

Configuring Remote Ports on Industrial Switches



Article Overview

Remote ports on industrial switches should be configured with proper port types, VLANs, and device-specific roles to ensure traffic isolation, bandwidth management, and network reliability.

Understanding Port Types and Roles

Industrial switches often support multiple port types:

- UNI (User Network Interface): Ports for end devices; default state is administratively down to prevent unauthorized access until configured .
- ENI (Enhanced Network Interface): Similar to UNI but with additional features for industrial traffic; can be assigned to community VLANs for controlled communication .
- NNI (Network-to-Network Interface): Ports for uplinks or inter-switch connections; default state is administratively up to allow remote access during initial setup . Ports can be reconfigured between UNI, ENI, and NNI without affecting their administrative state, but enabling the port is required for active communication .

VLAN and Traffic Segmentation

- VLANs logically segment networks by function, team, or application, isolating traffic between remote I/O, HMI/SCADA, and other devices .
- Community VLANs allow selected UNIs or ENIs to exchange traffic while maintaining isolation from other VLANs

Article Content

Implementation Methods of Remote Management Functions for Industrial ...

Through various methods such as serial port management, Web management, and network management software management,

SCALANCE XB-200 Web Based Management

The two standby redundancy switches connected in the configuration exchange data frames with each other to synchronize their

How To Configure A Managed Network Switch

Learn how to configure a managed network switch with ease. Our comprehensive guide

Managing and Configuring Switches for Secure SCADA Networks

Managing and Configuring Switches for Secure SCADA Networks | Part 2 Learn about OT resilience strategies,

Configuring Productivity 2000 CPU Ethernet Ports for Remote I/O ...

Configuring Productivity 2000 CPU dual Ethernet ports for remote I/O networks. Explains network segmentation

Switch Ports

Meraki's MS switches allow for the configuration of a single port to thousands of ports through

Cisco Industrial Ethernet 4000, 4010 and 5000 Switch Software ...

All ports on the switch can be configured as UNIs or ENIs. The default state for a UNI or ENI is administratively down

Configuring Secure Remote Access to Allen-Bradley PLCs via VPN vs. Port ...

This article details the technical requirements and security implications for establishing remote connections to Allen

Stratix Switches: Smartport Assignment Guidelines

Smartports can be configured from the Stratix web-page (Device Manager), using Cisco Network Assistant (CNA), or

How to Connect Industrial Switches and Routers

Industrial switches are primarily responsible for facilitating data exchange between devices within a Local Area Network (LAN), while

Cisco Industrial Ethernet 4000, 4010 and 5000 Switch Software ...

Configuring Port-Based Traffic Control Configuring LLDP, LLDP-MED, and Wired Location Service Configuring SPAN

Managing and Configuring Switches for Secure SCADA Networks

The OT best practices are discussed here for securely configuring the switch in a SCADA production network,

RUGGEDCOM ROS v4.3 Configuration Manual

Remote Monitoring and Configuration with SINEC NMS SINEC NMS is Siemens 's Network Management System software for the

Configuring DHCP vs Static IP on an Industrial Ethernet Switch

Learn how to configure DHCP and static IP on industrial Ethernet switches for reliable network management.

Modicon M580 Redundant Ethernet Remote I/O

Issue The new Modicon M580 Redundant Ethernet Remote I/O (RIO) systems require Modicon switch configuration.

Tutorial: Channel Configuration (Remote I/O) and I/O Configuration for

Also note that this tutorial only applies to Remote I/O. ControlNet channel and I/O configuration are very different.

How to Select, Configure, and Apply Industrial Switches for the ...

As a senior research and development engineer specializing in the Industrial Internet of Things (IoT), I often encounter

Cisco Industrial Ethernet 4000 Series Switches

Cisco Industrial Ethernet 4000 Series Switches - Some links below may open a new browser window to display the document you

Stratix Switches: Smartport Assignment Guidelines

Stratix 5400, Stratix 5410, Stratix 5700, Stratix 5800, Stratix 5200 ArmorStratix 5700 Stratix 2500 Answer Smartports

Axis network switches

This switch configuration guide is for network administrators configuring and managing AXIS network switches. It provides

Stratix 5700 Smartports Configuration

Stratix 5700 Smartports are the recommended configurations for switch ports. These configurations,

Industrial Ethernet Managed Switches

The switch comes with default port settings that should allow you to connect to the Ethernet Ports with out any necessary

How to configure Cisco switch in 11 steps?

By configuring your Cisco switch, you can effectively manage its functionality, ensuring versatility, power, and optimal performance.

FactoryTalk Linx Getting Results Guide

FactoryTalk Linx provides audit logging for shortcut configuration changes, driver configuration changes, most device configuration

Industrial VLAN Configuration for OEM Remote Access

Configure VLANs on Hirschman managed switches for secure OEM remote access while maintaining PLC-to-PLC

1734-UM018F-EN-E POINT I/O EtherNet/IP Adapter User Manual

Before using your adapter in an EtherNet/IP network, you need to configure it with an IP address, subnet mask, and optional

RUGGEDCOM ROS v4.3 Configuration Manual

Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the

Series Managed Industrial Ethernet Switch Command Reference Guide

This user guide describes the commands and parameters of the Command Line Interface (CLI) as implemented in the current

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