



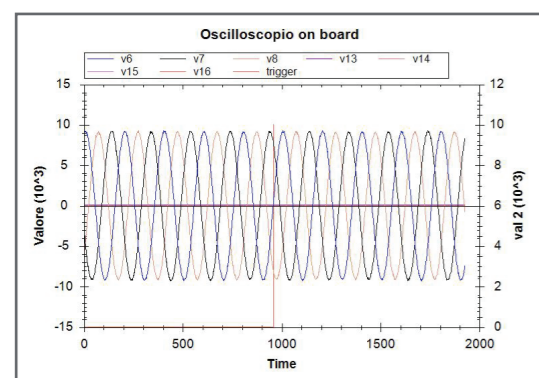
Remote control and Datalogging devices

CLEANVERTER, CLEANVERTER TL and CLEANVERTER PV products can be integrated with a local or remote system of supervision which can be implemented by combining in different ways (see table) the elements written below:

- Supervision software Elpower WindNew or Elpower SolarMonitor
- PC embedded fanless supplied with SSD 4GB, USB, RS232, VGA able to support Windows XP or LINUX
- Router UMTS
- Modem GSM

Here are the possibilities offered by combining these elements.

- Data displayed in real time: Display of values of the machine working status, among which: voltages and currents on grid and generator side, power, energy, temperatures, anemometer data, machine status and faults, event record, etc.
- Data logs on the pc: Saving data in csv file type containing all the values of interest on the inverter. The default sampling interval is 1 second and is customizable from 0.5 to 2 seconds. The log analysis allows to obtain detailed information during the whole time in which the machine remains in operation status.
- Setup reading and modification: It is possible to read and in case modify the set up of the machine and the torque curve to be followed by the generator. It is also possible to import and export configurations and torque curves.
- Updating inverter software: Updating and in case personalization of the software.
- Mail sending: Sending of mail messages about the machine status, indications of blocks, no grid, production levels, etc.
- Sms sending: in case of block of the machine and after consulting the production status.
- Remote access: it is possible a remote look up of the pc embedded by the supervisor. It is possible to access by remote mode (any internet spot, tablet or smartphone) to all data in real time, download data logs, modify the setup and the curve.



This mode is also used by Elpower in case of need for service and remote update of the software; as for service activities, it is also available the oscilloscope on board function

	Data display in real time	Data logs on the pc	Setup reading and modification	Updating inverter software	Mail sending	Remote access	Sms sending
A) Supervisor + client's pc	YES	YES (when connected to the inverter)	YES	NO	NO	NO	NO
B) Supervisor + PcEmbedded	YES	YES (for the whole operating time of the inverter)	YES	YES (only in local)	NO	NO	NO
C) Supervisor + PcEmbedded + Router	YES	YES (for the whole operating time of the inverter)	YES	YES	YES	YES	NO
D) Supervisor + PcEmbedded + Interface + gsm + Router	YES	YES (for the whole operating time of the inverter)	YES	YES	YES	YES	YES

- Supervisor means the supervision software
- A) Client's PC with supervisor, connected via RS232 to the inverter
 - B) PC Embedded with supervisor, mounted on DIN rail and connected via RS232 to the inverter
 - C) As B plus Router UMTS connected via Ethernet to PC Embedded
 - D) As C plus connection modem GSM to PC Embedded through insulated interface USB/232

