primevision

INTELLIGENCE SUITE

CONNECTING INFRASTRUCTURE AND MANAGING IDENTIFICATION, ENRICHMENT AND SORTING

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Prime Vision's Intelligence Suite is designed to enhance automation and efficiency in logistics, parcel sorting, and processing through smart implementation of innovative technologies. Our solutions utilize advanced algorithms and machine learning in an open, modular and flexible architecture to streamline the processing of mail, parcels, luggage or any other to-be-sorted item, significantly reduce manual intervention, and achieve higher accuracy in logistics operations.

By integrating intelligent enrichment- and decision-making capabilities into your infrastructure, the Prime Vision Intelligence Suite transforms how (and how many) items are recognized, identified, and tracked throughout the entire supply chain. This not only optimizes operational workflows but also ensures seamless communication between systems, enabling organizations to respond swiftly to changing demands.

OUR INTELLIGENCE SOLUTIONS

Smart Flow Manager
Integration with customer systems and orchestration of coding flow

Smart Sorting Platform
Dynamic sorting decision system

Smart Data Manager
Import, manage and distribute address data and sorting plans

Smart Analytics
In depth insights into all sorting processes

Smart Coding
Video Coding

Smart Store
Parcel Image Database

Smart Station
Manual camera workstation

Prime OT Cloud
Hosting

Prime OT Security
Security

Prime Connect
Integration

SMART FLOW MANAGER
Seamless connections for a smarter future

The Smart Flow Manager (SFM) is a dynamic and flexible event-driven workflow solution designed to seamlessly connect sorting-related devices—such as cameras, sorters, and luggage belts—to sorting decision systems and other related software or hardware systems. SFM automates the identification process, enabling these systems to operate more efficiently.

HIGHLY CONFIGURABLE AND FLEXIBLE ARCHITECTURE

With its flexibility, configurability, and open architecture, SFM can integrate with any existing system, whether it's already in place or part of future infrastructure. SFM is adaptable to various configurations, ranging from full, mission-critical solutions that demand high availability, scalability, and robust security management to lighter versions with a minimal footprint.

Implementing SFM brings several key advantages, such as enhanced operational efficiency and a reduction in manpower needs. Operators also benefit from improved service level compliance and stronger quality control measures.

READY FOR CLOUD AND EDGE COMPUTING

Built using modern architectural principles and the latest security methodologies, SFM is cloud/edge computing (HCI) ready and compatible with hybrid cloud environments. Additionally, it features a web-based process monitor (WBPM) accessible from any point in your network, offering extensive statistics and reporting functions.

SFM is fully compatible with Prime Vision products, including Smart Coding, Smart Station, Smart Sorting Platform, Smart Data Manager, Smart Store (image archive), Smart Analytics, Flow Projector, Robotic Sorting, and Computer Vision technology.

KEY BENEFITS:

- Increased operational efficiency
- Reduced manpower requirements
- Improved service level compliance
- High configurability
- Real-time monitoring and reporting
- Seamless integration with third party solutions and Prime Vision products

SMART SORTING PLATFORM
Your solution for intelligent sorting

The Smart Sorting Platform (SSP) is a cloud-native sorting solution to steer a myriad of sorting devices at national scale. Coming from localized sorting decision-making, post and parcel companies can benefit from centralized intelligence and flexibility while reducing their reliance on specialized third-party support for making changes on each sorting device, a costly and effortful process.

ADVANCED LOGIC WITH THE SIMPLEST DEVICES

Innovation has brought many new devices into the sorting center, such as specialized hand scanners, voice-assisted systems, and specialized printers. Excelling at their task but lacking flexibility and extensibility, SSP helps post and parcel companies centralize sorting logic, allowing for complex rule execution, scheduled changes, and dynamic exceptions to be carried out by otherwise "simple" devices.

TRUE DYNAMIC SORTING

SSP enables dynamic sorting capabilities regardless of the sorting device in use. This includes the flexibility to accommodate last-minute address changes, adapt to different working shifts, utilize the latest address lists, and implement special sorting rules as needed. SSP also allows for easy notification configuration, making sure that your backend systems, like customer Apps or SMS systems, can receive parcel updates quickly and accurately. With SSP, your sorting operations can remain agile, responsive, and customer-focused.

ENABLE PARCEL AND LETTERS SORTING CONSOLIDATION

SSP offers a unique opportunity to consolidate mail and parcel sorting into a single platform, significantly reducing the footprint and complexity of your delivery backend services. The Sorting Platform can scale up and down accordingly to shifting customer behaviors, keeping costs at bay when demand slows down.

KEY BENEFITS:

- Maximized hardware utilization by centralizing logic
- Granular control over processing rules
- Dynamic sorting capabilities to adjust to dynamic shifts and parcel redirections
- Consolidated letters and parcels sorting operations
- Effortless notification confguration

SMART DATA MANAGER
Efficient data management for smarter sorting

Managing data efficiently is the cornerstone of modern logistics and sorting operations. The Smart Data Manager (SDM) is a comprehensive solution for importing, editing, and distributing the data essential for coding and sorting processes.

STREAMLINED DATA HANDLING

SDM simplifies managing critical data by efficiently handling essential datasets like address databases, product definitions, and configuration data. It also supports non-sorting data needed by other systems, ensuring seamless integration. With automated import and export functions, keeping data up-to-date is easy, reducing manual effort and errors.

CUSTOMIZABLE SORT PLANS

Creating customized sort plans has never been easier. Operators can define sorting equipment and configure products to meet specific needs. Beyond traditional sorting, SDM handles items like mail, luggage, and warehouse goods.

REAL-TIME SORTING INTEGRATION

SDM works hand-in-hand with the Smart Sorting Platform (SSP) to enable real-time sorting integration. Sorting machines receive precise and immediate instructions, ensuring fast, accurate decisions that maximize throughput and processing efficiency. This synergy between SDM and SSP empowers businesses to maintain high-performance sorting operations even during peak periods.

EXTENSIBLE AND VERSATILE

The versatility of SDM goes beyond managing sorting data. It is designed to handle various data types and formats, enabling integration with external systems such as reference databases, barcode lists, or other specialized data repositories.

KEY BENEFITS:

- Central data management platform
- Efficient data management
- Supports many data types/formats
- Flexible sort planning
- Real-time integration with sorting decision system(s)
- Automated and extensible

SMART ANALYTICS
Optimizing postal operations with data-driven insights

Smart Analytics is a cloud-native analytics solution designed to improve postal operations by leveraging data from Prime Vision's suite of products, including the Smart Data Manager, Smart Sorting Platform, and Smart Flow Manager. With advanced analytical capabilities, Smart Analytics offers postal operators a comprehensive view of their sorting operations and helps develop optimal configuration strategies.

DESCRIPTIVE ANALYTICS: GAINING INSIGHTS INTO OPERATIONAL PERFORMANCE

By collecting and analyzing data from the Smart Sorting Platform and Smart Flow Manager, Smart Analytics provides deep insights into throughput and efficiency. It allows operators to create flexible dashboards to filter and visualize sorting and coding data, enhancing their understanding of operational performance.

PREDICTIVE ANALYTICS: PREPARING FOR THE FUTURE

Through predictive analytics, Smart Analytics uses machine learning to forecast future sorting and coding behaviors. This feature helps postal planners anticipate necessary resources like delivery vehicles, predict bottlenecks, and develop preemptive sorting strategies, ensuring preparedness for fluctuating volumes.

SORT PLAN SIMULATION: TESTING DRAFT SORTING PLANS

Smart Analytics includes a sort plan simulation feature that enables planners to test draft sorting plans created in the Smart Data Manager. By simulating the impact of these plans on the sorting network using representative or predicted volume data, planners can assess potential outcomes and avoid disruptions, optimizing network performance and reliability.

AUTOMATIC CHUTE MAPPING: ENHANCING SORTING EFFICIENCY

Additionally, Smart Analytics features automatic chute mapping to enhance sorting efficiency. Using mathematical modeling, it suggests the ideal product-to-outlet mapping, optimizing for even utilization and reduced walking distance.

KEY BENEFITS:

- Enhanced efficiency
- Data-driven decisions
- Optimized sort plans
- Scalable and flexible
- Rapid ROI

SMART CODING
Exceptional video coding at your fingertips

Prime Vision's Smart Coding is an advanced graphical user interface (GUI) that allows operators to review and code mail piece images with ease. This system goes beyond simple image display, offering features such as smart-keying, which predicts the input operators are likely to make after just a few characters, improving speed and accuracy. Built-in quality control ensures that inputs align with your business logic, reducing errors and maintaining high data integrity. Additionally, Smart Coding tracks operator performance and includes integrated training tools, helping staff improve and stay aligned with best practices.

INTUITIVE USER INTERFACE FOR STREAMLINED SORTING

The GUI is designed for clarity, displaying only the most relevant information for the task. For complex tasks like multi-side parcel sorting, it can show multiple images at once, with smart algorithms that automatically locate labels and adjust the display for optimal interaction, making the sorting process faster and more intuitive.
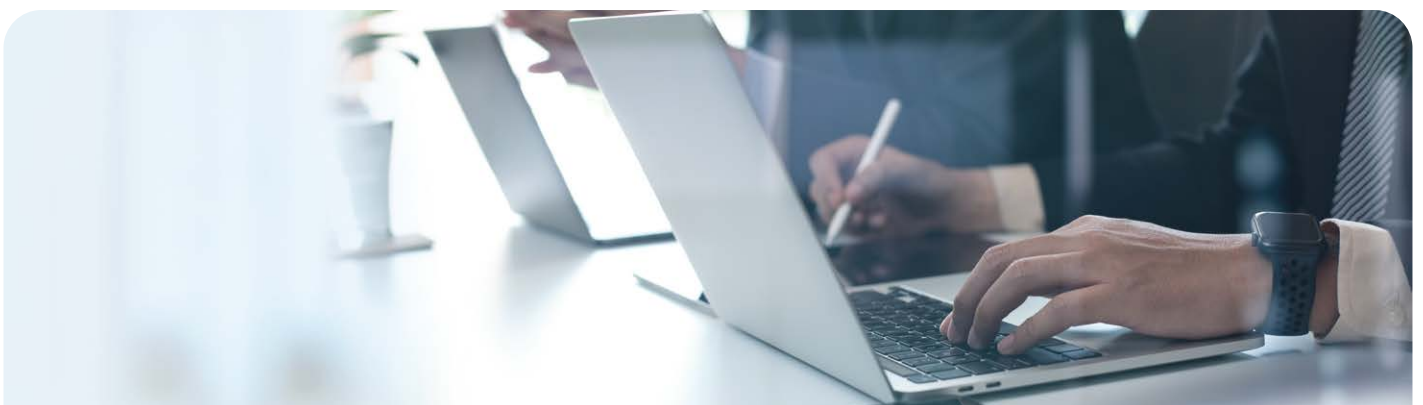
GLOBAL FLEXIBILITY

Smart Coding is built to be flexible, supporting various configurations, from machine-side terminals to centralized coding rooms, remote setups, cloud-based systems, and offshore options. Deployed globally with hundreds of installations, Smart Coding ensures consistent speed and accuracy across diverse environments. The system also includes robust validation tools and security features to protect sensitive data, making it an ideal choice for businesses looking to scale their operations while maintaining high standards.

HIGHLY ADAPTABLE

Smart Coding is not only designed to handle automated identification rejects but also supports more complex coding tasks, such as managing sensitive mail streams (e.g., registered items), special services, international mail, and airwaybills. Its adaptability makes it a versatile solution for various types of mail processing needs.

KEY BENEFITS:

- Modular and scalable architecture
- Cloud or local deployment
- Priority-based task management
- Optimized performance
- Web-based client-server environment
- Flexible integration

SMART STORE
A new way of grasping your network

Prime Vision's Smart Store is an innovative hybrid image archive system designed to maximize operational efficiency by connecting multiple sorting centers and centralizing image processing. With rapid image retrieval (~100 ms), Smart Store empowers various departments to seamlessly integrate image data into their workflows, improving decision-making and enhancing operational effectiveness.
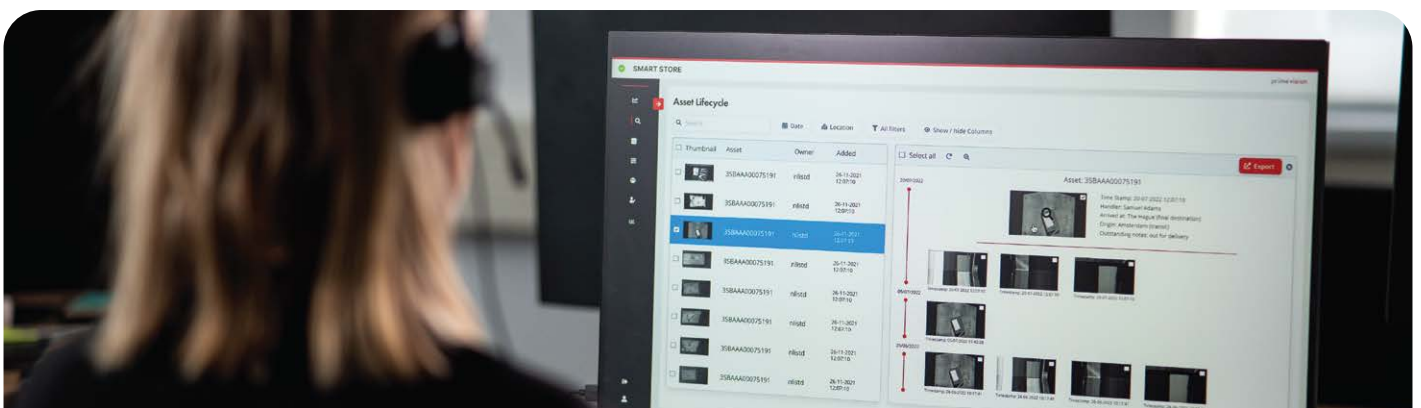
COST-EFFECTIVE AND EFFICIENT PROCESSING

To minimize cloud hosting costs, Smart Store processes images before uploading, ensuring that data is available organization-wide without sacrificing efficiency. The platform's flexible architecture supports the integration of third-party images, making it adaptable to a wide range of systems and use cases. Customizable retention times further enable businesses to manage image data according to their specific needs, ensuring cost-effective data storage. Additionally, Smart Store is equipped with robust security features, including fine-grained access controls, ensuring that only relevant users can access sensitive data while maintaining security and confidentiality across the network.

THE PERFECT SOLUTION FOR LINKING INTERNAL TEAMS AND PARTNER NETWORKS

In today's fast-paced and competitive delivery landscape, where parcel volumes are rising and customer expectations continue to grow, Smart Store plays a pivotal role in balancing customer satisfaction with operational excellence. The platform allows postal organizations to access detailed image evidence for every parcel, which is critical in addressing issues like claims handling, parcel damage, and flow misclassification. By providing transparency and accuracy, Smart Store helps organizations resolve disputes swiftly, improve operational efficiencies, and enhance the customer experience.

KEY BENEFITS:

- Centralized image archive
- Rapid image access
- Cost-efficient processing
- Third-party integration
- Fine-grained access control
- Supports claims and customer inquiries

SMART STATION
Streamlined manual coding and processing solution

The Smart Station is designed to optimize the manual coding, sorting, and processing of mail pieces and parcels that cannot be processed through standard barcode scanning, OCR, or coding methods. This solution is especially beneficial for handling non-machinable parcels, such as bulky goods.

USER-FRIENDLY INTERFACE

The system operates through an intuitive web application that integrates with essential equipment, including label printers, barcode scanners, scales, and cameras, all connected to the workstation. This user-friendly interface ensures smooth operation and efficient workflow for operators. The Smart Station workstation is adjustable for ergonomic comfort. The desk can also be fitted with a bottom camera for capturing images of parcels from various angles, or a top camera for greater flexibility in processing.

FLEXIBLE CODING MODES

Operators can log in to the Smart Station and choose from various coding modes, such as barcode scanning, manual entry, and address coding. It uses the same Address API as Smart Coding for consistent data handling and supports real-time address validation, offering suggestions that update as the user types, ensuring accuracy.

For enhanced efficiency, the Smart Station can be integrated with barcode scanners, dimensioning systems, and scales to streamline the coding process for non-machinable items. This integration optimizes workflows and reduces manual errors.

IMAGE CAPTURE FOR ENHANCED OCR PERFORMANCE

The workstation is equipped with a Manual Image Lift System, which captures high-quality images to improve OCR performance, particularly for non-machinable parcels. This feature ensures greater accuracy in processing complex parcels that require additional attention.

KEY BENEFITS:

- Streamlined operations
- Enhanced flexibility
- Cost-effective integration
- Improved accuracy
- Scalable solution
- User-centric design

PRIME OT CLOUD
Hybrid cloud solution for modern infrastructure challenges

As software systems evolve and become more complex, managing and securing infrastructure—especially when balancing both modern and legacy systems—poses a significant challenge for many organizations. The need for a seamless integration of various technologies, along with heightened security measures, is critical for maintaining operational efficiency and business continuity.

SEAMLESS INTEGRATION AND ENHANCED PERFORMANCE

Prime Vision's OT Cloud uses Hyperconverged Infrastructure (HCI) to integrate on-premises servers into a private cloud, enhancing resiliency, redundancy, speed, and efficiency. By maximizing existing infrastructure, OT Cloud improves system performance while offering scalability to the public cloud as computing needs grow. This flexible solution ensures your operations can meet both current and future demands, supporting business growth and technological progress.

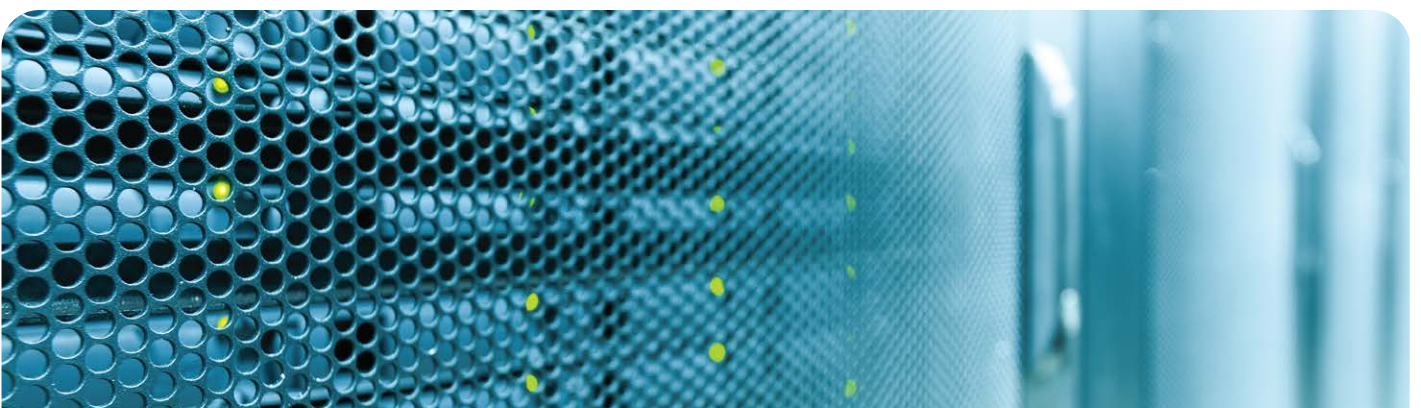## TRUSTED BY LEADING POSTAL OPERATORS

Prime OT Cloud is a trusted hybrid solution for leading postal operators, addressing key concerns like data security and privacy compliance. By centralizing servers, it enhances security and efficiency while providing automatic failover to keep operations online during disruptions. This reliability is crucial for businesses requiring 24/7 service.

GDPR COMPLIANCE AND FULL CONTROL

Prime OT Cloud ensures GDPR compliance by keeping sensitive data on-premises, only utilizing the public cloud when necessary. This method guarantees secure data storage, allowing organizations to maintain full control over their infrastructure. By enabling businesses to manage systems according to specific security protocols and operational needs, Prime OT Cloud provides a high-performing, compliant cloud environment without compromising on control or security.

KEY BENEFITS:

- Increased resiliency
- Enhanced scalability
- Improved security
- Cost efficiency
- Compliance assurance

PRIME OT SECURITY
Safeguarding your operations with confidence

At Prime Vision, security is at the core of everything we do. We understand that robust security is crucial for the success of your operations, which is why our solutions are designed with an integrated approach to meet the highest security standards while addressing the specific needs of your business. Our security framework is built around three essential domains: Infrastructure, Pipeline, and Workload, ensuring comprehensive protection at every level of operation.

INFRASTRUCTURE LAYER

The foundation of our security strategy lies in the protection of the hardware and environments that support our software solutions. We focus on securing network access, cloud provider access, and ensuring data encryption using best-in-class techniques. With extensive experience in managing complex, high-availability infrastructure challenges, our solutions deliver a secure and reliable backbone for your operations, reducing the risk of potential vulnerabilities and ensuring business continuity.

PIPELINE LAYER

Our security measures extend to every step of the development process. We implement rigorous vulnerability scanning across all system levels, including code, container images, functions, and infrastructure as code. By integrating security quality gates into our development process, we ensure that only secure, vetted applications make it to production, minimizing risks before they can impact your operational environment.

WORKLOAD LAYER

In the production environment, we continuously monitor services to safeguard against runtime threats such as ransomware and advanced malware. This layer includes strong authentication and authorization mechanisms, automatic access token refreshes, and regular OS patching. Our proactive monitoring and checks not only optimize system performance but also enhance resilience against emerging and evolving cyber threats, ensuring that your operations remain secure and efficient.

KEY BENEFITS:

- Comprehensive protection
- Proactive risk management
- Enhanced compliance
- Operational efficiency
- Expert support

PRIME CONNECT
Leave local network maintenance in good hands

Prime Connect is the flexible Managed LAN solution designed to meet the needs of operations of all sizes, from local retail stores to large sorting centers. By taking on the responsibility of local network management, Prime Connect helps businesses of all kinds maintain seamless, secure, and efficient networks without diverting internal resources.

STREAMLINED LOCAL NETWORK MANAGEMENT

Prime Connect streamlines local network management, relieving your IT staff from time-consuming tasks. Prime Vision will set up, continuously monitor, and update essential elements such as secured firewalls, connections, VPN tunnels, and local integrations. With over 30 years of experience as a Systems Integrator for medium and large postal operators, Prime Vision brings a proven track record of maintaining and optimizing critical operational technology (OT) systems. This ensures that your network remains secure, up-to-date, and fully functional, supporting your operations without disruption.

CUSTOMIZED DESIGN FOR RELIABILITY AND SECURITY

Our network specialists will design your Managed Local Area Network (LAN) with a focus on reliability, security, and scalability. We incorporate comprehensive device management, switches, and firewalls to create a robust and secure infrastructure that meets your specific business needs. By closely monitoring essential performance metrics such as CPU utilization, memory utilization, storage use, session use, device temperature, and interface utilization, we proactively address potential issues before they impact operations. This hands-on approach ensures that your network remains optimized for performance, giving you peace of mind while keeping your systems running smoothly.

KEY BENEFITS:

- Expert Management
- Enhanced Security
- Proactive Monitoring
- Scalability
- Improved Reliability
- Cost-Effective

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smart vision, smart flow

ABOUT Prime Vision

Prime Vision is a world-wide market leader in robotics and computer vision integration for e-commerce and logistics.

As award winning company, Prime Vision designs and integrates solutions using the latest in recognition, identification and robotic techniques for optimizing the automation of sorting processes.

The company's headquarters are located in Delft, The Netherlands where more than 170 experts offer extensive market and domain knowledge to digital businesses around the globe.

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