Services and Support

Engineering Services and Consulting

Today’s critical infrastructure systems face a growing number of potential risks varying in scope and complexity. Our professional services include:

• Automated password management with SEL and other control system devices.
• Deny-by-default firewall configuration.
• IPSec VPNs for site-to-site security.
• Risk and vulnerability assessments.
• Co-op and municipality-focused security/compliance services.
• NERC CIP and 693 compliance services.
• Secure serial and Ethernet designs.
• System restoration.
• Patch management and firmware update maintenance.
• Virus response.

Secure Communications and Control Solutions

Secure and protect critical communications and control networks

• Defense-in-depth cybersecurity mitigates threats with sustainable, proactive solutions.
• Security controls and encryption solutions maintain confidentiality, integrity, and availability of critical data.
• Comprehensive management and event-logging tools provide centralized monitoring and system-wide awareness of physical infrastructure and networking assets.
• A broad product line with flexible interface formats provides support for serial and Ethernet networks using both wired and wireless communications.

Regional Technical Support

We have regional offices and branch offices located close to customers throughout North America and the world. To ensure consistent, top-quality services, we share policies, procedures, and standards across all our offices. Because regional offices have direct access to the larger SEL organization, global customers receive the same exceptional services and support, no matter where they are.
Example Secure Control System Diagram

**System Layers**

**IT Corporate Network**
- Delivers policies, procedures, training, and awareness.
- SEL-3555 Computer
- SEL-3555 Real-Time Automation Controller (RTAC)

**L5 | Perimeter**
- OT/IT Outer Firewall (FW)
- Separates the control system from the enterprise physically and electronically.
- SEL-2740S Software-Defined Network Switch
- SEL-3355 Computer
- SEL-3620 Ethernet Security Gateway
- SEL RTAC

**L4 | SCADA**
- Operation Center/Substation Human to Machine (H2M)
- Authorizes users and aggregates system data for analysis and visualization.
- SEL-2730M Managed 24-Port Ethernet Switch
- SEL-2740S Software-Defined Network Switch
- SEL-3025 Serial Shield®
- SEL-3061 Cellular Router
- SEL-3620 Ethernet Security Gateway
- SEL-3622 Security Gateway
- SEL-3622 Utility-Grade USB Modem
- SEL ICON Integrated Communications Optical Network (for Ethernet virtual synchronous networking [VSN])

**L3 | Access**
- WAN
- Segregates H2M from machine to machine (M2M).
- SEL-2730M Managed 24-Port Ethernet Switch
- SEL-2740S Software-Defined Network Switch
- SEL-3025 Serial Shield®
- SEL-3031 Serial Radio Transceiver (for SCADA)
- SEL-3061 Cellular Router
- SEL-3620 Ethernet Security Gateway
- SEL-3622 Security Gateway
- SEL-3622 Utility-Grade USB Modem
- SEL ICON Integrated Communications Optical Network (for SONET/time distribution)

**L2 | Automation**
- M2M
- Provides baseline and continuously monitors the system.
- SEL-2240 Axion®
- SEL-2401, SEL-2407® Satellite-Synchronized Clocks
- SEL-2468 Satellite-Synchronized Network Clock
- SEL-2730M Managed 24-Port Ethernet Switch
- SEL-2740S Software-Defined Network Switch
- SEL-3025 Serial Shield
- SEL-3025 Serial Shield
- SEL-3620 Ethernet Security Gateway
- SEL ICON Integrated Communications Optical Network (for Ethernet/serial)
- SEL RTAC

**L1 | Protection**
- M2M
- Isolate and clear faults to ensure safety and availability.
- SEL-2032 Communications Processor
- SEL-2440 DPAC Discrete Programmable Automation Controller
- SEL-3025 Serial Shield
- SEL-3610 Port Server
- SEL ICON Integrated Communications Optical Network (for Ethernet/serial)
- SEL Relays

**L0 | Physical**
- Measure and operate for system safety and stability.
- SEL-2240 Axion (Merging Unit)
- SEL-451
- SEL-2240 Axion (Merging Unit)
- SEL-651R Advanced Recloser Control
- SEL-2440 DPAC (Merging Unit)