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#### TEC Contents · September 2024

PG 4	Web Client Computing Devices Facilitate Integration of Web Based HMI/SCADA Applications
PG 10	Company Profile • Sunbelt Solomon
PG 14	Company Profile • Rhino Switchboard Mats
PG 20	Ad Index





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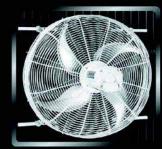
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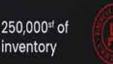
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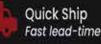
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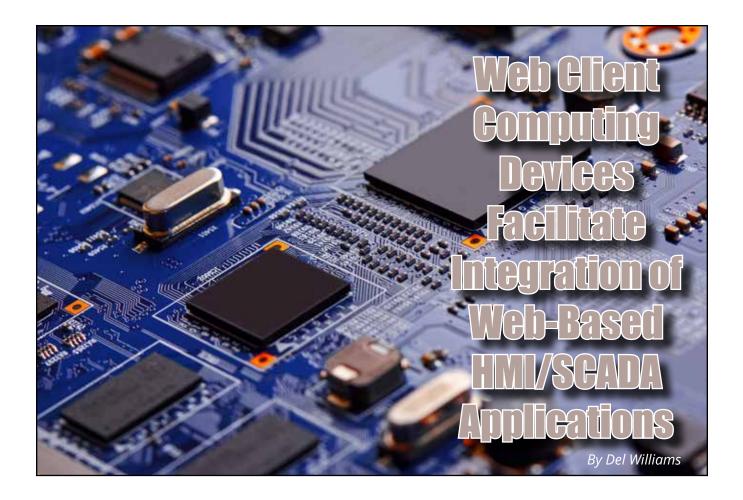
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*Flexible web client computers specifically designed for industrial manufacturing environments act as Human Machine Interface to web-enabled devices and HMI/SCADA applications* 

Operators in manufacturing facilities have long depended on Human Machine Interfaces (HMI) to offer a visual summary of process systems that simplifies the monitoring of crucial status and control data. A well-crafted graphical user interface enhances situational awareness, decreases workload, and empowers operators to oversee the entire process –facilitating their focus to quickly address any abnormal scenarios.

Most of this HMI/SCADA software runs on a dedicated computer system. "Today, sophisticated web server technology facilitates access to HMI screens and the viewing of SCADA systems. Newer PLCs and RTUs frequently incorporate web servers that allow diagnostics and monitoring via browsers as well," says Paul Shu of ARISTA Corporation, a leading provider of computing platforms and visualization display products for manufacturing environments across all industrial sectors.

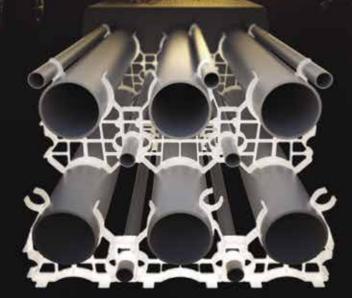
#### Facilitating Implementation of Web-Based HMIs

Historically, HMI/SCADA client software has run on a dedicated computer with a compatible Operating System installed that exhibited slow loading times during startup and restart procedures. This reduced productivity on a routine basis, cutting into valuable production time. Updating and maintaining software on individual PCs resulted in higher cost of ownership and even more downtime.

Fortunately, web-based applications have revolutionized accessibility by enabling connectivity from any

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location using a web browser. Still, for manufacturers, the integration of the HMI presented several challenges.

When standard web browsers are used, operators must open a browser and type a long website address to be routed to a specific program. Users have the liberty to explore various unrelated websites as well, but this only exposes the system to potential risks inherent in online browsing activities.

Now manufacturers can optimize operations by utilizing software-enabled web clients to streamline web-based HMI implementation. The best solutions involve touchscreen displays that can serve up HMI pages on multiple monitors, in multiple split screen configurations, or at cloned workstations to streamline the management of equipment across the production line.

ARISTA, for example, has introduced a web client computer called Q8 Edge that is designed to serve as the display or control panel for web-enabled PLCs, HMI systems, and IP cameras.

In the case of the Q8 Edge web client, ARISTA designed the interface to automatically connect with the assigned web pages without opening a browser and entering an address.

"After initial setup, the browser automatically launches with the assigned web link after turning on the PC's power or restarting the system, so the operator gets to needed information much faster," says Shu.

Hybrid remote desktop services (RDS) and webbased applications can also be launched simultaneously, when needed. The web client supports clones, duplicate screens, and multi-screen. Touch Screen is supported as well. The applications can be displayed one by one by toggling a hot key, or all applications can be displayed by split screen. For data security, the USB drive function is disabled automatically after the system boot up. No external USB drive can be used to download or upload data.



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In addition, ARISTA prevents access to other sites or browser features. "The operator can only see what is displayed on the screen and cannot change anything beyond the intended HMI pages," says Shu.

When troubleshooting is necessary, the Q8 Edge can be securely accessed using interactive remote mirroring by an administrator.

The approach facilitates installation of a wide range of pharmaceutical cleanroom grade computers, panel PCs, monitors, and KVM. To promote efficient use in space constrained areas, various types of mounts are available, including pendant arm, wall, pedestal, ceiling, and VESA.

When web client computers, Panel PCs, or Mobile Workstations must be customized to the manufacturer's process, this can be accommodated as well.

"If there are unique requirements such as space constraints, we can meet with the manufacturer to fully understand the situation and design a solution," says Shu. "In six to eight months, we can deliver the first articles for approval, and begin production of the equipment."

As manufacturing facilities continue to actively explore new avenues to enhance productivity, the utilization of web-based HMIs on industrial-grade computers can significantly boost efficiency. This innovative solution, characterized by streamlined and adaptable display features as well as improved security measures, promises to enhance the profitability and productivity of plant operations in the years ahead.

For more information, contact ARISTA Corporation at (510) 226-1800, e-mail sales@goARISTA.com, or write to 48460 Lakeview Blvd., Fremont, CA 94538.

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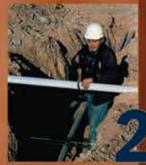
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#### Company Profile • Sunbelt Solomon

Sunbelt Solomon is a leading electrical provider specializing in full lifecycle solutions, catering to a diverse range of utilities and industries across North America. With a comprehensive suite of products and services including remanufactured and new transformers and auxiliary equipment, rental equipment, repair services, asset recovery, field teardown, and field services, Sunbelt Solomon is as a reliable partner in customized electrical solutions and services.

#### Why Sunbelt Solomon?

*Core Offerings:* Sunbelt Solomon's both remanufactured and new electrical equipment ensures customers have access to a wide range of solutions to meet their specific needs. Whether it's reconditioning existing equipment or providing brand new units, we deliver high-quality products that meet industry standards.

*Services:* Our services extend beyond mere product delivery, providing end-to-end solutions. Sunbelt Solomon's rental services offer flexibility to clients, allowing them to access equipment without the burden of ownership. Asset recovery services enable our customers to maximize the value of their assets through efficient decommissioning and resale processes. Additionally, the company offers comprehensive field teardown and field services, ensuring seamless integration into existing and new electrical infrastructures.

#### **Our Value Proposition:**

Sunbelt Solomon is centered around four key pillars: Sustainability, Speed, Customization, and Customer

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#### Centricity.

*Sustainability*: Since our beginning, we have been committed to environmental responsibility, offering remanufacturing services that extend the life of electrical equipment and reduce waste. By utilizing sustainable practices, Sunbelt Solomon supports a greener future for our industry and the planet.

**Speed:** Sunbelt Solomon understands the importance of timely solutions in this fast-paced energy sector. With a commitment to efficiency, we deliver quickly for all services, minimizing downtime and maximizing productivity. With over 50,000 pieces of inventory in stock, we are ready to support your electrical requirements.

**Customization:** Recognizing that each customer has unique needs, Sunbelt Solomon emphasizes customization in its offerings. Whether it's tailoring equipment specifications or providing specialized services, we work closely with our customers to deliver solutions that precisely meet their needs. Our experienced engineering staff can design, package, and procure a wide range of power solutions- from simple to complex.

*Customer Centricity:* Customer satisfaction is the core of Sunbelt Solomon. We place our customers at the forefront of every decision, striving to exceed expectations through proactive communication, responsive support, and a commitment to safety and quality.

With 18 locations across North America, Sunbelt Solomon ensures widespread coverage and accessibility. As a trusted one-stop shop, we have 24/7 availability that ensures our customers have support whenever they need it, 365 days a year.

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