

# we control PHOTOVOLTAIC



## Wireless PV plant monitoring system

**we500** is a flexible, full featured and high performance solution that allows to remotely monitor and control every single part of the photovoltaic system, from the inverter to the string controls and sensors.

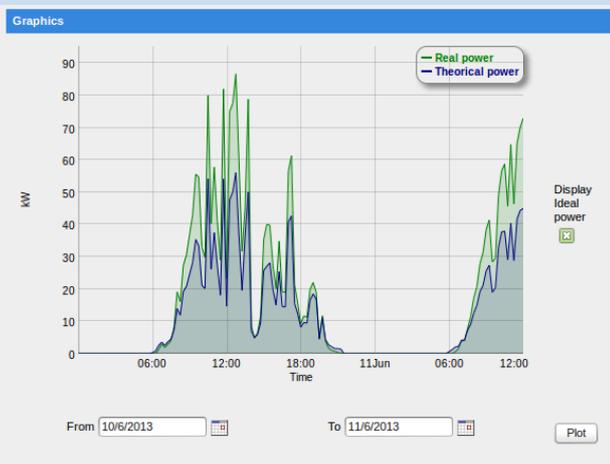
Site Information					
Site Name	Nethix				
Site ID	370				
Country	Italy				
Region	Veneto				
Info Output Monitor		Total	1	2	3
Current production		149.10 kW	50.39 kW	49.97 kW	48.74 kW
Total energy production		14069.38 kWh	4751.60 kWh	4722.55 kWh	4595.23 kWh
Profit		3855.0 €	1301.9 €	1294.0 €	1259.1 €
Saved CO2		6823.6 kg	2304.5 kg	2290.4 kg	2228.7 kg
Status		✔			
Meteo					

### Autonomous system

WE500 needs only a data enabled SIM card and a power source for accomplishing its activities. It does not need any kind of on-site human interaction.

### Wireless connectivity

The built-in web interface provided by WE500, that allows to monitor and download logged data, is available through 2G/3G wireless data connection, LAN or wireless LAN. The web interface can be accessed from a PC browser or from any mobile device using the iOS or Android apps provided. The remote server to which the data is sent can be located in the cloud or in the customer premises.



### Redundancy

WE500 is the only device on the market with an optional dual modem that provides wireless connection redundancy to mission-critical systems. The redundancy is provided through several policies that can be selected according to the users needs.

### User friendly

The web interface is self-explanatory and versatile. Data are presented with tables and multi-trace graphics, that allow to compare several parameters in a single plot, such as the comparison between the theoretical energy and the currently produced energy. Several elements of the user-interface can be personalized, including the company logo and colours, giving



### Customizable and expandable

Thanks to its modular and flexible system architecture, WE500 can be customized according to specific needs. New or existing modules can be easily added and/or modified following user requests. WE500 is also expandable through additional analog and digital inputs/outputs when required.

# NETHIX

WE CONTROL

### Photovoltaic data logging

WE500 provides a sophisticated data logging mechanism that obtains the system status through the local I/O, modbus or other custom protocols and sends the data to a remote server using standard protocols such as HTTP and FTP. The data can be stored in the internal memory or on USB memory sticks. It can also be downloaded in several format such as XLS and CSV. WE500 is compatible with many PV inverters and power analyzers available on the market. New protocols can also be implemented on request.

### Remote diagnostics

WE500 can monitor and detect system malfunctions and report them through an advanced alert system that sends notifications to selected users by SMS or email. It can send the notifications to a remote server that can analyze the data and reply with an action through the same channel or even by SMS commands that can be executed by WE500.

### Real time monitoring and control

WE500 allows to monitor the performance of any PV parameter such as strings voltage, current and power in real time by displaying multi-trace graphics or tables that can also be downloaded for further post-processing.

Monitor 1	Monitor 2	Monitor 3
<b>Real time data</b>		
Current real power		50.39 kW
Current ideal power		28.86 kW
Total production		4751.60 kWh
Irradiation		655.6 w/m <sup>2</sup>
Saved CO <sub>2</sub>		2304.5 kg
Profit		1301.9 €
Panels temperature		62.0 °C
Environment temperature		-49.7 °C
In-doors temperature		-49.7 °C
<b>Production totalizers</b>		
Partial production		86.730003kWh
Last day production		353.36499kWh
Current week		353.36499kWh
Last week		2729.780029kWh
Current month		3859.398438kWh
Last month		10429.947266kWh
Current year		34451.980469kWh
Last year		7497.541016kWh

Inverter 1			
<b>String Control 1</b>		Board temperature:	40.0 °C
		Board status:	✓
String 1	4.74 kW	String 6	4.72 kW
String 2	4.72 kW	String 7	2.37 kW
String 3	4.72 kW	String 8	2.35 kW
String 4	4.65 kW	String 9	2.38 kW
String 5	4.74 kW	String 10	2.40 kW
<b>String Control 2</b>		Board temperature:	37.0 °C
		Board status:	✓
String 1	4.70 kW	String 6	4.73 kW
String 2	4.64 kW	String 7	2.34 kW
String 3	4.67 kW	String 8	2.37 kW
String 4	4.68 kW	String 9	2.38 kW
String 5	4.75 kW	String 10	2.38 kW

### WE500 Technical data

- CPU: ARM 32-bit
- Storage: 1 GB Flash
- Communications: 2x RS-232, 1x RS-485, MODBUS
- Local I/O: 8 digital IN, 2 digital OUT, 2 analog IN
- Wireless: Modem 3G/HSPA or 2G/GPRS
- Connectivity: Ethernet 10/100 Mbit RJ45
- Optionals: Dual modem, USB, WiFi

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