



MAGAL
SOLUTIONS

THE SMART TERMINAL - IMPROVING SEAPORTS' EFFICIENCY

Operational Challenges

Seaports play a crucial role in connecting global trade and driving economic growth and digital transformation becomes increasingly vital to the continued flow of ships and cargo. Today, seaports and terminals worldwide face numerous security, operations, safety and environmental challenges such as terrorism and smuggling, as well as delays and safety concerns.

Operational challenges such as streamlining operations, reducing delays, and increasing revenue demand viable solutions. It is essential to address these issues in order to capitalize on opportunities and enhance efficiency.

Solution Description

Magal's seaports solutions seamlessly integrate and fuse operational, safety, and security information into a single, comprehensive operational platform. With Fortis X, Magal's advanced C5I platform, seaports gain a full 360-degree view of critical areas such as entrance and exit gates, queues, and vessel, as well as real-time statistics for STS (Ship-to-Shore) cranes, RTGs (Rubber-Tired Gantry cranes), and operational trucks (TUGs) used for container movement between the STS and RTG. This real-time insight provides seaport authorities with essential dashboards and operational information for efficient decision-making, allowing them to identify bottlenecks promptly and optimize operations. Magal's solutions enable seaports to track and measure key performance indicators (KPIs) to improve overall efficiency, enhance security measures, and ensure a solid return on investment (ROI). This integrated solution empowers seaports to drive growth, increase revenues, and achieve a higher level of operational excellence.



Technical Capabilities:

1. **Operational Dashboards:** Real-time visibility into key operational metrics, enabling efficient monitoring and management of seaport operations.
2. **Security Dashboards:** A centralized view of security systems, enabling proactive threat detection and response.
3. **Advanced event Management:** event management capabilities facilitate the tracking and resolution of incidents, ensuring prompt and effective response.
4. **Powerful GIS Engine:** Geographic Information System (GIS) engine enables accurate geospatial visualization and analysis of port infrastructure and assets.
5. **Data Fusion between Subsystems:** Seamless integration and data fusion between subsystems, such as TOS, GOS, and VTS, provide a unified view for better decision-making and operational coordination.
6. **Smart Rule Engine:** An intelligent rule engine automates workflows, triggers alerts, and enables rule-based actions, streamlining operations and enhancing efficiency.
7. **Advanced video Analytics:** Real-time monitoring, object detection, and event recognition, enhancing security and situational awareness.
8. **Predictive Bottleneck Analysis:** Utilizing historical data and advanced analytics, providing predictive insights to identify potential bottlenecks, allowing proactive planning and optimization of port operations.
9. **Scalability:** The solution is designed to scale according to the evolving needs of seaports, accommodating growth and expansion without compromising performance.
10. **Integration with External Systems:** Seamlessly integrating with external systems, such as customs and logistics platforms, ensuring smooth data exchange and operational continuity.
11. **HSE Integrated Modules:** Integrating safety collaboration tools to ensure a safer workplace and compliance with regulatory guidelines and protocols, utilizing unified platforms for monitoring and managing safety hazards and potential environmental threats.

These technical capabilities empower seaports to achieve greater operational efficiency, strengthen security measures, and make data-driven decisions for improved performance and profitability.



Solution Benefits

Magal Solutions presents Fortis-X, C5I, an integrated system designed to enhance seaport operations, security, and safety. By seamlessly integrating Terminal Operating System (TOS), Gate Operating System (GOS), and Vessel Tracking System (VTS), our solution delivers significant benefits for seaports.



Enhanced Operational Efficiency: Consolidated TOS, GOS, and VTS into a centralized platform, streamlining operations and eliminating inefficiencies. This integration enables seaports to handle larger amounts of cargo efficiently, resulting in improved productivity and reduced delays.

- Real-time data flow, collection and fusion
- Efficient, knowledgeable management and decision-making
- Yard, warehouse, and container cross management
- Vessel and trucks turnaround time; traffic flow throughout the terminal



Fortified Security Measures: With the integration of TOS, GOS, and VTS, seaports gain comprehensive situational awareness and control. A unified command and control room ensures enhanced security frameworks, safeguarding against threats like terrorism, smuggling, theft, and piracy.

- Site & perimeter security
- Risk mitigation
- Minimal response-time to alerts
- Violations & incidents investigations



Comprehensive Safety Protocols: Enabling seaports to address safety concerns, such as accidents, fires, and environmental hazards, with unwavering attention. The integrated system enhances safety protocols, mitigating risks and ensuring the well-being of all stakeholders.

- Safe, secure, and sustainable operations
- Recourses allocation
- Personnel efficiency

The integration of TOS, GOS, and VTS within Fortis-X establishes a robust backbone for seaports, facilitating increased operational efficiency, fortified security measures, and rigorous safety protocols. By optimizing processes and providing comprehensive control, our solution empowers seaports to handle larger cargo volumes, resulting in increased revenues. Experience the future of seaport management with Fortis-X, C5I by Magal Solutions and witness the transformative impact on efficiency and revenue growth.