CyberSecure IMS™

Cyber-Physical Security for the Convergence of IT, OT, and IoT Systems

Global Monitoring System For Unified Cyber-Physical Protection

The heart of the CyberSecure IPS solution is CyberSecure IMS™ (Infrastructure Monitoring System).

CyberSecure IMS™ was created to protect the most vulnerable yet unaddressed areas of the cyber security environment—the physical network infrastructure. IMS™ is an enterprise security solution protecting the government’s most sensitive classified data. As the only DoD accredited software with a Certificate of Networthiness for critical infrastructure protection, it also facilitates site-specific Risk Management Framework (RMF) authorizations. With IMS™, major telecom and data center operators can transform their security paradigm while adding the missing component to their physical infrastructure security plan. Adding IMS™ delivers maximum value, minimizes maintenance and provides sustainable long-term cost of ownership.

Traditional IT security has focused on the upper layers of the OSI framework to prevent network attacks from computer hackers. The industry is quickly recognizing that security must be holistic, protecting the entire OSI stack to mitigate the risks of unauthorized intrusion, data breach and damage. Although the IMS™ system was initially designed to satisfy the Information Assurance (IA) requirements for secure government installations and to meet specific Committee on National Security Systems (CNSSI) 7003 standards, it has grown to encompass multiple owner/operator security objectives.

With customers and deployments across the globe, CyberSecure IMS™ provides a flexible/scalable platform for security across diverse network environments, both legacy and cutting-edge; it is the ideal advanced protection solution wherever a customer is in their security life cycle. As the landscape of data center infrastructure takes shape to make room for IoT, OT and other critical infrastructure platforms, CyberSecure IMS™ is poised to support the increasing demand for data security that accompanies these technologies.

Solution Hightlight

The dynamic nature of IMS™ allows for rapid innovation and scalability presenting virtually unlimited integration capabilities for data analytics, machine learning, AI applications, and algorithms.
CyberSecure IMS™ Key Highlights:

Real-Time Global Visibility

CyberSecure IMS™ via the ‘Rapid Analysis’ dashboard, gives CIOs, CISOs, as well as Physical Security Officers and Network Security specialists the ability to monitor the full-spectrum of critical infrastructure in their environment regardless of the location of the assets to the Security Operations Center. These assets include Outside Plant and Inside Plant components such as cabling, mission critical servers, NEMA enclosures, or any other of the myriad of vulnerabilities common to secure facilities. With our distributed architecture, the security team can monitor facilities and campuses across the globe in seconds from a single easy-to-use console providing a live view of the health and safety of mission critical assets.

Patented Intrusion Analysis Tools

CyberSecure IMS™ gathers unique optical signature information from field devices, analyzes the severity of the disturbance, and also provides event correlation. Patented features include: the Optical Intrusion Warning System™ and Fiber Forensics™ which provide security personnel detailed information necessary to eliminate nuisance alarms and helps security teams make informed decisions regarding appropriate alarm response protocols.

Continuous Diagnostics & Rapid Troubleshooting

Rapid troubleshooting features like our Just Press Play™ (JPP) provides a “DVR-like” capability that significantly reduces the time needed to investigate an outage or incident. The IMS™ software logs and stores every warning or alarm that is triggered allowing the Incident Response team to filter and replay the events on the console viewer. JPP's ability to visualize events and correlate the data is critical to any incident review or post mortem activity. Administrators can quickly determine the underlying cause and immediately begin remediation protocols.
Pioneering Data Center Cyber-Physical Security

In recent years, CyberSecure IMS™ has naturally evolved to apply its protection framework to the entire Data Center environment, referred to as The CyberSecure IPS Data Center Protection solution. This solution requires no electricity for the sensors to operate, which allows extreme flexibility for installations. Cabinets, subfloors, cage walls, cable trays – virtually any space that requires monitoring can be equipped with a sensor. With new integration of RFID tags, our solution provides a level of granular security down to tracking the movement of individual servers and even hard drives.

Our Data Center Protection solution is comprised of our Cyber Sensor Controller and Universal Cyber Sensors™. These versatile sensors are designed to protect critical network components and data center assets when used with the CyberSecure IMS™ software. Each sensor type is specifically designed to solve a set of protection challenges unique to the network operating environment. Depending on the sensor type, it can measure for open/close, change in signal, shift, vibration, strain and temperature. Our universal floor sensor is designed to detect the proximity of an intruder standing or moving within a data center cage or any secure area on a raised data center floor.

▶ Provide alternative to manned security
▶ Comprehensive view of Infrastructure security
▶ Reduce time to recover from fiber cuts
▶ Passive and Powerless sensors

Closing Security Gaps with CyberSecure IPS Cyber Sensors™

A recent example of our commitment to innovation has led to the development of the CyberSecure IPS Manhole Protection System™ (MPS) which monitors access points to critical infrastructure pathways: today a major vulnerability. This solution adds visibility to all types of indoor/outdoor access points such as manholes, handholes, and NEMA enclosures over long distances using zero-power fiber optic sensors. Each sensor can detect Open/Close conditions, fiber loss (dB), fiber bend, as well as provide the ambient temperature at each sensor location. The MPS™ solution offers the highest level of monitoring and protection in the world and is fully integrated with CyberSecure IMS™ to provide immediate dispatching when unauthorized access is detected.
Driving Towards the Convergence of IT, OT and IoT Systems

CyberSecure IMS™ has dynamic API capability for seamless integration with security systems that may exist in customer network environments, providing both northbound and southbound integration capability. The IMS™ software can provide further integration with systems beyond security monitoring to include COTS Enterprise Monitoring Solutions available today. The CyberSecure IPS team of software engineers works with customers to ensure that the IMS™ software blends into their environment for convenience and ease of use.

IMS™ native capabilities are strongly suited for legacy ICS environments to provide OT security for the Power & Utilities market, Oil & Gas, and beyond. With innovation as a core principle, CyberSecure IPS is investing heavily in Research & Development and expanding its portfolio of sensor technology to include IoT. The CyberSecure IMS™ platform is foundational and well positioned for the approaching 5G market coinciding with the development of smart infrastructure. The timely development of security solutions to address these emerging technologies are reflected on the CyberSecure IPS product roadmap.