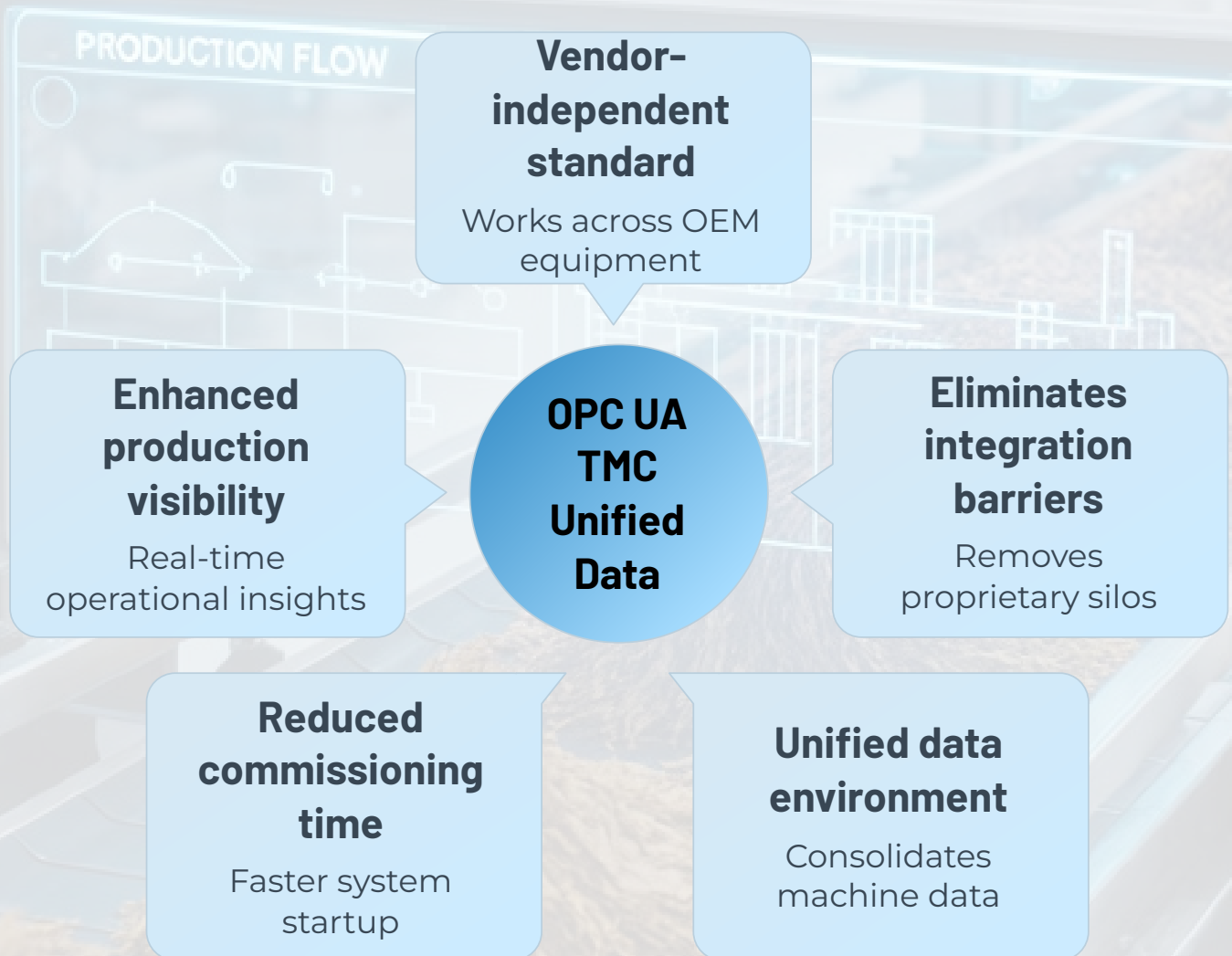


OPC UA TMC: Standardized Tobacco Machine Communication

In today's fragmented tobacco production environments, machine data integration remains a significant challenge. OPC UA TMC delivers a vendor-independent communication standard specifically designed for tobacco manufacturing equipment. This standardized solution eliminates integration barriers between diverse OEM equipment, creating a unified data environment that reduces commissioning time and enhances production visibility.



Transforming Fragmented Systems Into Unified Production



The Challenge

Tobacco manufacturing facilities typically operate with equipment from multiple OEMs, each using proprietary communication protocols and data models. This fragmentation creates complex integration challenges, extends commissioning timelines, and limits production visibility.



Our Solution

OPC UA TMC implements a standardized data model across all tobacco production equipment. By leveraging the open OPC UA standard with tobacco-specific TMC compliance, we create a unified communication layer that bridges proprietary systems into a cohesive whole.

Key Benefits



Vendor-Neutral Integration

Connect equipment from any manufacturer without proprietary barriers or custom interface development.



Accelerated Commissioning

Reduce integration time by up to 70% with pre-configured data models and standardized interfaces.



Standardized Data & Alarms

Access consistent machine data points, alarms, and status notifications across all equipment.



Enterprise-Grade Security

Implement OPC UA's robust security architecture with authentication, encryption, and access control.



Scalable Architecture

Start with a single machine line and expand to plant-wide implementation without redesign.



MES/SCADA Compatibility

Seamlessly integrate with existing enterprise systems through standard OPC UA interfaces.

Implementation & Technical Architecture

Production Areas Covered

→ Primary Processing

Tobacco preparation, cutting, expansion and makers/rod production equipment.

→ Secondary Processing

Filter attachment, packaging machines and quality inspection systems.

→ End-of-Line Systems

Cartoning, case packing, palletizing and material handling equipment.

→ Auxiliary Systems

Quality monitoring, energy management and environmental control equipment.

How It Works ?

System Integration

IoT Server Processing

Data Standardization (TMC Mapping)

Secure Transfer & Publishing

Machine Connection

OPC UA TMC creates a standardized communication layer that transforms proprietary machine data into a consistent TMC-compliant object model. This unified data structure enables seamless integration with enterprise systems while maintaining vendor independence and security.



Machine Data Collection

Native integration with OPC UA-enabled machines or adapters for legacy equipment.



TMC Standardization

Transformation into TMC-compliant object model with consistent naming and structure.



Enterprise Integration

Secure connection to MES, SCADA, ERP and analytics platforms via standard interfaces.

Enterprise Integration & Technical Support

System Compatibility

OPC UA TMC seamlessly integrates with your existing technology stack through standard interfaces and protocols, eliminating complex integration projects.

Manufacturing Execution Systems (MES)

Standardized production data exchange with leading MES platforms for real-time performance monitoring and production scheduling.

SCADA & Visualization

Unified machine data representation for comprehensive monitoring dashboards and control systems with consistent naming conventions.

ERP & Business Systems

Structured production data flow to enterprise systems for accurate resource planning and business analytics.

Data Lakes & Analytics

Standardized data export for advanced analytics, machine learning and predictive maintenance applications.



Technical Expertise

Backed by Siskon's industrial automation expertise and TÜBİTAK-funded R&D, OPC UA TMC represents the cutting edge in tobacco production standardization.

Frequently Asked Questions

What is TMC?

TMC (Tobacco Machine Communication) is an industry standard defining data models and communication protocols specifically for tobacco manufacturing equipment.

How is security ensured?

OPC UA TMC implements certificate-based authentication, encryption, and access control while maintaining complete network segmentation between OT and IT environments.

How does vendor independence work?

The solution implements adapters for each machine type, transforming proprietary data into the standardized TMC model regardless of manufacturer.

Contact Us For A Demo

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