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# SINEMA Server V13 SP2

## Making Your Network Transparent

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# Increasing Relevance of Industrial Network Monitoring

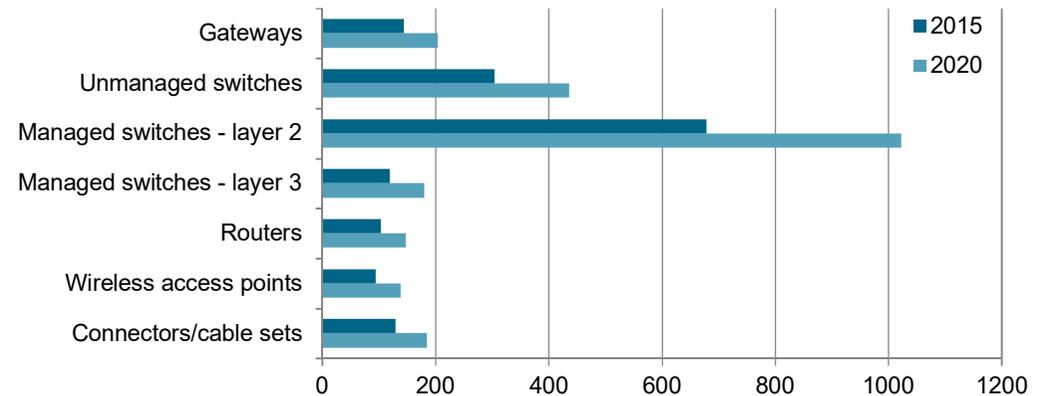
## Studies prove:

- World market for Industrial Ethernet networks grows continually
- Number of PROFINET nodes rising
- Increasing number of managed devices
- Growing amount of devices with a small size (fewer port count of each device)

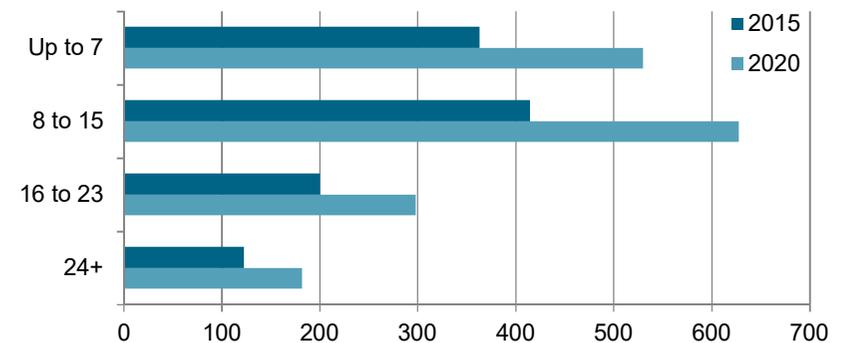
## This leads to:

- Size of networks will continue to increase
  - Complexity within the network will continue to grow
- **This results in an increasing demand for network management solutions**

Products by revenue



Port count by revenue of all switches



Source: IHS Technology, *Industrial Ethernet Infrastructure Components Report – 2015 and 2016*

# Portfolio Positioning

Part of Siemens' integrated network management system

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HMI

- HMI SCADA systems
- DCS systems
- MES systems



Network management system

- **SINEMA Server**
- RUGGEDCOM NMS



Infrastructure

- SCALANCE X/W/M/S
- Products with SNMP capability
- RUGGEDCOM



End devices

- Field devices
- PROFINET infrastructure



# Top-Highlights SINEMA Server

## Maximum transparency for your industrial network

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### Graphical representation

- Topological recognition and representation of the network
- Integration into HMI / SCADA systems possible



### Validation of network parameters

- Repeatedly check and document the essential characteristics of the network



### Automatic Documentation

- Permanent inventory and documentation of all network users



### Management

- Device configuration via CLI
- Firmware management
- Monitoring and management centrally and around the clock



### Monitoring and diagnostics

- SNMP, PROFINET and SIMATIC mechanisms are being used
- Evaluation and presentation of diagnostic conditions

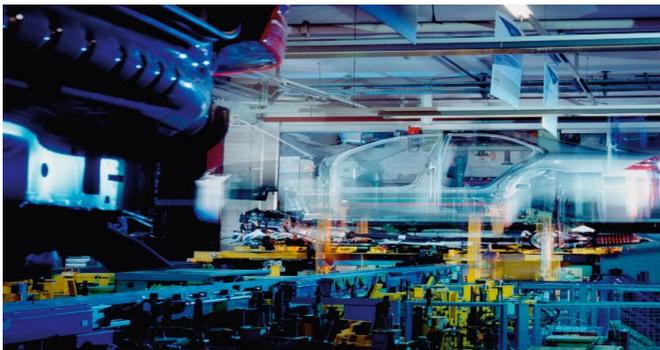


## Typical application fields

SINEMA Server is particularly versatile

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### Target sectors and applications



#### Networks in factory automation

- **Automotive industry**  
Networks with changing topologies and PROFINET
- **Machine industry**  
Easy validation of network parameters for documentation purposes



#### Networks in the process industry

- **Food and beverage industry**  
Integration of the SINEMA Server interface into WinCC- & PCS7 systems
- **Pharma and chemical industry**  
Redundant networks and monitoring of S7-300/400



#### Networks in other industries

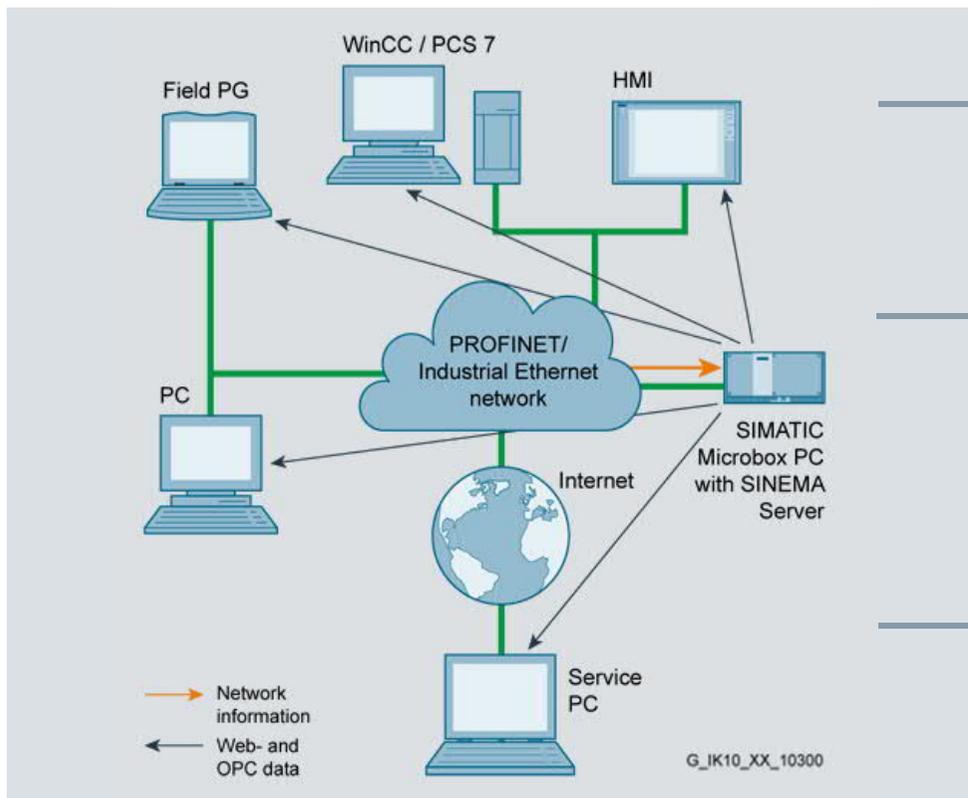
- **Power plants**  
Monitoring of SCALANCE and RUGGEDCOM components
- **Tunnels and mining**  
Monitoring of extended network structures

# SINEMA Server improves the network efficiency

## Easy integration and monitoring of networks

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### System- / Value added aspects



#### Comprehensive network management

- A large number of nodes can be centrally managed via SINEMA Server

#### Transparent diagnostics

- Maximum transparency in industrial networks through automatic topology and comprehensive diagnostic functions

#### Openness and flexibility

- Integration of products from different manufacturers
- Easy access to diagnostic data due to web-based architecture
- Diagnostic data made available via OPC-UA server
- Wide range of adjustment options for network monitoring

# SINEMA Server V13 SP2

## Customer benefits

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### Characteristic / function



Inventory and documentation of all network nodes



Topological presentation of the network



Evaluation and display of diagnostic status information



Creation and display of statistical information for definable periods



Validation of network parameters



Configuration of devices by CLI and firmware management

### Customer benefits

- ▶ Up-to-date documentation at central location and at all times
- ▶ Structured representation makes it easier to determine the current network status
- ▶ Minimizing plant downtimes
- ▶ Fast and easy check of the network status over longer time periods
- ▶ Fast detection of changes to device configurations
- ▶ Update and configuration of network components from central location

## Network monitoring for power plants

SINEMA Server as part of a sustainable energy concept

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SINEMA Server improves the availability of the system by automatically monitoring the network

Customer:

**Combined heat and power plant  
Aubrugg** (Switzerland)

Industry:

**Power generation**

### Advantages for the customer:

- Easy and automatic inventory of more than 100 switches (including topology generation)
- Fault avoidance due to automatic network monitoring improves the availability of the system and thus the security to supply

# SINEMA Server V13 SP2

## Changelog V13 SP1 -> V13 SP2

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### Network search



- Device profiles updated

### Monitoring



- Monitoring of POF power budget values depending on cable length
- **Global activation of the port statistics**
- Custom OIDs can be monitored with "not equal"
- Improved handling of device status within overall status groups
- Monitoring of custom OIDs in binary format

### Topology



- **Remember connections (use case: tool changer)**

### Device configuration



- HSPs of supported devices updated
- Adding of new firmware files improved
- **CLI scripts with dynamic tags for IP, MAC and device names (\$i, \$m, \$n)**
- Error check of executed CLI scripts based on error expressions
- **FW download for SCALANCE M and SCALANCE S615**

### PROFINET



- **Automatic detection of tool changers (DCP-Hello)**
- **PROFINET standard diagnostics on module / submodule level**
- **PROFINET channel diagnostics on channel level**
- Import of PROFINET GSD files as source for diagnostic texts

### Validation



- Check of duplicate IP, MAC, PROFINET names
- **Export of topology during validation process**
- FW comparison (whitelist) based on 1-4 digits (e.g. V.5.0.1011)

### System



- **ESXi 6.0**
- Scheduled database cleanup
- Detailed server status information in the SINEMA Server Monitor

### Server overview



- Server trend accessible via URL

## Further information

SINEMA Server improves the scalability, performance and transparency of your network

➤ See for yourself!

More information about SINEMA Server on our website

[SINEMA Server Online](#)

Datasheets and other technical information can be found here

[Industry Service & Support](#)



Thank you for your attention!

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