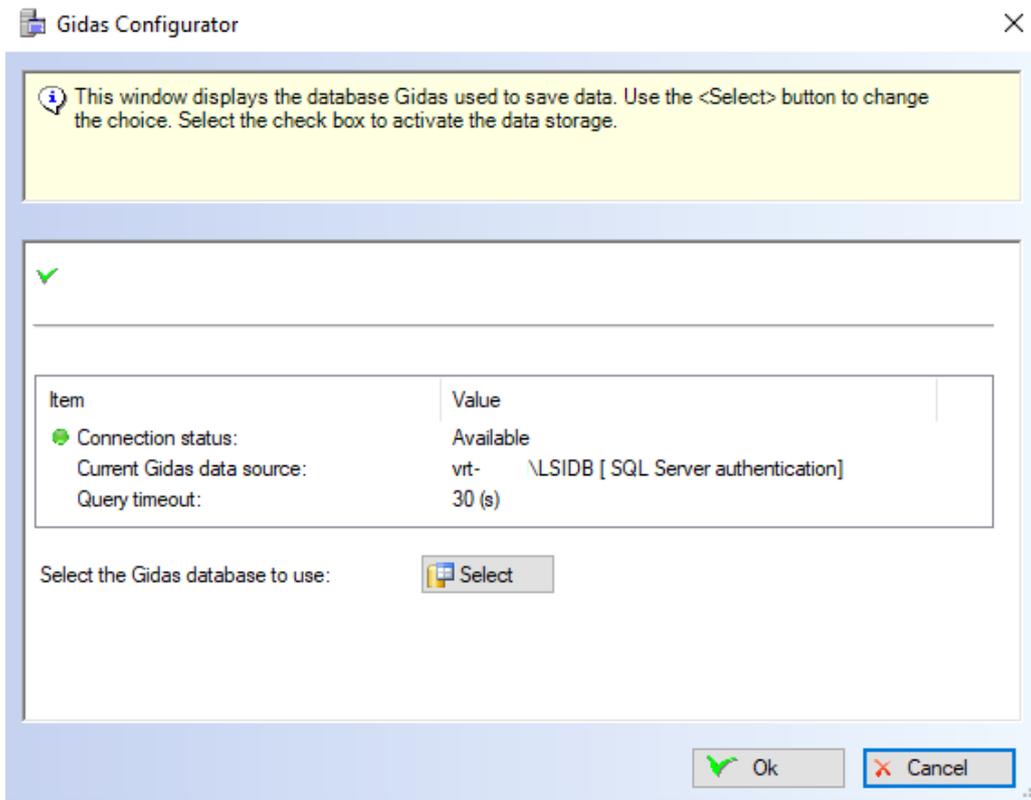
If a *Gidas* database has not yet been selected, press the *<Select>* button to open the *Gidas* database configuration window
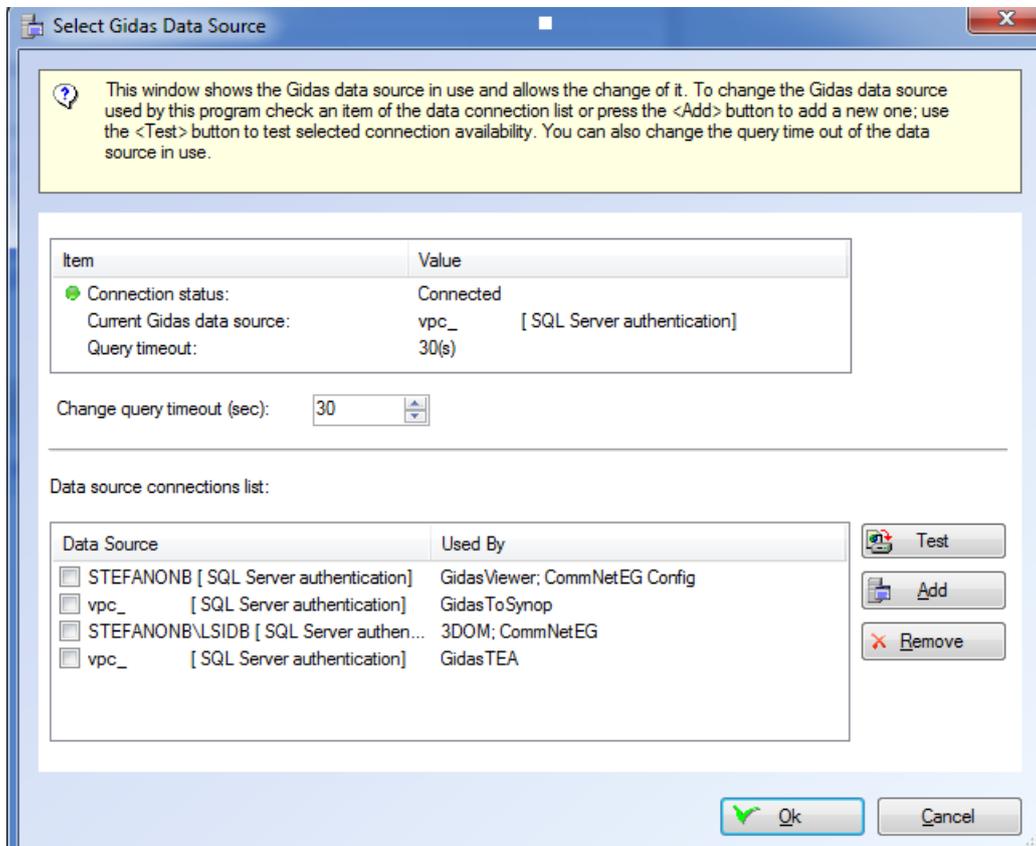
This window shows the *Gidas* data source in use and allows its modification. To change the data source used by the program, select an element from the list of available data sources or add a new

one with the *<Add>* button; use the *<Test>* button to check the availability of the data source selected in the list.

The list of available data sources contains the list of all data sources entered by the user, so initially it is empty. This list also shows which data source is used by the various *LSI-Lastem* programs that use the *Gidas* database.

For more information, see the *GidasViewer* program manual.

ATTENTION
To use the program it is necessary the presence of a Gidas database installed locally or on the network as long as it is visible from the LSI.P1CommNet program. To install the Gidas database, see the GidasViewer program manual.

4.2.   Instruments configuration

The *Instruments* section shows the list of instruments configured for data download; you can add, edit or remove instruments.

To edit an existing instrument select it from the list and press the *<Edit>* button:

In this window you can set:
- *Enabled*: represents the status of the instrument; if deselected, the instrument will not be used by the program and its files will not be downloaded.
- *Name:* station name displayed in the program interface (initially the name defined in the current instrument configuration is used).
- *FTP server:* list of FTP sites containing the processed data configured in the datalogger; select the FTP site from which to download the files or enter a local one (for example because the FTP server is reachable from the internal network where the communication program is installed).
- *Use FTP passive mode:* yuo can try to change this option if you have problems downloading file from FTP configured site.
- *Manage FTP files after download:* file management options on the FTP site after they have been downloaded to the local computer; we recommend selecting the *Remove* option to remove files from the FTP site or the *Move to backup folder* option to move the downloaded files to the \data\backup subfolder of the FTP site. It is not recommended to use the *Leave* option because the program always downloads locally all the files found on the FTP site.

- *Maximum number of files to download at each request:* set a limit to avoid that, in the presence of many files, the program can not satisfy the request. Set 0 to always download all files on the FTP site: avoid this value in combination with the previous *Leave* option.
- *Use last elaborated date to filter downloaded files:* if you set this option, the program discards all files that contain data with a date lower than the last downloaded date. Given the nature of the FTP protocol, the use of this option is not recommended. **This option will be selected automatically if the user select to maintain files on FTP server after download.**

Use the <Set Local Server> button to enter the possible local address of the FTP server used by the instrument; the FTP address must be entered in the format:

```
user:password@host:port/path
```

ATTENTION
Deselect the Enabled option to disable the data download of the instrument.

Selecting the *<Ok>* button to confirm the configuration settings will start checking the structure of the FTP site.

To remove an instrument select it from the list and press the *<Remove>* button.
To change the *Enabled/Disabled* state of an instrument select it from the list and press the *<State>* button.
To add a new tool, press the *<Add>* button; this action shows the supported instruments configured via 3DOM:
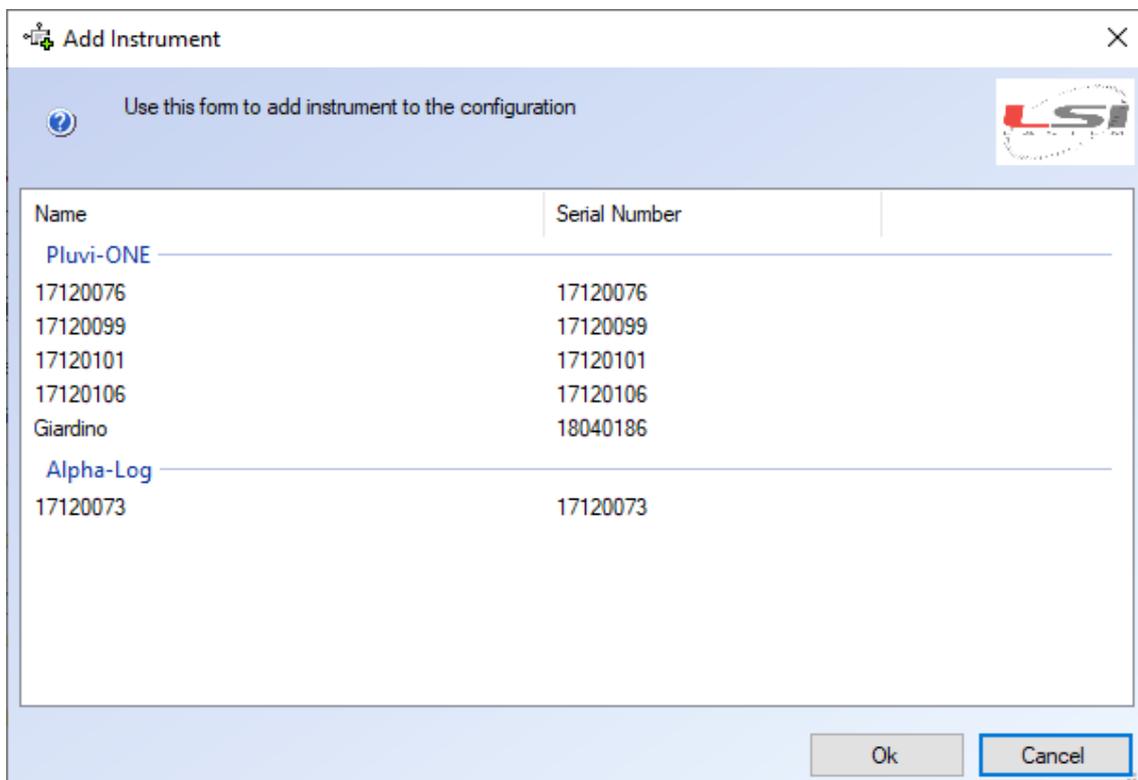
Select the tool to be inserted and press *<Ok>* to open the window to change the properties of the new instrument.

5. Licenses

To be able to examine the data in the *GidasViewer* database it is necessary to install the licenses for *GidasViewer* for each serial number of the instruments managed by this program. To install Licenses see the user guide of the *GidasViewer* program.