Neousys Industrial Solution

Solar Panel Monitoring

Neousys Technology Inc.

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Overview: Solar Panel

Solar panels or photovoltaic (PV) modules are assemblies of photovoltaic cells mounted in a framework for installation. Utilizing sunlight as a source of energy to generate direct current electricity. The use of solar panel generated electricity extends to general usage, it can sustain household appliances and generate enough power to utility-scale PV plants.

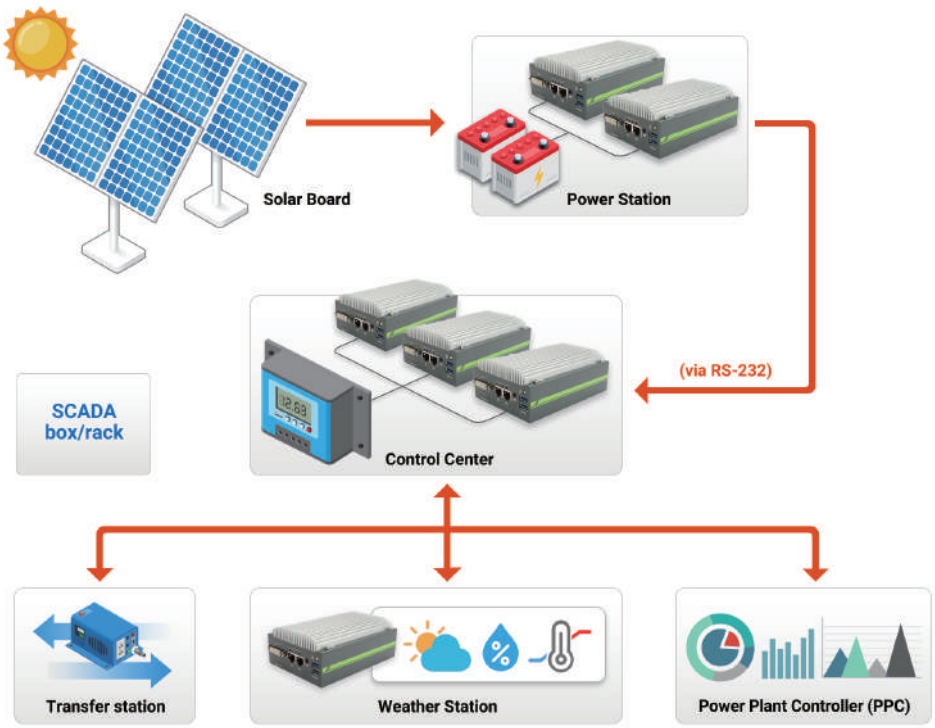
As with any energy generating system, having the right monitoring or management system offers real-time, data logging and estimated long-term information on the solar system hardware setting, power conversion efficiency, each connected device's power consumption and more.

Problem-solving

Having the right monitoring system gives you real-time accurate power generation and device consumption. There are three main obstacles the system must overcome. (1) The implementation of such a monitoring system will require the hardware to be positioned in harsh environmental settings such as under the sun or near other constant heat sources. (2) Once the data has been acquired, it needs to be uploaded to the cloud through wireless communication. (3) Connectivity between various PV, SCADA and power monitoring systems.

Problem-solved

The customer came across Neousys Technology's POC series that is (1) true fanless and able to operate in wide temperature range environments. Due to their compact dimensions, they are also ideal for deployment into confined spaces. (2) The POC series features expansion sockets to add on wireless 5G/ 4G modems so the collected data can be uploaded seamlessly onto the cloud or database. (3) For local connectivity, the POC series offers RS-232/ 422/ 485 serial and USB 3.1 Gen1 connections.



Benefits of Neousys POC Systems

Neousys POC systems offer the following advantages:

Environmental

- True fanless -25°C up to 70°C wide-temperature operations for harsh, volatile environments
- Extreme rugged construction for extra volatile environmental conditions
- Shock and vibration operation capable with MIL-STD-810G certification
- Efficient and patented thermal dissipation design
- Compact dimensions for confined space deployment

Connectivity/ expandability

- Power over Ethernet capable
- Up to USB3.1 Gen1
- Up to 2.5G Ethernet connectivity
- Connection ports with screw-lock for rugged connectivity
- WiFi 6/ WiFi 5/ 5G/ 4G wireless communication, expansion via mini-PCIe module
- MezIO socket for function expansion

Processing power

POC-500 series: AMD Ryzen Embedded + Radeon GPU
POC-400 series: Intel 10nm Elkhart Lake Atom (quad-core) + Google TPU capable
POC-300 series: Intel Apollo Lake Atom
POC-200 series: Intel Bay Trail Atom
POC-120 series: Intel Atom E3826
POC-40 series: Intel 10nm Elkhart Lake Atom (dual-core)

Mounting options

The POC systems can be wall or DIN rail mounted to suit your deployment needs.

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