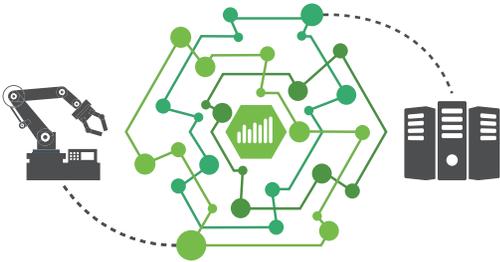# VIA Smart Energy Management Solutions

With the growing complexity of today's power grid, the need to monitor, control, and optimize the performance of power generation and transmission systems has never been greater. This is a particularly important requirement for solar, power, and other renewable energy installations that are mainly operated across multiple remote locations and require automated control and management systems for monitoring the status of the equipment and ensuring optimum performance according to the prevailing weather conditions.

With our years of experience in designing ruggedized, ultra-compact, power-efficient solutions for the most demanding computing environments, VIA offers a customizable portfolio of application-ready Smart Energy Management Solutions ideally suited to match the specific needs of the Green Energy industry.

VIA Smart Energy
Management Solutions Provide :

Data Collection

Rich I/O connectivity options for controlling and collecting mission critical data from a wide range of devices and sensors.

Data Analysis

Real-time data processing and analysis to safeguard against power generation system crashes, ensure optimum performance, and generate system reports.

Monitoring and Control

Redundant networking options to ensure 24/7 remote monitoring and control of even the most remote installations.

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VIA Smart Energy
Management Solutions

With their ultra-reliable operation, low power consumption, and multiple customization options, VIA Smart Energy Management Solutions have already been installed in wind farms and solar farms in some of the remotest regions of the world – enabling our customers to maximize the efficiency of their energy generation and distribution operations. They provide a comprehensive range of customizable systems for creating the backbone of your smart energy management ecosystem.

VIA
we connect

VIA AMOS-3005

High-performance fanless ruggedized system ideal for data-intensive energy harvesting and power management monitoring and control scenarios.

- 1.2 GHz VIA Eden® X4 CPU with VIA PadLock® Security Engine
- Wide input voltage range supporting 9V~36V DC-in
- Wide operating temperature range from - 40°C up to 60°C
- Dual Gigabit Ethernet, optional Wi-Fi and 3G/4G modules
- Rich I/O feature set including lockable USB, COM and GPIO

VIA AMOS-820

Rugged ultra-compact fanless system for energy harvesting and power management monitoring and control applications.

- 1.0GHz NXP i.MX 6Quad Cortex-A9 SoC
- Power over Ethernet (PoE) option
- Wide operating temperature range from -20°C up to 65°C
- Legacy I/O support including dual CAN bus, dual COM, and GPIO
- Linux and Android BSPs, including VIA Smart ETK

VIA ARTiGO A600

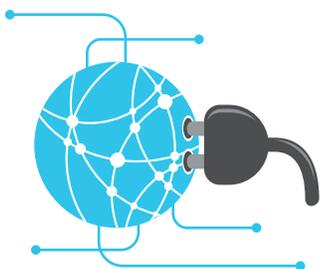Ultra-sleek fanless system for energy management data collection and visualization applications.

- High performance 800MHz VIA Cortex - A9 SoC
- Rich I/O connectivity including COM, Digital I/O, and USB 2.0 ports
- Dual Ethernet ports, optional high-speed wireless networking modules
- Four 3-pole Phoenix RS-485 ports with full 3.75KV isolation
- Customized Linux BSP services

VIA
we connect

Rapid Customization

VIA Smart Energy Management Solutions are designed using a modular approach that makes rapid hardware and software customization a snap. Key customization options include:

Peripheral integration :

With a wide selection of RS-232, RS-485, USB, GPIO, CAN bus, and DIO ports, VIA Smart Energy Management Solutions provide flexible connectivity to a broad array of legacy and state-of-the-art equipment and systems. Gigabit Ethernet, Wi-Fi, and 4G networking options ensure high-speed network connections for mission-critical applications such as remote monitoring and control.

Operational environment optimization :

With their ruggedized form factors, low power consumption, and wide operating temperature ranges, VIA Smart Energy Management Solutions can be optimized to operate in even the most demanding environments. Potential customizations include the integration of a heating module in the VIA AMOS-3005 for extreme low temperatures.

Software customization :

With a wealth Android, Linux and Windows software development expertise and easy-to-use BSPs and SDKs, including the VIA Smart ETK, we provide a comprehensive range of software customization services for optimizing the compatibility, performance, I/O connectivity, and peripheral integration of VIA Smart Energy Management Solutions across multiple platforms.

Superior Reliability and Longevity

VIA Smart Energy Management Solutions are built to the highest standards of quality and undergo stringent testing in order to ensure optimum reliability in even the toughest environments. To meet the life-cycle needs of our customers, we offer longevity support for up to seven years on selected models.