



CAREL

**PlantVisorPRO**

all you need  
where you need it

T e c h n o l o g y & E v o l u t i o n

# Supervision and control suite for refrigeration and air-conditioning systems



## PlantVisorPRO

PlantVisorPRO is the new generation of CAREL supervisors, one of the most innovative in the sector.

PlantVisorPRO features an intuitive, effective and pleasant navigation interface, with advanced characteristics: relational database, user profiling and access control, XML protocol for exchanging data between applications, Modbus®, TCP/IP connectivity, web interface.

PlantVisorPRO is designed for both small installations and large systems.

The supervision system can be started in just a few steps, thanks to the automatic recognition of the instruments in the installation and the preset logs and alarms.

Monitoring and energy saving management functions, HACCP reports, alarm management, local and remote connectivity, activity scheduling and controls for instruments or groups of instruments define and complete the features of PlantVisorPRO.

### Certification

PlantVisorPRO is compliant, as required by EC regulation 37/2005 of 12 January 2005, with standard EN 12380 on temperature recorders for the transport, storage and distribution of chilled, frozen, deep-frozen/quick-frozen food and ice cream.

PlantVisorPRO is also compliant with standard EN 13485.



Comply with  
**HACCP**  
93/43/EU





## Why PlantVisorPRO?



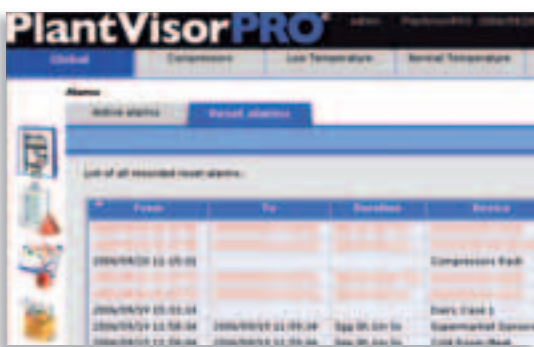
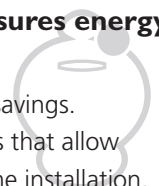
### Simplified HACCP management

PlantVisorPRO can produce temperature and alarm printouts for all the supervised instruments. The temperature data are saved in PlantVisorPRO in compliance with the standards in force.



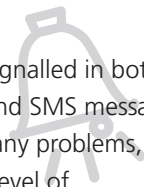
### Integrated management of the installation ensures energy savings

Increasing attention is currently being focused on energy savings. For this purpose, PlantVisorPRO offers a series of functions that allow savings in energy and reductions in the running costs of the installation, such as: floating suction pressure, light management, night/day set point changeover, ...



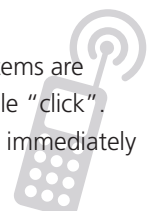
### Simple and intuitive alarm management

All alarm situations are detected by PlantVisorPRO and signalled in both the local system and the remote system. E-mails, faxes and SMS messages can be sent immediately to inform the service centre of any problems, so as to be able to optimise service operations. A different level of importance can be defined for each alarm, with the information sent to multiple recipients, based on time bands.

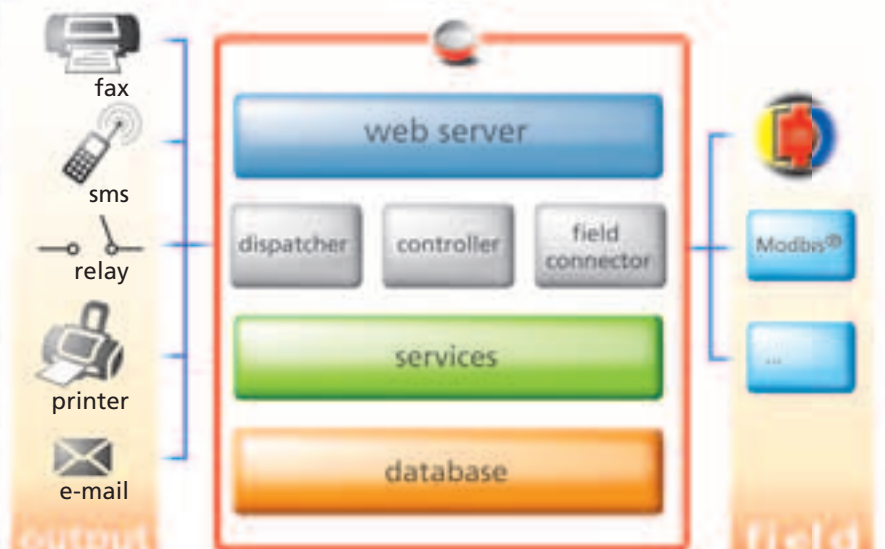


### Effective maintenance

Being immediately informed is a major advantage. The systems are therefore always under control, and can be reached a simple "click". Using the remote solution, many problems can be resolved without having to physically go to the site.



# Powerful and enhanced software architecture



PlantVisorPRO is a supervisory system that exploits the latest web technology. The data are saved in a database, ensuring reliability and portability.

This ensures the user a powerful, easy-to-use and highly customisable tool for all different needs/applications.

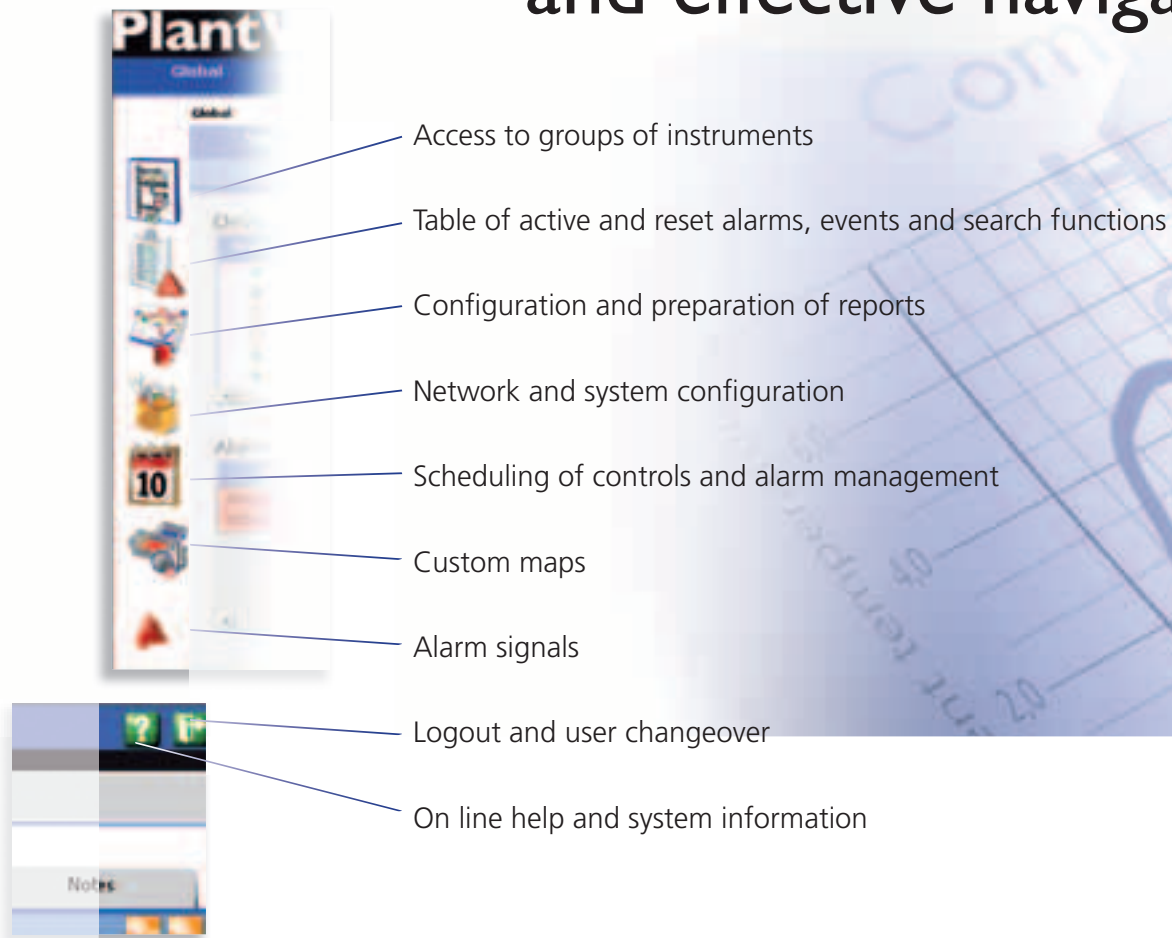
## Main features

- **multi-protocol:** CAREL, Modbus®, ...
- **multi-language:** 11 standard languages, possibility to implement any language<sup>(\*)</sup>
- **multi-platform:** Windows®, Linux<sup>(\*\*)</sup>
- **multi-user:** different levels of access to the information can be set by creating different profiles.
- **guardianPRO:** application that ensures maximum system reliability. All the processes are monitored, and in the event of hardware or supervision software problems, **guardianPRO** independently generates alarm messages by SMS, fax or e-mail to notify the user.

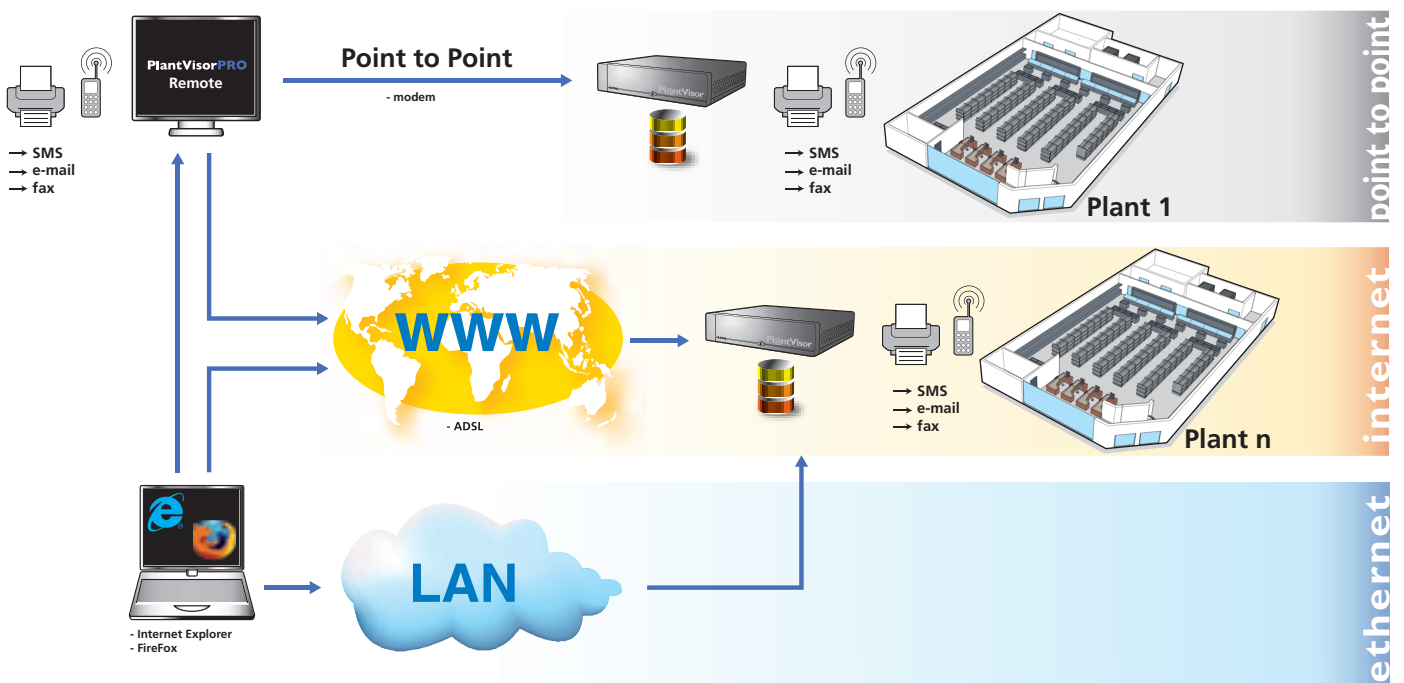


(\*) check the availability of the required language when purchasing.  
 (\*\*) check availability (product initially available for the Windows® environment)

# Simple, intuitive and effective navigation



## Connection modes



# Main functions

## Management of field devices

The devices in the field can be quickly configured by assigning them to defined groups or areas. All the information is readily visible on summary pages of the installation or detailed pages on the instrument. The user can thus keep the installation under control at a glance.



## Graphs

PlantVisorPRO produces detailed and complete graphs, with the possibility to show multiple analogue (temperature) or digital (operating status) values at the same time.

These are fundamental for analysis and diagnostics in the event of incorrect operation of the controlled utilities.



## Alarms

The management of alarm situations is extremely powerful and reliable. Each event is recorded, providing complete information on the type, start and end date/time.

The alarm management involves a recognition phase, a second phase for managing the scheduled actions, and a third phase in which the event is recorded.

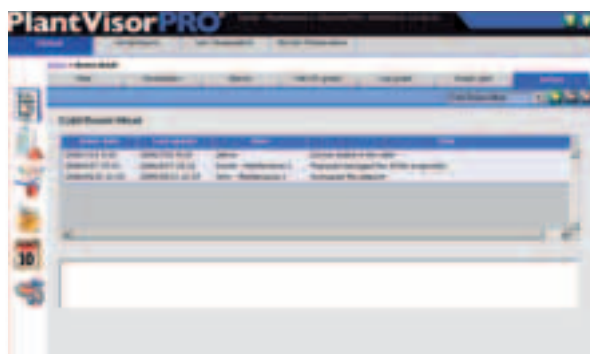
A different level of importance can be defined for each alarm, with the activation of audible signals if required.

A screenshot of the PlantVisorPRO software interface showing an alarm management table. The table has multiple columns, including 'Alarm ID', 'Alarm Name', 'Alarm Type', 'Alarm Status', 'Alarm Priority', 'Alarm Date/Time', and 'Alarm Action'. The rows contain detailed information about various alarm events, such as 'High Temperature Alarm' and 'Low Pressure Alarm', with their respective dates, times, and actions.

## Notes

Extremely useful function for saving information and creating a log of the installation, important for the maintenance personnel.

Any user can enter their own notes, which are saved with the date/time and name.



# scheduler: even more powerful



The scheduler is the most important and powerful function in PlantVisorPRO.

A series of actions can be programmed based on the time, events or alarms. These include:

- printouts;
- send fax, e-mail, SMS;
- change parameters;
- activate local operation on the instruments (e.g. defrost, ...);
- sound effects;
- ...



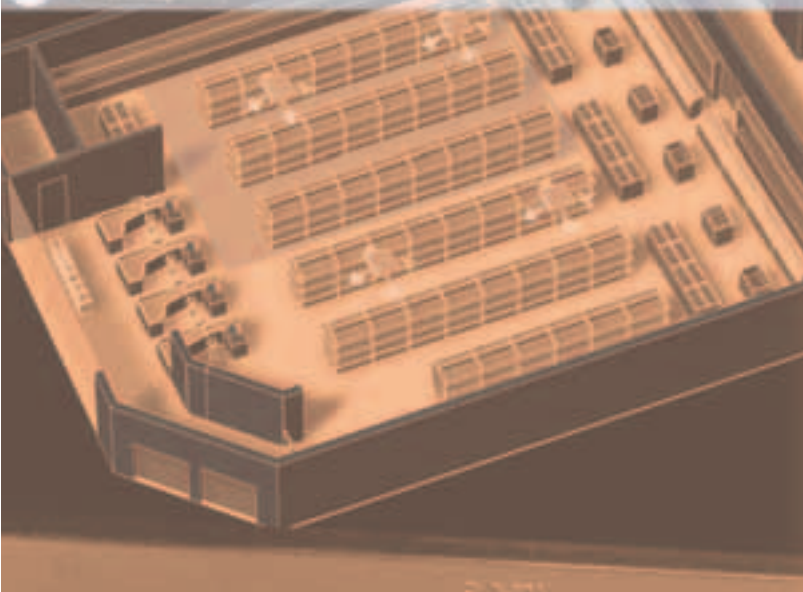
The main functions of the scheduler are:

- alarm notification management  
sent to different users, depending on the time bands;
- management of recurring actions  
with this new function, the user can create calendars of recurring actions, such as:
  - change the set point in night mode;
  - lights ON/OFF;
  - start defrost.



# PlantVisorPRO IDE

## software customisation suite



PlantVisorPRO IDE is the new integrated development tool based on Microsoft®.net technology, designed to simplify the customisation of PlantVisorPRO and make it faster and more powerful.

PlantVisorPRO IDE is used to develop synoptic maps of the installation, implement more sophisticated control rules than those available via the web interface, and create customised models of the devices being supervised.



## features

- based on Microsoft® .NET technology, aimed at maximising the user experience, reproducing the same environment as the most advanced development tools;
- available in the same languages as PlantVisorPRO (with the possibility to implement any language) so as to simplify development for all users.

## advantages

- development can be handled from a remote station without being physically connected to the installation; generation functions can then be used to update the sites subsequently;
- based on a library of objects that are continuously updated with new elements, allowing the development of increasingly complex displays. The plug-in architecture allows new tools to be added to the environment, for greater productivity.



# PlantVisorPRO remoto centralised management of multiple systems



Used to manage a series of installations located in different geographical areas from one single station.

**PlantVisorPRO remoto** can be synchronised via modem or network (LAN or Internet) with all the **PlantVisorPRO** and Enhanced local versions. This means that the situation involving all the systems is continuously under control.

Moreover, the scheduler, also featured on the remote version, can forward the alarm signals from the various sites via SMS, fax and e-mail.

This function is very useful if the remote installation is not permanently supervised; for example, during the weekend, at night or in any case when the operator is absent.

## advantages

- provides an updated situation of alarms and events on the various local supervisors, simply and immediately. Accessed from the server (via LAN) or via modem or network from any PC with Internet Explorer®;
- lookup of events, alarms and notes without having to be connected to the site. This allows the telephone line to left free for other calls;
- rapid update of the recipients of the alarm signals. Simply add, remove or modify the recipients of the alarms on the remote scheduler without having to access all the local supervisors.

# PlantVisorPRO range

## PlantVisorPRO locale

This solution is available in two versions: for small systems (up to 10 utilities) and large installations (up to a maximum of 200 controllers on each serial line, maximum 4 serial lines).

## PlantVisorPRO remoto

This solution is available in three versions: supervision of 20 sites, 50 sites and more. Versions for more than 50 sites are especially developed by CAREL or its VAR network so as to offer the maximum in terms of system management and integration of customer requests.

## PlantVisorPRO IDE

Integrated development environment for the construction of customised versions of PlantVisorPRO. This software package can be used to enter installation layouts, new customised programmable controllers, introduce a new language and other additional modules that enhance the performance of the supervisory system.



## minimum system requirements

### Hardware requirements

- Processor: Pentium 4 3.0GHz (or equivalent) or higher;
- RAM: 512 MB (PlantVisorPRO locale and remoto),  
1 GB (PlantVisorPRO IDE);
- Hard disk: 80GB;
- Video with 1024x768 pixel resolution;
- CD drive;
- Local PC: one free serial port for 232/485 converter (PcGate) or  
one USB port for CVSTDUMOR0 converter;
- One COM or USB port for modem connection (optional).

### Software requirements

- Operating system: Microsoft® Windows XP Professional SP2  
with NTFS file system;
- Browser: Internet Explorer 6.0.

The supervisor must be installed on a dedicated computer featuring the following "network components":

- remote access or network board;
- TCP/IP protocol.

# PlantVisorPRO embedded the plug & play solution



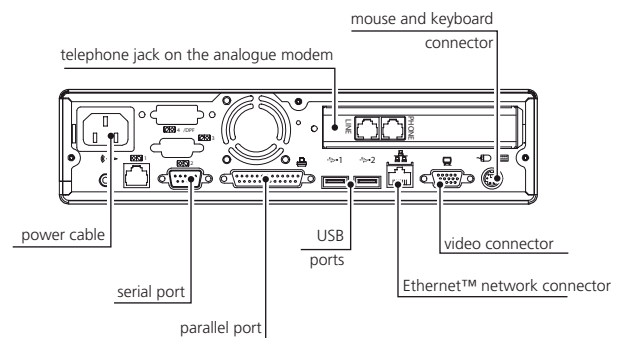
PlantVisorPRO embedded is the new CAREL solution that allows the simple and rapid installation of a monitoring and telemaintenance system for all CAREL instruments.

PlantVisorPRO embedded features all the communication ports required to best exploit the functions of Web Server and system controller:

- built-in fax/modem for communication via e-mail, fax, SMS, Microsoft® Internet Explorer, PlantVisorPRO remoto;
- integrated Ethernet™ port for LAN – WAN – Internet connection;
- serial port for the PCGate supplied, for communication with the instruments;
- USB/parallel port for printers.

## technical specifications

- Power supply: 230 Vac;
- Dimensions: 26x24x6.2 cm;
- RS232 serial port for PCGate (to CAREL instruments);
- Parallel port (printer);
- Telephone jack on the analogue modem/fax;
- USB port (printers, modem, pendrive, etc.);
- Ethernet network™ 10/100 connector (LAN, WAN, Internet);
- VGA connector (1024 x 768 monitor);
- PS2 connector for mouse and keyboard.



## advantages

- can be used as local system with mouse, keyboard and video, or alternatively as a remote monitoring system only via modem or network;
- plug & play solution, simplifies the installation of the system in the field and prevents problems of hardware compatibility with the peripherals, such as the modem;
- overall reduction in costs (maintenance, selection of the components, installation of the software);
- available in Italian, English, French, German, Spanish, Portuguese, Czech, Greek, Russian, Chinese, Turkish (check the availability of the language when purchasing).

## Headquarters

### CAREL S.p.A.

Via dell'Industria, 11 - 35020 Brugine - Padova (Italy)  
Tel. (+39) 0499 716611 - Fax (+39) 0499 716600  
carel@carel.com - www.carel.com

## Subsidiaries

### CAREL Australia Pty Ltd

www.carel.com.au  
sales@carel.com.au

### CAREL China Ltd.

www.carelhk.com  
sales@carelhk.com

### CAREL Deutschland GmbH

www.carel.de  
info@carel.de

### CAREL Export

www.carel.com  
carelexport@carel.com

### CAREL France Sas

www.carelfrence.fr  
carelfrence@carelfrence.fr

### CAREL Italia

www.carel.it  
carelitalia@carel.com

### CAREL Sud America Ltda.

www.carel.com.br  
carelsudamerica@carel.com.br

### CAREL U.K. Ltd.

www.careluk.co.uk  
careluk@careluk.co.uk

### CAREL USA L.L.C.

www.carelusa.com  
sales@carelusa.com

## Affiliated Companies:

### CAREL Korea Co. Ltd.

www.carel.co.kr  
info@carel.co.kr

### CAREL (Thailand) Co. Ltd.

www.carel.co.th  
info@carel.co.th