

Delivering the most advanced portfolio of monitoring and management solutions.

PV View® Plus is an on-demand monitoring service that allows customers to use an internet connection to retrieve information about the operation of their utility tied photovoltaic system from anywhere in the world. Benefits of using PV View Plus include easy integration, alerts and faults notification, faster problem resolution and higher system uptime. Installers, as well as end users, can have accounts in the system and have visibility into their respective sites.



### Daily Energy Production



### Weekly Energy Production



### DC Input Power



## Standard Features:

In the standard offering, PV View Plus provides the ability to monitor the following information from the inverter within an accuracy of +/- 5%:

### Viewable in Web Interface






- DC Input Voltage from PV array
- DC Input Power from PV array
- DC Input Current from PV array
- AC Phase Current from inverter (average)
- AC Voltage from inverter (average)
- AC Real Power from inverter
- Daily, Weekly, Monthly, Yearly and Cumulative Energy Production

### Viewable by Report Downloading

- Fault Status
- DC Ground Current
- AC Neutral Current from inverter
- AC Reactive Power from inverter
- AC Apparent Power from inverter
- AC Power Factor
- AC Phase Current from inverter (A, B, C)
- AC Voltage from inverter (A, B, C)
- AC Voltage and Current Balance
- Inverter Internal Air Temperature
- Heatsink Temperature
- Fan Speed

Additionally, email alert notifications of inverter faults and warnings can be sent to the end customer as well as Satcon™ technicians to ensure fast resolution.

**Environmentals**

-  **29.0 °C**  
Ambient Temp.
-  **44.0 °C**  
Cell Temp.
-  **385.0 W/M<sup>2</sup>**  
Irradiance
-  **22.4 mph**  
Wind Speed
-  **W**  
Wind Direction

**DC Input Voltage**



**Sub-Array Input Current**



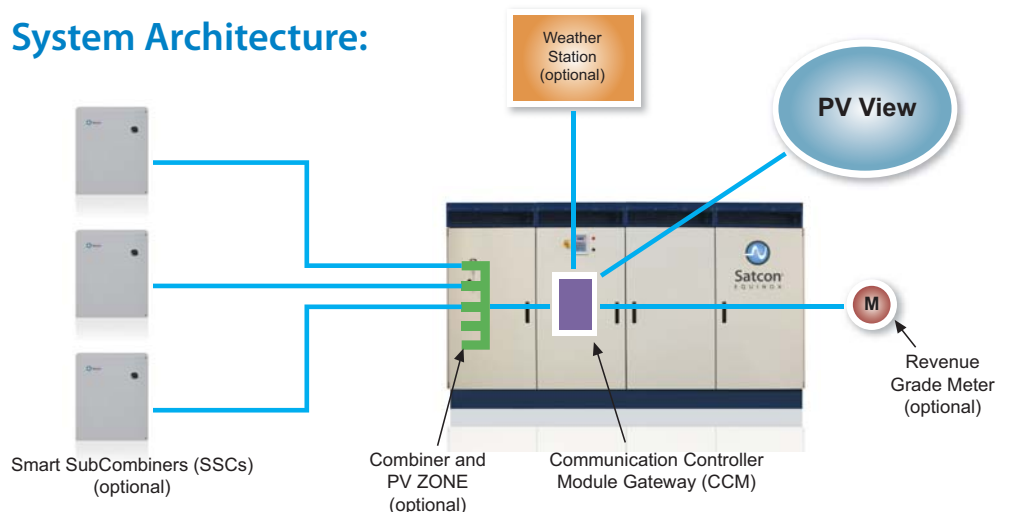
**Optional Features:**

PV View Plus also gives you the ability to monitor additional system information with these optional accessories:

- **With the Weather Station, users can view the following site specific information useful for calculating expected system performance:**
  - Irradiance
  - Wind speed
  - Wind direction
  - Ambient temperature
  - Photovoltaic cell temperature
- **The Revenue Grade Power Meter provides data with greater accuracy (+/- 2%), including:**
  - Energy Production
  - Inverter AC Voltage output
  - Inverter AC Current output
  - Inverter AC Power output
  - AC Line Power Factor
- **With the Combiner/PV Zone option, DC Current of each sub-array can be monitored and displayed in the web page Detailed System View.**
- **With the Smart SubCombiner (SSC), string level currents can be monitored:**
  - Up to 10 Amp DC current sensing for each module string
  - 12 string capability per combiner



**System Architecture:**



Each site may have one or more Communications Controller Module Gateways (CCM), Smart SubCombiners, Revenue Grade Power Meters or Weather Stations connected through RS-485 MODBUS as shown. The PV View PLUS CCM is installed inside the inverter and acts as a gateway to the internet. It automatically establishes a communications link with the secure PV View PLUS server and transmits the data over the internet using a LAN/Ethernet connection. The PV/Inverter site and server communicate with each other using TCP/IP protocol.

### Packages Available:

<b>Base Package:</b>	PV View Plus
<b>Option #1:</b>	DC sub-array current
<b>Option #2:</b>	Individual DC string current
<b>Option #3:</b>	Weather package
<b>Option #4:</b>	Revenue Grade package



Powergate Plus 500kW



Equinox 500kW



Smart Subcombiner

## Software and Hardware Requirements:

### Requirements for Web Client

- A client computer with internet access to the <http://www.pvviewplus.com> URL
- Latest Adobe Flash Player plug-in installed at the client end
- Any of the following web browsers:
  - Windows Internet Explorer v6+
  - Opera v9+
  - Firefox v1.5+

### Hardware Requirements

Data is transferred using SSL-secured connections to servers at Satcon and Fat Spaniel. All connections are initiated from the communications controller to the server. These connections are only required for customers using the PVView or FatSpaniel service. Please be sure that the site network is able to contact all of the following ports:

Server	DNS Name	IP	Port(s)
Satcon	pvview.satcon.com	216.209.35.165	13,80,9000
Satcon Service	ras.satcon.com	64.150.176.122	9004
Fat Spaniel	insight.fatspaniel.net	63.236.63.132	443 (HTTPS)

### Package Options:

PV View Plus is available for all Satcon PowerGate® Plus and Equinox™ inverters. It is offered as a base package, as listed below, or with any combination of the options listed:

	Software	Hardware
<b>Base</b>	PV View Plus	Communications Controller Module Gateway (CCM)
<b>Option #1</b>	Monitor DC sub-array currents	Combiner / PV Zone
<b>Option #2</b>	Monitor DC string currents	Smart SubCombiner (SSC)
<b>Option #3</b>	Monitor weather data	Weather Station
<b>Option #4</b>	Monitor Revenue Grade data	Revenue Grade Meter

For each package listed above, setup of Site Capacity License and Yearly Monitoring Fees are also required. All hardware options are covered under Satcon's warranty.



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