

Leaders In Industrial Automation Control Engineering and IIoT Communication



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Leaders in Industrial Automation
Control Engineering and
IIoT Communication

Our Applications

In the ever-evolving motion-control and electric motor industry, LEC's international experience in developing components, engineering systems and programming software for clients spans a vast array of verticals. Our broad client portfolio ranges from oil & gas, pipeline and transportation companies to water/wastewater, forestry and many more key industries.



Oil & Gas, Pipeline

- Drilling Rig Remote Monitoring Systems
- Production Monitoring Systems
- Pumping Unit Monitoring Systems
- Pipeline Metering Station Monitoring and Control Systems
- Pipeline Control and Block Valve Controls and Monitoring Systems
- Pipeline SCADA Systems



Water / Wastewater

- Wastewater Pump Stations
- Potable Water Well Controls
- Elevated Tank Controls
- Treatment Process Controls



Metals & Machining

- C-N-C Machining
- Arc Furnaces
- Punch Presses
- Rolling/Stamping/Slitting
- Die Casting
- Draw Blocks
- Annealing



Forestry / Agriculture

- Bucking, Sawing & Chipping
- Trimming, Sorting & Stacking
- Drying & Packaging



Power Generation

- Fuel Tank Farm Supervisory Control
- Process Water Filtration & Treatment
- Wastewater Filtration & Treatment
- Electrostatic Precipitator Controls
- Bottom Ash Control Systems
- Fly Ash Control Systems
- Hydro-Electric Generator Controls
- Raw Water Intake Controls



Robotics

- Pick & Place
- Welding
- Assembly



Communications

- Ethernet Networks
- VPN Access
- ControlNET
- DeviceNET
- Modbus / RS485
- Fiber Optic
- Cellular
- Internet



Monitoring

- SCADA Systems
- Remote Monitoring Systems
- Residual Chlorine Monitoring Systems



Automotive

- Tire Industry
- Welding Machines
- Component Assembly
- Automation
- Quality Control - Vision
- Inspection Systems



Plastics

- Injection Molding
- Extruding
- Blow Molding
- Thermoforming
- Ultra-Sonic Welding



Food & Beverage

- Batching
- Ovens
- Fillers/Seamers/Cappers
- Packaging
- Palletizers
- Bar Coding/Sorting



Chemical

- Custom Container Filling Stations
- Palletizers
- Batch Controllers



Paper Industry

- Paper & Pulp
- Converting
- Presses



Fiber Glass Insulation Production

- SMC Production
- 10 & 15 Ton Presses



Transportation

- Draw Bridge Controls
- Bridge Automation



Amusement & Entertainment

- Roller Coaster Automation
- Water Park Automation

LEC Is Engineering Smarter Systems

LEC supplies the competitive advantage to industry, turning challenging circumstances into revenue-generating results by providing the cutting-edge production and process management automation tools needed to face competitors head-on in a demanding global marketplace. Our proven experience is demonstrated via our clients' success in areas such as cost reduction, higher-quality manufacturing, process efficiency increase, greater employee safety and productivity improvement.



Who We Are

LEC provides industrial automation and control engineering, and industrial IIoT enablement and cloud platform services of the highest quality. Every day, we demonstrate an unending commitment to our clients, strategic partners and communities.

Automation is a crucial element of the manufacturing and production process. The efficiency of any process is dependent on successful system integration. LEC supplies the competitive advantage to industry, turning challenging circumstances into revenue-generating results. We provide the cutting-edge production and process management automation tools needed to face competitors head-on. LEC produces tangible benefits - cost reduction, higher-quality manufacturing, process efficiency increases, greater employee safety and productivity improvement.

Access to our professionals is not restricted to "traditional" business hours and workdays. Our highly experienced emergency support teams are available any time – day or night. By incorporating remote access features into your control system, our teams are enabled to diagnose issues, and in many cases remedy them from virtually anywhere.

Additionally, we offer our clients the option of attending customized training sessions, either on-site or in a hands-on classroom environment.



Proven Industry Leaders

Our passion is engineering smarter systems that exceed expectations. LEC's experienced and passionate team brings a multidisciplinary approach to addressing the challenges that affect our clients. We're setting a new standard in industrial automation control engineering and IIoT enablement.



Strategic Partner Alliances

LEC's well-established strategic alliances with industry leading component manufacturers, hardware providers, network carriers and platform developers enable our team to successfully design, produce, and integrate custom systems based on the specific, individual needs of each client. These Alliances play a vital role in LEC's consistent delivery of successful results.

Experienced Human Resources Behind the Technology

The core of our flexible workforce includes engineers experienced in a variety of disciplines with the knowledge to complete a project of any size and in nearly any industrial application. Our professionals are passionate about design, fluent with technology, and engaged in each aspect of every project.

- Automation Engineers
- Industrial Engineers
- Network Architects
- Electrical Engineers
- Mechanical Engineers
- Computer Engineers
- Civil Engineers
- Network Engineers
- PLC/Automation Programmers
- Certified Panel Technicians



Engineering Products & Services

Engineering & Consultation

Consulting services offered by LEC range from specification of a single system component to turnkey design-build services. We have an extensive network of resources, both technical and non-technical, which allows us to accommodate client needs during any phase of a project. These services are not specific to any particular market segment and are applicable to both public and private-sector projects. LEC provides the solutions needed as well as the documentation required to keep up with all details of a project; including schematics, hardware/software manuals, and fabrication details. All of our documents are accurate, easy to follow, and simple to modify.



Industrial Automation & Control Systems

LEC's team has decades of experience in engineering smarter automation systems for industry, delivering real solutions to successfully solve critical process and control application challenges. We are committed to the continuous training of our team and to the innovation advancement of our industrial automation services. Whether you need a single-station work cell, a completely integrated multi-functional assembly line, or the integration of new components into an existing system, LEC has the solution. Our team of experienced engineers, programmers, technicians, and software developers focuses on providing cost-effective solutions. Clients rely on us for process integration, machine design and build, PLC and RTU programming, HMI SCADA development, production monitoring and reporting, data collection, servo and VFD programming, machine diagnostics and alarming, panel design, and industrial IoT solutions.

Systems Integration

LEC's experienced team of control system integrators design and implement sophisticated control systems for manufacturing operations, process and other industrial facilities. We leverage our extensive knowledge of engineering, information technology, operations, and business to expertly integrate plant equipment to automate manufacturing and processes from the plant floor to the enterprise level. Automation helps manufacturers and processors reduce cost, increase production, use less energy and lower environmental impact. Our extensive experience with a vast array of hardware and software platforms and their unique communication protocols enables us to effectively integrate multiple machine control systems in accordance with specific client requirements, whether into a comprehensive control room, SCADA application, or cloud-based solution.



Engineering Products & Services

UL-508A Certified Industrial Panel Design & Fabrication

LEC specializes in providing custom control panel solutions of the highest caliber in the manufacturing industry with a proven track record of satisfying a variety of industrial automation needs. Our team of highly experienced technicians expertly construct control panels to the highest quality of industry standards using the best products from trusted hardware manufacturers. LEC's UL-508A Certified Panel Shop can accommodate any size project, and provide engineering support from design concept to completion.



Skid Design & Fabrication

Our engineers, technicians and fabrication teams provide the best quality skid-mounted measurement technologies and mechanical and electrical controls available in the industry. LEC's professionals can manage and advise on your project from initial design through start-up and commissioning. We offer both standard designs for quick turnaround to meet tight deadlines, and customizable solutions to meet unique regional or application requirements.



Programming

PLC Programming

Our skilled professionals provide software programming services for a variety of brands of Programmable Logic Controllers (PLCs). Our software development outcomes are easy to use, organized, and simplified, with descriptive comments to give our clients the information they need to maintain their equipment.

HMI & Operator Interface Programming

Regardless of the complexity of your HMI needs, LEC provides sophisticated, user-friendly systems that are easy to operate, and our professionals are experienced in designing and programming a wide variety of operator interface systems.

Motion Control Programming

We are skilled in the design, installation, and commissioning of an extensive array of motion-control components and variable speed drives, which provide smooth operation of electronic gearing, contouring, and circular motion applications.



Radio Frequency Controls

LEC has extensive experience in providing solutions utilizing a variety of wireless controls and I/O devices in accordance with your particular requirements. These are crucial when an application involves potentially dangerous machinery (such as conveyors and blenders) or the monitoring of equipment, motors and other devices from a remote location.

Programming

Industrial Internet of Things Enablement Products and Services

LEC offers experienced Industrial Internet of Things (IIoT) enablement, filling the gaps between disparate technologies.

- Integrating existing field devices and assets into a current IIoT framework.
- Connecting disparate systems into a single platform and user interface for monitoring and control.
- Developing ground-up, custom IIoT solutions to meet specific client requirements.
- Long-term solution support to ensure sustainability while meeting ongoing and future IIoT business needs.



Mission Critical IIoT Connectivity

- Highly secure and redundant wireless connectivity
- Advanced private network with client access to real-time network analytics
- Managed services staffed with skilled support and troubleshoot personnel
- Pre-commissioned hardware for optimized deployments
- 4G LTE Network
- System Consulting & Design
- Robust 24/7 ticketing system with solveIT™ support tool



Engineering the Components of IIoT

LEC offers experienced Industrial Internet of Things (IIoT) enablement, filling the gaps between disparate technologies. With years of industrial controls and automation experience, along with investment in new and innovative technologies and the brightest human resources, LEC is truly a market leader in deploying IIoT. Trusted by the industry, wireless carriers and enterprise clients alike, LEC is a proven partner in business.

Visualization & Control Through Robust IIoT Platform Technologies

- IIoT platforms delivering data visualization, analytics, and control
- Reliable alarm and fault notification systems
- Ability to extract data and enable control both remotely and in-plant
- Data logging and reporting functionality
- Simple configuration and intuitive user interface
- Access from any browser-enabled device



Introducing iQ2™. Intelligence. Squared.

iQ2 is LEC's complete, end-to-end IIoT platform solution, designed from an industrial automation engineering perspective, to effectively and efficiently address individual needs. Our flexible IIoT integration process quickly and easily enables our cutting-edge platform technology on the plant floor, for OEMs and any industrial remote assets.



ENABLING IIoT

Engineering the Components of IIoT



iQ Web SCADA

LEC's complete end-to-end monitoring and control solution, iQ Web SCADA, integrates into almost any new or existing control or automation system regardless of the function of the machinery, equipment, or system. The iQ Web SCADA platform can be used all or in part, depending on the needs of the user.



iQ CommSentry

LEC's iQ CommSentry service tool provides users with a simple solution to monitor and manage network performance resulting in reduced downtime and the prevention of costly errors. This platform simplifies compliance management, IP address management, easily tracks and locates network users and devices, and analyzes network traffic and bandwidth usage.



COMMSENTRY
MANAGING IIoT

Support

solveIT

Technical Support Center

LEC's newly-launched, cutting-edge solveIT™ Technical Support Center provides clients with direct, 24/7 access to data, project information and support request updates using the latest technology compatible with today's browsers and mobile devices. solveIT™ is a user-friendly and highly-collaborative cloud-based system designed to give clients instant access to detailed information regardless of locale. solveIT™ features data sharing, client data input capabilities, support ticket tracking, project tracking, hardware information and much more, increasing overall project management effectiveness.

On-Site Support

Technical support is a crucial component of LEC's services, and we are always pleased to assist clients with on-site questions or maintenance needs.



Replacement Components

We have a commitment to providing every nature of support for our clients' systems throughout their service life. In addition to our remote assistance and on-site support services, we also offer replacement components for every aspect of control and automation systems.



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