**Title:**

DST Controls - Real-Time Data & Analytics, Controls Integration, and Panel Manufacturing

**General**

DST Controls has been a leader in design, assembly, and integration of industrial monitoring & control systems since 1975. Still headquartered in Benicia, CA, we are a full-service ISO 9001/2008 registered, engineering and manufacturing company that is dedicated to world-class quality, cost-effectiveness, and on-time delivery

DST’ers enjoy a dog-friendly relaxed working environment where working hard and having fun are both expected. We stress career and skill development where learning to be organized and focused are keys to success. Everyone that works at DST must be willing to learn every-day and help others. We believe a team environment is necessary for our success. Our company is our employees; they are valued above all else.

Manufacturing

Panel Design and Manufacturing

14,000 square-foot Facility

We help our customers optimize existing products, as well as develop new ones. We build to UL 508A and ISO quality standards at competitive cost. In addition to UL 508A, our Panel and Sub-assembly shop is certified to build to the UL-1741 and UL-67 standards. Our staff is experienced in intrinsically-safe applications and able to comply with, and produce documentation packages for, CE, CSA, SEMI, and IP-20 standards.

We can build solely to customer specifications or, with our engineering department, turn-key a project from conceptualization to installation. If a customer's system or sub-system is already complete engineering-wise and ready to be assembled by the tens, hundreds, or thousands, we stand ready to build, test, and deliver each and every one of those units: on-spec, on-budget, and most importantly, on-schedule.

And if there's still room for product improvement, such as optimization for manufacturability, component-cost reduction, functional enhancement, or standards compliance - our engineering group can do that too.

Working with our Clients We Provide:

Design and Development

DST provides innovative design and engineering that solves technological problems fast. Our rapid prototype-assembly allows for product testing, iterative improvement, compliance certification (e.g., UL and CE), and final commercialization, to take place sooner. This helps provide cost-effectiveness that, during development, slows down R&D capital-burn, and during production, allows competitive (but profitable!) price-points.

Procurement

Serving both DST's custom panel shop and OSM group, our Procurement Department actually operates as a profit-center for our customers. Cost-cutting tactics used by our experienced and tough-minded purchasing people include supplier pricing alliances, volume purchasing leverage, and web-based RFQ & order entry. Coupled with a contemporary globalized procurement philosophy that makes lowering costs their "Prime Directive," DST-Procurement uses these tools to ensure the highest quality components, at the lowest possible cost, delivered in the shortest time possible.

Outsourced Subsystem Manufacturing (OSM)

DST's Outsourced Subsystem Manufacturing or OSM (pronounced "Awesome") group specializes in higher-volume production of electrical or electronic-based subsystems. This can be as simple as assembling a few wiring harnesses for a microscopic x-ray system or as complicated as designing, building, programming, and servicing over a thousand PLC & HMI based controllers that regulate the delivery of specialty gasses to production tools. OSM's big value to DST's customers is lower cost with higher quality and faster delivery so the OEM can concentrate on improving its products and satisfying its customers.

Manufacturing Services

For our OEM offers to the Solar and other CleanTech industries, check out our solar website at [www.dst-solar.com](http://www.dst-solar.com)

Electrical, Control, and Monitoring System Engineering and Design

Specification Development for Products and Systems

Product Safety Certification and Labeling (UL, CE, CSA, etc.)

Technical Writing, e.g., Installation, Operations, and Maintenance Manuals

Assembly, Packaging, and Shipping - Anywhere

Product Help Line - Supporting Our Customers, World-Wide

DST Solar

DST Controls: Alternative Energy Division

DST Controls has been a leader in design, assembly, and integration of industrial monitoring & control systems since 1975. Still headquartered in Benicia, CA, we are a full-service ISO 9001/2008 registered, engineering and manufacturing company that is dedicated to world-class quality, cost-effectiveness, and on-time delivery.

Our alternative energy division helps our growing list of clean-tech customers with that industry’s unique requirements for innovative design and engineering.

In 2007, we launched our Alternative Energy Division to help our growing list of clean-tech customers with that industry’s unique requirements for...

Innovative design and engineering that solves technological problems fast.

Rapid prototype-assembly that allows product testing, iterative improvement, compliance certification (e.g., UL & CE), and final “commercialization,” to take place sooner.

Cost-effectiveness that during development, slows down R&D capital-burn—and during production, allows competitive (but profitable!) price-points.

To accomplish this, we maintain a staff of electrical, mechanical, process, and software engineers; CAD designers and drafters; instrumentation and control (I&C) field technicians; UL, CE, and CSA compliance experts; a UL registered manufacturing facility; and a very “sharp-penciled” procurement group that’s dedicated to getting our customers the absolute best pricing possible for the components we put in their systems.

So whether your product or subsystem is totally done engineering-wise and ready to be assembled by the tens, hundreds, or thousands—or whether there is still room for improvement, e.g., optimization for manufacturability, component-cost reduction, functional improvement, or standards compliance, DST is ready to help!

To summarize: our engineering group helps our domestic and foreign customers optimize their existing products and develop new ones—and our manufacturing group builds those products in commercial volumes to ISO quality standards and at globally-competitive costs.

Controls

**Controls Integration**

Technical Expertise in Multiple Disciplines and Industries

DST can support customers from project concept through commissioning to include control engineering, instrumentation, control panel design and assembly, system programming, installation, and start-up.

Our engineering staff is purposely diverse in their respective formal training (degrees) and work experience. DST's technical roster includes electrical engineers, mechanical engineers, control engineers, chemical engineers, computer science engineers, and our trained-in-the-trenches engineering technicians.

These professionals are united as a team by a common goal: monitor and control critical equipment and data for DST’s customers, whether across the street or across an ocean, and do it to world-class standards of quality and cost-effectiveness.

Many DST’ers are former automation end-users themselves and so are not only first-class engineers and integrators, but also have personal understanding of today’s increasingly critical needs for projects delivered on-spec, on budget, and on-time.

Integration Services

DST's skill sets and experience in facility, process, machine, and industrial-data automation include:

Project Management

Passion for effective execution and use of standard project management methodologies that greatly reduces risk-to-schedule and provides authorized customers with secure on-line access to their project’s progress indicators.

PLC and SCADA Programming

Our engineers have programming skills coving a wide range of PLC platforms, including Rockwell, GE, Siemens, and Modicon. We have strong capabilities with large and small SCADA projects using the most popular packages including Wonderware, GE IFix, and FactoryTalk View SE.

Networking and Data Collection

We have strong experience with industrial networks and plant floor communications over various protocols such as TCP/IP, OPC, Modbus, and many standard serial types. Additionally, we are experts with sending data to time-series historians and SQL databases, such as OSIsoft PI and Microsoft SQL Server.

Machine Control and Safety

DST engineers are well versed with working on most brands of sensors and machine control devices, including VFDs. We have expert safety specialists in-house that provide end-to-end solutions for new and retro-fit safety solutions.

Recent Projects

Process control for manufacturing in pharmaceutical

Automated vision inspection for packaging

Process control and monitoring for water and waste-water treatment

Material track and trace for a manufacturing operation

Machine safety system for heavy industries

Material transfer and conveyance for food and beverage

Data

**Industrial Data**

Data, Information, Action.

Each day, industrial plant managers make decisions that impact their facility’s productivity, efficiency, and safety, and to assist with the data systems so critical to those decisions, more and more managers are turning to DST’s Industrial Data Services for help.

Working as a Team We Provide:

Infrastructure Design

Identifying and prioritizing their company’s emerging industrial-data needs by selecting the most cost-effective real-time data infrastructure, including software and hardware - right down to plant-floor instrumentation if needed

Infrastructure Implementation

Implementing the new—or expanding the existing—data system using proven strategies and practices that truly promote user buy-in and maximize ROI

Data Integration

Integrating both custom and off-the-shelf “analytics” that add intelligence to the acquired data, automatically

Analytics and Visualization

Developing data distribution protocols and user-based displays so the right people get the right data, right when they need it, and in the right format, enabling immediate and actionable understanding

How’d we get so smart? Decades of industrial systems integration; constant close technical interaction with the leading suppliers of automation hardware and software; and being held again and again to zero-tolerance standards of performance-excellence by our globally competitive customers.

So whether someone is totally new to maximizing the value of their plant's real-time data, or already a competent, high-end industrial database user, DST Controls should be his or her first stop for outside help.

Simply put, we collect data on industrial production and make it pay.

DST professionals are skilled at increasing the availability and visibility of real-time production data so managers and executives can make more informed decisions. As experts in real-time industrial databases, we:

Connect plant-floor devices to operational and business systems

Collect real-time production, energy use, and environmental data

Provide visualization tools supporting Business Intelligence (BI)

Train users to do it themselves

Typical Projects

Infrastructure monitoring in critical-facilities for data centers and hospitals

Process improvement in pharma and bio-tech plants

Capacity assurance at power plants

Regulatory compliance at refineries

Energy monitoring for equipment, buildings, and campuses

Condition-Based Maintenance (CBM) for oil & gas pipelines

About DST

For more than 30 years, DST Controls has designed and fabricated control system panels and OEM sub-systems for a wide range of industrial customers. DST's professional, multi-disciplined engineering staff offers completed panel installation and validation in addition to a full range of controls integration services.

Building on its controls expertise, DST has become a global leader in industrial data monitoring and integration services. Through DST's Industrial Data Services, customers can leverage the value of real-time process and manufacturing data by integrating it into existing systems such as maintenance, asset management, and back-end business platforms.

DST's range of products and services, and how they apply to customer organizations, can be best visualized using the International Society of Automation (ISA) definition for integration of enterprise and control systems in the diagram on the right. ISA-95 consists of models and terminology used to determine which information has to be exchanged between systems for production, maintenance, and quality purposes, as well as corporate systems for finance and the supply chain.