

Phoenix Contact and Radiflow Joint Solution

Industrial Switching Platform with Integrated Radiflow iSID Sensor for Advanced OT Network Visibility and Security



Overview

As industrial and critical-infrastructure networks continue to converge with enterprise IT systems, operators face increasing cybersecurity risks while maintaining strict availability and safety requirements. Mission-critical OT environments—such as power utilities, substations, oil and gas facilities, water treatment plants, and transportation systems—require security solutions that are purpose-built for industrial protocols, deterministic traffic, and harsh operating conditions.

Phoenix Contact and Radiflow have established a technology partnership to address these challenges by integrating the **Radiflow iSID passive network sensor** directly onto the **Phoenix Contact EP Series Raptor multi-service platform**. This joint solution enables advanced OT network visibility and threat detection while reducing the need for additional security appliances at the edge.

By combining Phoenix Contact's rugged, substation-grade switching platform with Radiflow's deep industrial protocol analysis, asset owners gain a consolidated, high-performance solution for secure, resilient OT network operations.

Benefits	<ul style="list-style-type: none">• Simplified deployment of Radiflow iSID sensors in ICS/OT environments using a single hardened platform.• Reduced hardware footprint by consolidating networking and security monitoring functions.• Improved visibility into industrial protocols, assets, and communications behavior.• Passive monitoring with no impact to real-time control traffic.• Edge-based architecture well suited for remote, space-constrained, and harsh environments.
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Solution

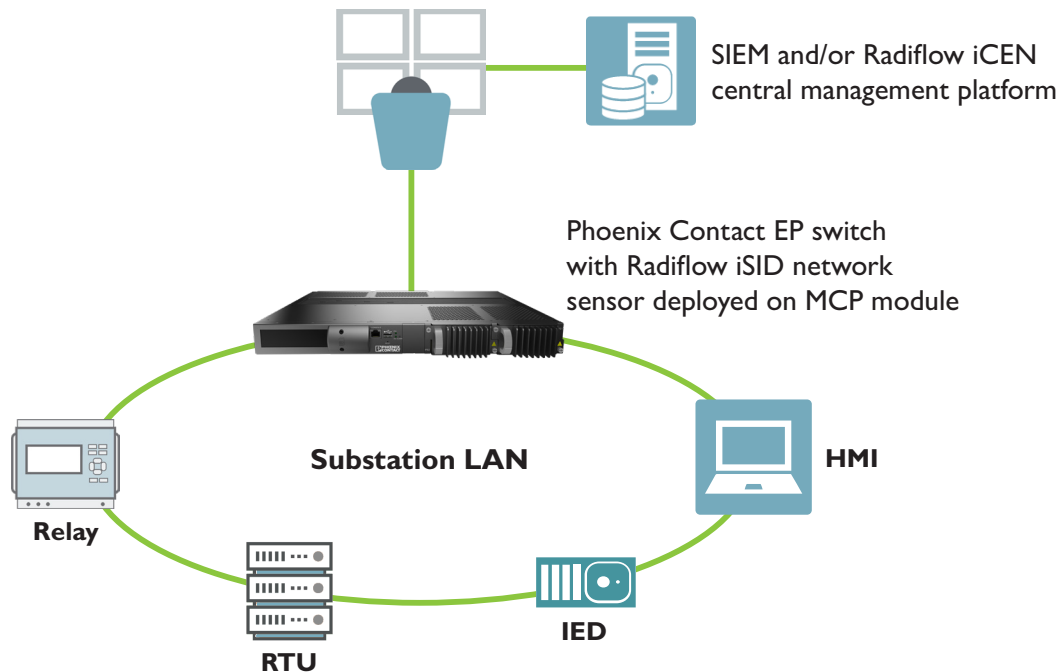
The **Phoenix Contact EP Series Raptor switch** is an intelligent, cybersecure hardware platform delivering up to **64 Gb/s full line-rate performance**, with support for **up to 4 × 10 Gb/s and 24 × 1 Gb/s ports**. The platform runs a feature-rich embedded operating system supporting advanced Layer 2 and Layer 3 networking, routing, redundancy, and security features.

Raptor's modular architecture—with field-replaceable modules, redundant hot-swappable power supplies, and support for third-party software applications—makes it an ideal foundation for converged OT solutions. By hosting the **Radiflow iSID sensor** directly on the Raptor platform, operators can deploy passive OT security monitoring without adding separate appliances, mirror switches, or external compute.



The EP Series is designed for extreme industrial conditions and meets stringent standards such as **IEC 61850-3** and **IEEE 1613**, making it well suited for substations and other critical-infrastructure environments where reliability and longevity are paramount.

Architecture Overview



The integrated architecture consists of:

- **Radiflow iSID Sensor** running as an embedded application on the Phoenix Contact Raptor platform
- Passive monitoring of east-west and north-south OT network traffic directly from the switching fabric
- Secure communication from the iSID sensor to the **Radiflow iCEN Central Management Platform**
- Centralized analysis, visualization, alerting, and policy enforcement via Radiflow management components

This architecture minimizes deployment complexity while enabling deep, protocol-aware visibility at the network edge.

Radiflow iSID Platform Capabilities

OT Asset Discovery and Visibility

Radiflow iSID provides continuous, passive discovery of OT assets, identifying devices, roles, firmware versions, and communication patterns across industrial protocols. This enables asset owners to maintain an accurate, real-time inventory without active scanning or operational risk.

Industrial Protocol Analysis

The iSID sensor performs deep packet inspection of industrial protocols such as IEC 61850, DNP3, Modbus, and others, allowing operators to understand normal behavior and detect deviations that may indicate misconfiguration, faults, or cyber threats.

Threat Detection and Anomaly Monitoring

By establishing behavioral baselines for OT communications, Radiflow iSID detects anomalous traffic patterns, unauthorized devices, and suspicious activity that could signal cyber incidents or operational issues.

Secure and Passive Operation

All monitoring is performed passively, ensuring there is no impact on control system performance, timing, or availability—an essential requirement for mission-critical OT environments.

Advantages of the Integrated Phoenix Contact and Radiflow Solution:

- Converged networking and security monitoring on a single hardened platform
- Reduced deployment and maintenance costs through appliance consolidation
- Improved OT visibility without introducing active probes or latency
- Scalable edge-based architecture for distributed industrial environments
- Enhanced cyber resilience for critical infrastructure and substation networks




Performance

The Phoenix Contact EP Series Raptor platform provides full line-rate switching performance while supporting the embedded Radiflow iSID sensor without impacting network throughput. Passive monitoring is performed efficiently at the edge, enabling real-time visibility even in high-traffic industrial networks.

(Detailed performance metrics available upon request.)

Related Products



Chassis	Description	Designation	Item No.
	FL SWITCH EP7400 Series Chassis. IEC 61850-3 / IEEE 1613, Layer 2/3 Switch, -40°C to +85°C Operating Range. Supports up to 28 ports total.	FL SWITCH EP7428R-L3F1	1144353
	FL SWITCH EP7400 Series Chassis. IEC 61850-3 / IEEE 1613, Layer 2/3 Switch, -40°C to +85°C Operating Range. Supports up to 24-ports PoE, 28 ports total.	FL SWITCH EP7428R-L3F1P	1539668
Chassis	Description	Designation	Item No.
	FL SWITCH EP7500 Series Chassis Security enabled. IEC 61850-3 / IEEE 1613, Layer 2/3 Switch, -40°C to +85°C Operating Range. Supports up to 28 ports total.	FL SWITCH EP7528R-L3F1	1539667
MCP Computing Module	Description	Designation	Item No.
	MCP Computing Module , Ubuntu, 256GB storage	FL SWITCH EP7400-MCP-L-256GB	1539661
	MCP Computing Module , Ubuntu, 512GB storage	FL SWITCH EP7400-MCP-L-512GB	1539663
	MCP Computing Module , Ubuntu, 1TB storage	FL SWITCH EP7400-MCP-L-1TB	1539665
	MCP Computing Module , Ubuntu, 2TB storage	FL SWITCH EP7400-MCP-L-2TB	1539666

Radiflow

Product	Description	Designation	Item No.
Radiflow	iSID Sensor Software	---	---
	iCEN Central Management Platform	---	---

About Radiflow

Radiflow is a leading provider of OT cybersecurity and visibility solutions for critical infrastructure and industrial networks. Its platform is designed specifically for the unique requirements of ICS and OT environments, delivering deep protocol awareness, passive monitoring, and actionable insights to protect essential operations. Learn more at www.radiflow.com.

