Migration Guidelines: Stratix 5700 Switch to Stratix 5200 Switch

Allen-Bradley
by ROCKWELL AUTOMATION

Reference Manual

Original Instructions

Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.

ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence.

IMPORTANT Identifies information that is critical for successful application and understanding of the product.

These labels may also be on or inside the equipment to provide specific precautions.

SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.

BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.

ARC FLASH HAZARD: Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

The following icon may appear in the text of this document.

Identifies information that is useful and can help to make a process easier to do or easier to understand.

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Configuration

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About This Publication

This publication describes how to migrate from a Stratix® 5700 switch to a Stratix 5200 switch.

This manual assumes that you understand the following:

- Local area network (LAN) switch fundamentals
- Concepts and terminology of the Ethernet™ protocol and local area networking

Product	Lifecycle	Modernization	Remark
Stratix 5200	New	—	Launch in early 2023
Stratix 5700	Active Mature	Stratix 5200 and Stratix 5800 switches	Expect to transition to EOL stage in early 2024

Inclusive Terminology

Rockwell Automation recognizes that some of the terms that are currently used in our industry and in this publication are not in alignment with the movement toward inclusive language in technology.

We are proactively collaborating with industry peers to find alternatives to such terms and making changes to our products and content. Please excuse the use of such terms in our content while we implement these changes.

Integrated Architecture Tools

The Integrated Architecture® tools can help you plan and configure a system, and migrate system architectures. For more information, see the Control Systems Configuration Tools page.

Migration Services

Throughout the product lifecycle, as products mature, Rockwell Automation helps you get the most out of your current equipment, help you determine your next steps, and lay out a plan for the transition to newer technology.

Whether you choose to migrate all at once or use our unique, phased approach to help minimize the costs, risks, and complexities that are involved in managing legacy products and systems, Rockwell Automation has the tools and the experience to guide you through the transition.

For more information, see Migration Solutions Brochure, publication MIGRAT-BR002.

Download Firmware, AOP, EDS, and Other Files

Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes from the Product Compatibility and Download Center at rok.auto/pcdc.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at rok.auto/literature.

Resource	Description
Stratix Ethernet Device Specifications Technical Data, 1783-TD002	Provides specifications for the switches and other devices.
Stratix 5200 and Stratix 5800 Managed Switches User Manual, 1783-UM012	Describes how to configure, manage, and troubleshoot Stratix 5200 and Stratix 5800 managed Ethernet switches and expansion modules.
Stratix 5200 Ethernet Managed Switches Installation Instructions 1783-IN022	Describes how to install Stratix 5200 managed Ethernet switches
Stratix Managed Switches User Manual 1783-UM007	Describes how to configure, and troubleshoot Stratix 5700 managed Ethernet switches
EtherNet/IP Network Devices User Manual, ENET-UM006	Describes how to configure and use EtherNet/IP™ devices to communicate on the EtherNet/IP network.
Ethernet Reference Manual, ENET-RM002	Describes basic Ethernet concepts, infrastructure components, and infrastructure features.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications.	Provides declarations of conformity, certificates, and other certification details.

Replacement Considerations

Feature Comparison

Stratix® 5200 switches include most of the features available in the Stratix® 5700 switches and add support for new network protocols, management, and diagnostic capabilities. Table 1 highlights the differences in features between the two platforms. See Stratix 5200 and Stratix 5800 Switches User Manual and Stratix Managed Switch User Manual for more details.

Table 1 - Stratix 5200 Switch and Stratix 5700 Switch Comparison

Feature	Stratix 5200 Base Switch	Stratix 5200 Full Switch	Stratix 5200 Advanced Switch	Stratix 5700 Lite Switch	Stratix 5700 Full Switch
Catalog Numbers	**1783-CMS6B 1783-CMS10B 1783-CMS20DB**	**1783-CMS6P 1783-CMS10P 1783-CMS10DP 1783-CMS20DP**	**1783-CMS10DN 1783-CMS20DN**	**1783-BMSxxxL**	**1783-BMSxxxA 1783-BMSxxxP, -PK 1783-BMSxxxN, -NK**
Hardware					
Gigabit ports	2	All Ports	All Ports	2 (select hardware)	2 (select hardware)
SFP or Combo ports	2	2	2	Up to 6 (select hardware)	Up to 6 (select hardware)
Power over Ethernet (PoE) ports	No	No	No	Yes (select hardware)	Yes (select hardware)
Conformal coating	No	No	No	No	Yes (select hardware)
Resiliency					
Spanning Tree (MST)	Yes	Yes	Yes	Yes (default)	Yes (default)
Spanning Tree (RPVST)	Yes (default)	Yes (default)	Yes (default)	Yes	Yes
Resilient Ethernet Protocol (REP)	Yes	Yes	Yes	Yes	Yes
EtherChannel (Link Aggregation)	Yes	Yes	Yes	No	Yes
FlexLinks	No	No	No	No	Yes
Device Level Ring (DLR)	One ring (select hardware) 1783-CMS20DB	One ring (select hardware) 1783-CMS10DP 1783-CMS20DP	Two rings	One ring (select hardware) 1783-BMS12T4E2CGL 1783-BMS20CL 1783-BMS20CGL	One ring (select hardware) 1783-BMSxxxP, -PK 1783-BMSxxxN, -NK 1783-BMS20CA
Media Redundancy Protocol (MRP)	Yes	Yes	Yes	No	No
Parallel Redundancy Protocol (PRP) RedBox	No	No	Yes (one channel)	No	No
Layer 3 Routing					
Connected Routing (Inter-VLAN routing)	Yes	Yes	Yes	No	Yes
Static routes	Yes	Yes	Yes	No	Yes
Network Services					
Quality of Service (QoS)	Yes	Yes	Yes	No	Yes
Multicast Management (IGMP Snooping)	Yes	Yes	Yes	Yes	Yes
Layer 2 NAT	No	No	Yes	No	Yes (select hardware) 1783-BMSxxxN, -NK
CIP Sync™ (IEEE 1588 PTP)	No	Yes	Yes	No	Yes (select hardware) 1783-BMSxxxP, -PK 1783-BMSxxxN, -NK
Dynamic Host Configuration Protocol (DHCP) per port	Yes	Yes	Yes	Yes	Yes

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Catalog Numbers	**1783-CMS6B 1783-CMS10B 1783-CMS20DB**	**1783-CMS6P 1783-CMS10P 1783-CMS10DP 1783-CMS20DP**	**1783-CMS10DN 1783-CMS20DN**	**1783-BMSxxxL**	**1783-BMSxxxA 1783-BMSxxxP, -PK 1783-BMSxxxN, -NK**
IPv6 Support	Yes	Yes	Yes	No	Yes
Security					
Port Security	Yes	Yes	Yes	No	Yes
Access Control Lists (ACL)	Yes	Yes	Yes	No	Yes
TACACS+ and RADIUS authentication	Yes	Yes	Yes	Yes	Yes
IEEE 802.1X	Yes	Yes	Yes	No	Yes
Switch Management and Diagnostics					
Web Interface (HTTPS)	WebUI	WebUI	WebUI	Device Manager	Device Manager
CIP™ (EtherNet/IP™) and Logix AOP	Yes	Yes	Yes	Yes	Yes
Remote Span (RSPAN)	Yes	Yes	Yes	No	Yes
Debug bundle and CLI output using web interface	Yes	Yes	Yes	No	No
Ping and Traceroute	Yes	Yes	Yes	No	No

SD Card Comparison

Table 2 - SD Card Comparison

Stratix Switch	SD Card Catalog Number
Stratix 5200 Switch	1784-SDHC8
Stratix 5700 Switch	1784-SD1

SFP Comparison

The Stratix 5200 switches support the same Small Form-factor Pluggable (SFP) modules as the Stratix 5700 switches.

Catalog Numbers:

- 1783-SFP100FX
- 1783-SFP100LX
- 1783-SFP100EXC
- 1783-SFP100ZXC
- 1783-SFP100T
- 1783-SFP1GSX
- 1783-SFP1GLX
- 1783-SFP1GEXE
- 1783-SFP1GZX
- 1783-SFP1GTE

Power Input and Consumption Comparison

Stratix 5200 switches have increased power consumption compared to the equivalent Stratix 5700 models. The power terminal block type and cable orientation match the one used in Stratix 5700 switches. See Table 3, and Table 4 for more details. Also see Stratix 5200 and Stratix 5800 Managed Switches and Stratix Managed Switches user manuals.

Power over Ethernet (PoE) feature is not available for the Stratix 5200 switches.

Table 3 - Stratix 5200 Full and Base Specifications

Attribute	1783-CMS6B, 1783-CMS6P	1783-CMS10B, 1783-CMS10P	1783-CMS10DP, 1783-CMS10DN	1783-CMS20DB, 1783-CMS20DP, 1783-CMS20DN
Power Input	1.6 A @ 12V DC 0.8 A @ 24V DC 0.4 A @ 48V DC	2.0 A @ 12V DC 1.0 A @ 24V DC 0.5 A @ 48V DC	3.2 A @ 12V DC 1.6 A @ 24V DC 0.8 A @ 48V DC	4.2 A @ 12V DC 2.6 A @ 24V DC 1.3 A @ 48V DC
Power Consumption	14 W max	17.7 W max	28 W max	36.7 W max

Table 4 - Stratix 5700 and 5700 Lite Specifications

Attribute	1783-BMS4S2SGL, 1783-BMS4S2SGA	1783-BMS06SL, 1783-BMS06SA, 1783-BMS06TL, 1783-BMS06TA, 1783-BMS06SGL, 1783-BMS06SGA, 1783-BMS06TGL, 1783-BMS06TGA	1783-BMS10CL, 1783-BMS10CA, 1783-BMS10CGL, 1783-BMS10CGA	1783-BMS10CGN, 1783-BMS10CGP	1783-BMS20CL, 1783-BMS20CA, 1783-BMS20CGL, 1783-BMS20CGP, 1783-BMS20CGN, 1783-BMS20CGPK 1783-BMS12T4E2CGL, 1783-BMS12T4E2CGP, 1783-BMS12T4E2CGNK
Power Input	0.5...2.0 A @ 12...48V DC				
Power Consumption	14 W max	15 W max	17 W max	20 W max	30 W max

Switch Hardware Features

Certifications and Standards

Stratix 5200 switches match the environmental specifications and regulatory standards of the Stratix 5700 platform. Stratix 5200 switches support IEC-62443-4-2 SL1 and SL2 security requirements if certain security features are configured in the switch. See the Stratix 5200 and Stratix 5800 Managed Switches User Manual for details.

Dimension and Installation Considerations

Stratix 5200 switches have reduced form factor and weight compared to the equivalent Stratix 5700 catalog numbers. See Table 5 and Table 6 for comparison.

Stratix 5200 Dimensions

Table 5 - Stratix 5200 Dimensions and Weight

Stratix 5200	Dimensions[1]			Weight
	Height	Width	Depth	
1783-CMS6B, 1783-CMSS6P	12.7 cm 5.00 in.	6.48 cm 2.55 in.	11.00 cm 4.33 in.	0.73 kg 1.6 lb
1783-CMS10B, 1783-CMS10P	12.7 cm 5.00 in.	7.62 cm 3.00 in	11.00 cm 4.33 in.	0.86 kg 1.9 lb
1783-CMS10DP, 1783-CMS10DN	12.7 cm 5.00 in.	7.62 cm 3.00 in	12.9 cm 5.08 in.	1.04 kg 2.3 lb
1783-CMS20DB, 1783-CMS20DP, 1783-CMS20DN	12.7 cm 5.00 in.	10.92 cm 4.3 in.	12.9 cm 5.08 in.	1.27 kg 2.8 lb

(1) Switch only, not including front connectors and DIN rail mounting bracket.

Stratix 5700 and 5700 Lite Dimensions

Table 6 - Stratix 5700 Dimensions and Weight

Stratix 5700	Dimensions[1]			Weight
	Height	Width	Depth	
1783-BMS06SL, 1783-BMS06SA, 1783-BMS06TL, 1783-BMS06TA, 1783-BMS06SGL, 1783-BMS06SGA, 1783-BMS06TGL, 1783-BMS06TGA	12.95 cm 5.1 in.	7.48 cm 2.94 in.	10.92 cm 4.3 in.	1.11 kg 2.45 lb
1783-BMS4S2SGL, 1783-BMS4S2SGA	12.95 cm 5.1 in.	8.00 cm 3.15 in.	11.45 cm 4.51 in.	1.22 kg 2.69 lb
1783-BMS10CL, 1783-BMS10CA, 1783-BMS10CGL, 1783-BMS10CGA	12.95 cm 5.1 in.	9.14 cm 3.6 in.	10.92 cm 4.3 in.	1.25 kg 2.75 lb
1783-BMS10CGN, 1783-BMS10CGP	12.95 cm 5.1 in.	8.00 cm 3.15 in.	12.83 cm 5.05 in.	1.38 kg 3.05 lb
1783-BMS20CL, 1783-BMS20CA, 1783-BMS20CGL, 1783-BMS20CGP, 1783-BMS20CGN, 1783-BMS20CGPK, 1783-BMS12T4E2CGL, 1783-BMS12T4E2CGP, 1783-BMS12T4E2CGNK	12.95 cm 5.1 in.	12.70 cm 5.0 in.	12.83 cm 5.05 in.	2.04 kg 4.50 lb

(1) Switch only, not including front connectors and DIN rail mounting bracket.

Installation Considerations

- Stratix 5200 switches have a mesh design on the top and bottom for optimal heat dissipation and IP30 rated enclosure.
- Stratix 5700 switches and Stratix 5200 switches must be mounted in the upright orientation and cannot be mounted sideways on a vertical DIN rail
- Stratix 5200 switches have a compressible DIN rail mounting clip for easy mount and unmount.
- Minimum clearances for both the Stratix 5200 and the Stratix 5700 are as follows:
  - Top and bottom: 50.8 mm (2.0 in.)
  - Sides: 50.8 mm (2.0 in.)
  - Front: 50.8 mm (2.0 in.)

Gigabit Ethernet

Depending on the catalog number, Stratix 5200 switches are available with up to 20 Gigabit Ethernet ports with a minimum of 2 gigabit ports.

Power over Ethernet (PoE)

PoE is not available on the Stratix 5200 switches. If PoE is required, use the Stratix 5800 or the Stratix® 5400 switch.

Switch Software Features

This section provides an overview of the differences in software features for the Stratix 5200 and Stratix 5700 switches. See Chapter 2 for details on how to document the existing network settings and recommended order of configuration for a new Stratix 5200 switch when replacing a Stratix 5700 switch.

Cisco IOS® XE

Stratix 5200 switches run Cisco IOS XE software with new features that are designed to automate onboarding, configuration, monitoring, and optimization.

- Built-in features to enhance platform integrity and security such as secure boot, image signing, hardware authenticity check and Cisco® Trust Anchor Module (TAM) for secure storage.
- Modular architecture that allows updating features / protocols via install packages.
- Provides API driven configuration with open API's and data models (NetConf)

WebUI Overview

The Stratix 5200 switch uses WebUI, which is an improved web-based management interface for easier and faster configuration of the switch. The WebUI has a new menu structure and workflow. It is highly customizable with fast navigation and extended troubleshooting tools.

WebUI allows for high level of customization. Some of these customizations include the following:

- Enable or disable items in the dashboard.
- Select any menu page as the default landing page after sign in.
- Filter table items by values, select the default number of table entries and visible columns.

WebUI Configuration

There are several differences from the Stratix 5700 Device Manager when you are configuring a Stratix 5200 switch. These differences include the following:

-
- WebUI changes must be saved explicitly to be retained after reboot. Differences in settings can be reviewed before saving.
- Most of the Ethernet Port settings are consolidated on the Ethernet Ports page under General or Advanced tab, with many new settings available in WebUI. For example, the Ethernet Ports > Advanced page allows applying ACL, Port Security, Port Thresholds, input and output QoS policy, 802.1X and more to a port. Previously, these settings were on separate pages or not available in Device Manager.
- Many settings that are related to a switch item, such as port or a VLAN, are consolidated in one place. Some per-port settings can be configured in multiple places depending on the workflow.
- A Smartport role can be applied to multiple ports simultaneously, including VLAN settings.
- Clicking an item in a table typically opens an Edit Configuration page for the item such as port or VLAN settings.
- Many configuration pages include links to other pages to configure prerequisite items, for example to add an ACL before assigning it to a port.
- More advanced settings are available in WebUI. The new Administration – command-line interface page allows you to apply CLI commands in WebUI if necessary. Other items in Administration include DHCP pools, time synchronization, SNMP, and other switch management protocols.
- Changes that are applied in the Stratix 5200 WebUI are NOT saved automatically to the startup configuration.
- The workflows for configuring some features have changed as described in the following sections.

Startup and Running Configuration

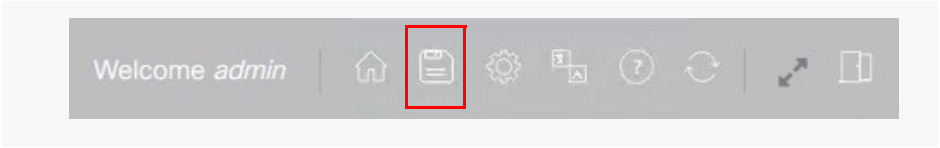
Both Stratix 5200 and Stratix 5700 switches use the following configuration files:

- The Startup configuration file (startup-config) is used during system startup to configure the software. The startup config file is stored in the internal flash. The file name is different between platforms:
  - "config.text" – Stratix 5700 switches
  - "startup-config.cfg" - Stratix 5200 switches

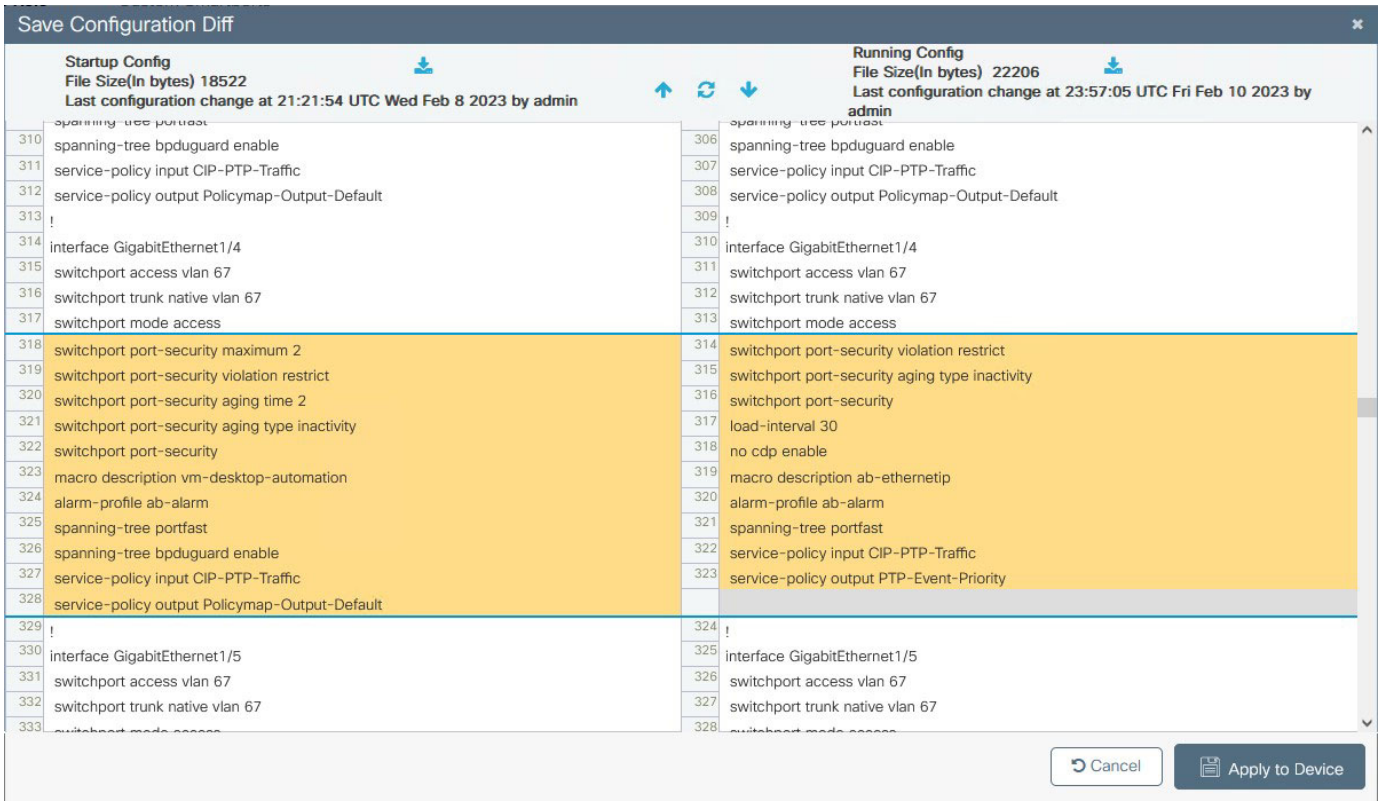
The Running configuration file (running-config) contains the current configuration of the software in memory.

The two configuration files can differ. For example, you can change the configuration for a short time rather than permanently. The Stratix 5200 WebUI and the Stratix 5700 Device Manager differ in how communications are handled.

IMPORTANT Changes that are made in the Stratix 5700 Device Manager are applied immediately to the switch running configuration and the startup configuration after clicking Submit. Changes that are made in the Stratix 5200 WebUI are not saved automatically to the startup configuration but only applied to the running configuration. These changes must be saved explicitly to the startup using the Save Configuration button.



- Changes that are made to the Running configuration and not saved to the startup are lost after you restart the switch.
- Before saving the running configuration to the startup, you can review and compare differences using the Save Configuration Difference page.



Express Setup and Initial Configuration

Express Setup

Express Setup on the Stratix 5200 switch is similar to the Stratix 5700 platform. Be aware of the following differences:

- The default IP address is 192.168.1.254.
- The default username to enter Express Setup is admin, and the default password is switch.
- The date and time can be set by an NTP server on the network or set manually during Express Setup.
- Individual ports can be assigned to or removed from the Management VLAN during Express Setup. By default, all ports are assigned.
- The summary of initial configuration and the CLI preview is available before submitting changes.

VLAN Configuration

The workflow to configure VLANs and assign ports to a VLAN has changed:

1. When creating a VLAN, use the VLAN tab on the Configuration – Layer 2 – VLAN page.
2. Configure VLAN ID
3. Assign VLAN Name
4. Assign multiple ports to a VLAN
   - Ports can also be assigned to a VLAN later using the Ethernet Ports or the Smartports pages.

If necessary, use the SVI page to configure the Switch Virtual Interface (SVI) for the new VLAN, including IP address, mask, Static or DHCP mode, and the advanced VLAN settings such as ACL and DHCP relay.

A new VLAN can also be added by configuring an SVI first (with or without an IP address).

Resiliency Solution Considerations

Spanning Tree Protocol

The default Spanning Tree mode on the Stratix 5200 after running Express Setup is Rapid per VLAN Spanning Tree Plus (Rapid PVST+) based on the IEEE 802.1w standard. This differs from the Stratix 5700 switch where the default mode is Multiple Spanning Tree (MST) based on the IEEE 802.1s 802.1 standard.

- Make sure that the Spanning Tree mode on the new switch matches the existing mode in the network (either MST or RPVST+). After Express Setup, configure the correct mode in the Stratix 5200 WebUI using Configuration – Layer 2 – Spanning Tree page.

  You can verify the existing STP mode of the Stratix 5700 or Stratix 5400 switches in Device Manager on the Configure – Network – STP Settings page.
- Spanning Tree PortFast settings are now configured on the Interface – Ethernet Ports or Interface – Logical pages. These settings are automatically assigned based on the Smartport role but can be changed if necessary.

Resilient Ethernet Protocol (REP)

All Stratix 5200 catalog numbers support REP. The Stratix 5200 WebUI allows configuring REP on an EtherChannel (the dual-media ring topology). When adding a Stratix 5200 switch to an existing REP segment, make sure that the new switch is configured with appropriate parameters before connecting to other switches in the segment:

- REP Segment ID and REP Admin VLAN
- REP port types (for example, Edge or Transit)
- Smartport role and switchport mode (typically Switch for Automation and Trunk)
- Native VLAN
- List of allowed VLANs

Device Level Ring (DLR)

DLR is available on select Stratix 5200 Base, Full and Advanced models. All DLR roles are supported, including DLR supervisor, redundant gateway, and DLR DHCP.

The Base and Full catalog numbers support one ring per switch, which is the same as the Stratix 5700 switch.

The Advanced catalog numbers support up to two rings per switch.

DLR is supported on any adjacent port pair (N, N+1), where N is an odd port number.

PTP (CIP Sync™) over DLR is not supported in the initial release. However, to configure the switch in the DLR supervisor or gateway role, PTP boundary mode must be enabled first (the default PTP mode is forward).

Parallel Redundancy Protocol (PRP)

Any model of the Stratix 5200 switch can be used as the infrastructure switch (LAN A or LAN B) in a PRP architecture. Configure Maximum Transmission Unit (MTU) on a PRP infrastructure switch as 1506 bytes or higher for a PRP topology

Advanced Stratix 5200 catalog numbers (-DN) can be configured as PRP RedBoxes (not available on the Stratix 5700 platform). One PRP channel is supported and is only configurable on ports Gi1/1 and Gi1/2.

EtherChannel

The EtherChannel feature is available on all Stratix 5200 catalog numbers. This feature allows grouping two or more physical ports into one logical interface for more efficient bandwidth utilization and resiliency.

REP over EtherChannel is supported for dual-media ring topologies. EtherChannel ports cannot be configured as DLR or PRP ports (this applies to all Stratix switches).

Layer 3 (routed) EtherChannels are not supported on the Stratix 5200 switches.

FlexLinks

The FlexLinks resiliency feature is not available on the Stratix 5200 switch. The FlexLinks feature allows configuring a pair of Layer 2 interfaces where one interface acts as a backup to the other.

To replace the FlexLinks configuration when migrating from a Stratix 5700 switch, use one of the following methods:

- Configure EtherChannel (only if both links are connected to one switch that supports EtherChannel).

- Use Spanning Tree as the default method to block one of the links (if connecting to two separate upstream switches).

Routing Considerations

Routed Ports and Layer 3 EtherChannels

Stratix 5200 switches do not support routed (Layer 3) ports and Layer 3 EtherChannels. This functionality was previously available on the Stratix 5700 Full versions. If routed ports or Layer 3 EtherChannels are required, use a Stratix 5800 or Stratix 5400 switch.

Connected Routing and Static Routes

Connected routing (inter-VLAN routing) is supported on all Stratix 5200 switches. Connected routing enables all devices on any VLAN that use the switch to communicate with each other if they use the switch as their default gateway.

Connected routing is enabled by default and cannot be disabled. To use Connected Routing, multiple VLAN SVIs with IP addresses must be configured on the switch. Devices in routed VLANs must use the switch SVI as the default gateway address. There is no need to change Switch Management Database (SDM) template on a Stratix 5200 switch to use Connected routing.

Static routing is supported on all Stratix 5200 switches. Static routes define explicit paths to the destination network. The route information includes the destination network address, destination subnet mask, and the IP address of the next hop router.

Dynamic Routing and HSRP

Advanced routing features such as dynamic routing protocols (EIGRP, OSPF, and so on) and HSRP are not supported on the Stratix 5200 switches. This is the same as for the Stratix 5700 switches. Use Stratix 5800 or Stratix 5400 switches (Layer 3 versions) for advanced routing functionality.

Time Sync Considerations

The Full and Advanced Stratix 5200 catalog numbers support IEEE 1588 PTP in the End to End Transparent or Boundary mode. Time sync considerations include the following:

- NTP-PTP Clock mode is not available on the Stratix 5200 switches. This is the same as for the Stratix 5700 switches.
  - The NTP-PTP clock mode is supported in the 17.12.01 Firmware Release. Upgrade to this firmware if needed.
- After Express Setup, the default mode on a Stratix 5200 switch is Forward. In this mode, the switch forwards PTP frames but do not participate in PTP.
- Make sure that PTP mode and parameters are configured after Express Setup to match the existing network requirements.
- PTP is not supported over DLR in the initial release of the Stratix 5200 switch.
- To enable DLR supervisor or gateway role, the switch must be configured first in the PTP boundary mode even if PTP is not used in the network.

Base Stratix 5200 catalog numbers allow passing PTP traffic (forward mode) without participating in the PTP.

Network Security Considerations

Port Security

MAC address port security is available on all Stratix 5200 catalog numbers.

Port security is enabled automatically for some of the Smartport roles. Port security settings can be changed on the Configuration – Interface – Ethernet Ports - Advanced page.

Access Control Lists (ACL)

IPv4 and IPv6 ACLs are supported on all Stratix 5200 switches.

ACL configuration has been enhanced in the Stratix 5200 WebUI with more ACL types and advanced options. ACL can be applied to a port using the Configuration – Security – ACL or Configuration – Interface – Ethernet Ports - Advanced pages.

Only inbound ACLs are supported. This differs from the Stratix 5700 switches where outbound ACLs were supported on routed ports and VLANs. IPv4 ACLs can only be applied to physical ports and not to VLAN interfaces. Some ACLs are system-defined for various network and security services and are not displayed in WebUI. These can be viewed in CLI.

Users and Passwords

New user and password management features available in WebUI on the Stratix 5200 switch are:

- Create custom password policies and apply to individual users
- Assign custom privilege levels to users
- Stronger password encryption types

For read-only users, only Dashboard and Monitoring menu items are available. Configuration and Administration pages are not visible and read-only users cannot see any of the switch settings.

AAA Configuration

Authentication, authorization and accounting (AAA) configuration has been enhanced in the Stratix 5200 WebUI. The AAA Wizard is now available to simplify the process of configuring external RADIUS, TACACS+ or LDAP authentication in a basic or advanced mode.

TrustSec

TrustSec features are not supported on the Stratix 5200 platform (same as for the Stratix 5700 switches). If TrustSec support is required, use Stratix 5800 switches.

Other Network Services

Layer 2 Network Address Translation (NAT)

Layer 2 NAT feature is available on the Advanced Stratix 5200 catalog numbers (-DN). NAT can be enabled on the ports Gi1/1 and Gi1/2 only. NAT implementation on the Stratix 5200 switch is similar to the Stratix 5700.

DHCP Server

DHCP per port (DHCP Persistence) is available on all Stratix 5200 catalog numbers. DLR DHCP is available on all switches that support DLR.

DHCP pools and DHCP Persistence are configured on the Administration – DHCP Pools page. The Stratix 5200 WebUI allows configuration of advanced DHCP settings such as DHCP pool option values, multiple default routers, and multiple DNS servers.

Quality of Service (QoS)

The Stratix 5200 switches provide advanced hardware-supported Quality of Service (QoS) capabilities for optimized performance and prioritization of industrial control traffic such as EtherNet/IP. Several QoS features are as follows.

- CLI configuration for QoS has changed between Stratix 5700 and Stratix 5200 and cannot be copied from one to another
- Express Setup automatically applies global QoS settings that are optimized for EtherNet/IP traffic.
- Smartport roles apply appropriate ingress and egress QoS policies.
- Advanced QoS settings such as policies, class maps and actions, can be changed, if necessary, on the Configuration – Services – QoS page in WebUI. Custom QoS policies can be applied to ports using the QoS or Ethernet Ports – Advanced pages.
- QoS is now available in all versions of the Stratix 5200 switch, whereas Stratix 5700 Lite versions excluded QoS.
- Stratix 5200 Base catalog numbers do not support some of the advanced QoS features such as policing and rate limiting. Prioritizing of EtherNet/IP traffic and CIP Sync™ traffic is fully supported.

Multicast Management

Internet Group Management Protocol (IGMP) snooping services are similar on the Stratix 5200 and 5700 switches. Global IGMP Snooping settings are configured on the Configuration – Services – Multicast page. IGMP Snooping settings per VLAN are configured on the Configuration – Layer 2 – VLAN page.

Layer 2 Discovery Protocols

The Stratix 5200 switch supports both CDP (CDP) and Link Layer Discovery Protocol (LLDP). CDP and LLDP are enabled by default and configurable in WebUI.

Switch Troubleshooting

Many new troubleshooting tools are now available in WebUI to improve diagnostics and easily provide information to technical support. These tools include the following:

- Download partial or full syslog or configure external syslog servers
- Use Ping and Traceroute tools for verifying network connectivity
- Download Core Dump and System Report for analyzing system crashes
- Create Debug Bundle for technical support with ability to include output of any CLI command
- Use command-line interface in WebUI to execute diagnostic commands
- View advanced CPU and Memory Utilization data with the ability to analyze process utilization and download data dumps

Packet Capture with SPAN

Enhanced Switch Port Analyzer (SPAN) features can be configured on the Stratix 5200 switch using WebUI. This feature is called Port Mirroring on the Stratix 5700 switch.

A maximum of two SPAN sessions can be configured. Local source SPAN is available on all Stratix 5200 switches.

Remote SPAN (RSPAN) and Flow-based SPAN (FSPAN) options are available on all catalog numbers.

- RSPAN is used to capture traffic from a remote switch or send traffic to a remote switch using an RSPAN VLAN
- FSPAN is used to apply an ACL-based filter to control the type of network traffic to be monitored

Multiple source interfaces or VLANs can be selected for a SPAN session in WebUI. Ingress or egress source options are available. SPAN is configured on the Configuration – Layer 2 - SPAN page. The Smartport role Port Mirroring is no longer available.

Software Upgrade

The Stratix 5200 switch provides a faster and user-friendly firmware update process using WebUI.

The only supported software update method on the Stratix 5200 is Install mode. In this mode, the software install package is contained in one .BIN file, which is transferred to the switch. Multiple package files (.PKG) are extracted from the .BIN file and installed in the onboard nonvolatile memory.

A software upgrade on a Stratix 5200 switch can only be performed to the internal memory. The time it takes to upgrade the software depends on the transfer method and the network speed, and typically takes up to 15 minutes. After transferring and installing files, the switch must be rebooted to apply the new software version. This step can be postponed if necessary.

Software install package files (.BIN) can be transferred to the on-onboard nonvolatile memory using different methods: from a local PC (HTTPS), from a network server using FTP, SFTP or TFTP, or from an SD card. Multiple versions of software files can be uploaded and stored on the SD card for later upgrade or downgrade using the File Manager page. During the upgrade or downgrade, the SD card or the internal memory can be the source of the files, but the upgrade destination can only be the internal memory of the switch.

The previous software files are retained in the flash memory, which allows you to perform a rollback (downgrade) if necessary. Keep in mind that the internal memory capacity is limited to two GB. You can delete unused software files using Remove Inactive Files link on the Software Upgrade page or delete manually using the File Manager page.

File Management

The Stratix 5200 switch provides tools for easier configuration and software file management using WebUI. Some of these tools include the following:

- The File Manager page for viewing, uploading, renaming, or deleting files on the onboard flash or SD flash.
- The Backup & Restore page for copying running or startup configuration to the PC or a network server using HTTPS, FTP, SFTP, or TFTP for archiving.
- A new startup configuration file can be copied to the switch with an option of backing up the existing configuration to flash. The new configuration does not take effect until after a reload.
- The Software Upgrade page provides an option of removing inactive software files from flash to free up space.

SD Card and Boot Considerations

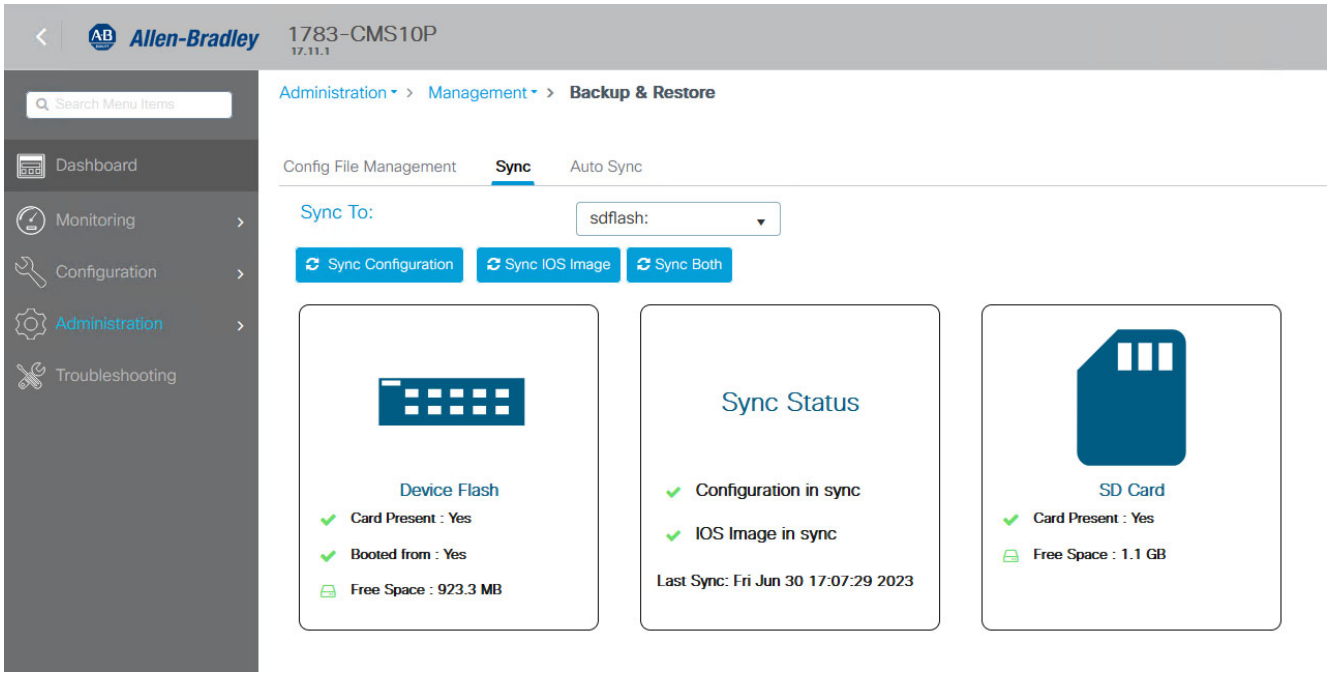
The Stratix 5200 switch has a slot for an optional SD card that can be used for backup purposes. The supported card type is the high-capacity 1784-SDHC8 card.

You can use the SD card to synchronize the configuration and software from the internal memory and later use it to configure a replacement switch in a factory default state. You can also store versions of software files or store copies of configurations on the SD card.

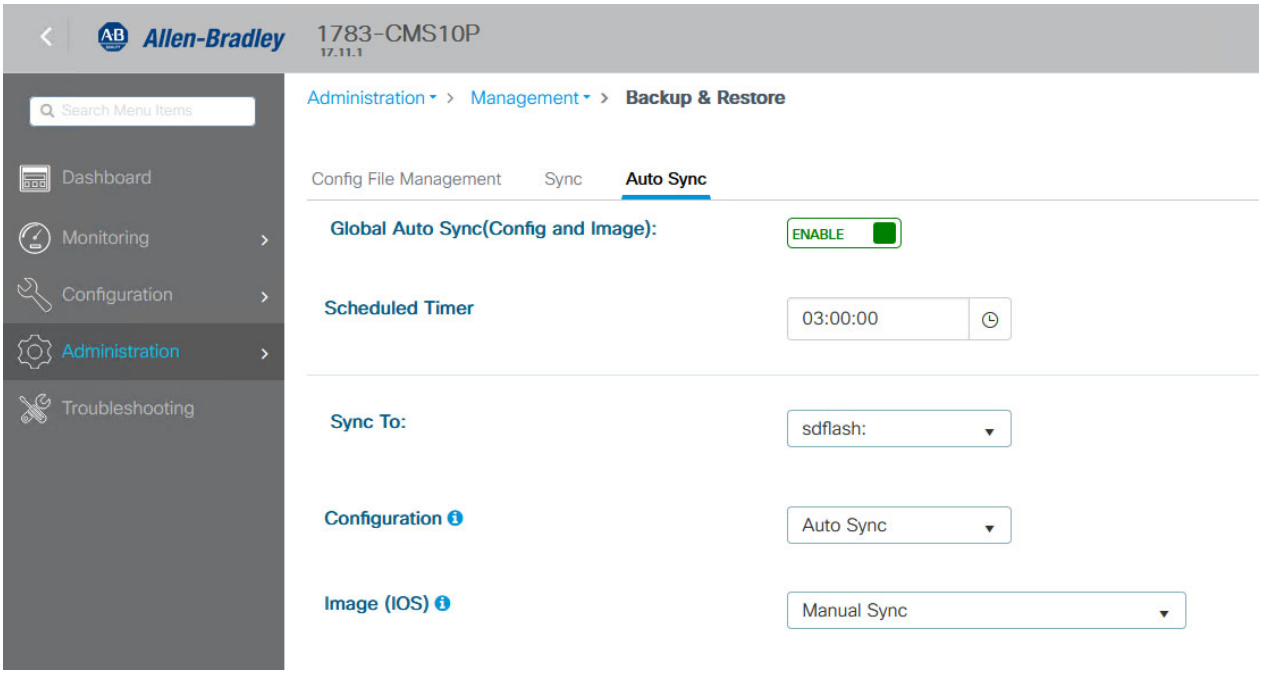
Synchronization to SD Card

The switch that previously has been configured (not in a factory default state) always uses the startup configuration in the internal memory during boot. Changes to the running configuration are not immediately synchronized with the startup configuration and must be saved explicitly.

To synchronize configurations from internal memory to SD card automatically every time when saving to the startup, enable Global Auto Sync and select Auto Sync for configuration. Configuration and software files can be synchronized from the internal memory to the SD card manually on demand using the Administration – Management – Backup & Restore - Sync page.



A scheduled synchronization from the internal memory to the SD card can be configured to happen once a day at the selected time using the Administration – Management – Backup & Restore – Auto Sync page.



Restoring to a Factory Default Switch (Swap Drive Procedure)

An SD card with a previously synced configuration and software can be used for recovery after a switch failure.

The SD card must be present in the new (factory default) switch before powering up. After the boot, the switch in a factory default state detects that the SD card contains the startup configuration and/or the software and initiates the synchronization from the SD card to the internal memory.

If the newer version of the software is present on the SD card, the switch copies the files and installs the software in the internal memory. This can take several minutes to complete. After synchronization, the switch reboots to load the software from the internal memory and apply the new configuration.

Note the following consideration when restoring configuration to a new switch:

- Restoring configurations is only supported between switches within the same platform, for example, restoring configuration from a Stratix 5700 to a Stratix 5200 switch using an SD card fails.
- Applying configuration to a switch with lower feature set (for example, from a Full to Base), or different number and type of ports can lead to unpredictable results where configuration is partially applied or incorrect.
- Configuration used to restore from SD card is the nvram_config file. This configuration file is readable but encrypted and cannot be edited.

Boot Order

The Stratix 5200 switch in a non-default state always boots from the internal flash if valid software files are present. If the switch is in a factory default state and the SD card contains a newer version of the software, the switch uses the SD card to install the software to the internal flash. Afterwards, the switch reboots and uses the internal flash.

Boot Time

The boot time has increased on the Stratix 5200 switches as compared to the Stratix 5700 switches.

- Stratix 5200 switches use IOS-XE – a modularized Linux-based switch software that can deliver containerized applications alongside IOS, with focus on programmability via APIs and integrated security capabilities.
- Advanced security features in IOS XE, such as secure boot, integrity checks and image verification, increased firmware size and modular software architecture require more time for initialization during the boot process.

Configuration

Replacing an Existing 5700 Switch

The recommended steps for replacing an existing Stratix® 5700 switch with a new Stratix® 5200 switch are:

1. Using the Stratix 5700 Device Manager, document the existing switch configuration according to the switch role, required features, type and number of connected devices. Use Table 7 as an example.
2. Identify ports on the new switch that is used for each connected device. If needed, verify media and SFP type. The numbering scheme can be different on the new switch.

Table 7 - Existing Stratix 5700 Switch Settings

Stratix 5700 Feature	Stratix 5700 Device Manger
Basic Switch Settings: • Host Name • Management VLAN • IP Address Mode • IP Address / Mask • Default Gateway • CIP™ VLAN	Admin > Device Management > Express Setup
VLAN Settings: • VLAN ID • VLAN Name • VLAN IP Address (if assigned)	Configure > Network > VLAN Management
Smartport Roles	Configure >Network > Smartports
Port Settings – General: • Description • Speed/duplex: auto or hard-coded • Operational Mode: trunk, access, or dynamic auto/desirable Port Settings – Access Mode: • Access VLAN Port Settings – Trunk Mode: • Allowed VLAN list • Native VLAN	Configure > Network > Port Settings
Port Thresholds(1): • Incoming – unicast, multicast, broadcast • Outgoing	Configure > Network > Port Thresholds
EtherChannels(1): • Channel Group Number • Channel Mode: LACP (Active/Passive) or Static • Assigned ports • Operational Mode: trunk or access • VLAN settings: Access or Native VLAN, Allowed VLAN List	Configure > Network > EtherChannels Configure > Network > Port Settings (logical ports Po<#>)
DHCP General Settings: • VLAN IDs with DHCP Snooping enabled DHCP Pool Settings: • DHCP Pool Name • Network / Subnet Mask • Starting and Ending IP • Default Router • Reserved Only and DHCP Snooping Enabled	Configure > Network > DHCP > Global Settings • Select each pool and click Edit
DHCP Persistence: • Interface, DHCP Pool Name and reserved IP address	Configure > Network > DHCP > DHCP Persistence

Table 7 - Existing Stratix 5700 Switch Settings

Stratix 5700 Feature	Stratix 5700 Device Manger
Precision Time Protocol (PTP)[2]: General: • PTP Mode - Boundary, End to End Transparent or Forward • Any ports where PTP is disabled Boundary Mode only: • Priority1 and Priority2 values • PTP VLAN ID per port • If any ports have non-default PTP settings (not common) – see Stratix Managed Switches User Manual for details	Configure > Network > PTP
Network Time Protocol (NTP): • IP addresses of NTP servers • If any server is Preferred	Configure > Network > NTP
Routing(2): • Default Gateway • Static Routes	Configure > Network > Routing
Spanning Tree Protocol (STP): Spanning Tree Mode: • MSTP, Rapid PVST+, or PVST+ MST Mode • Any instances other than default MST 0 and their VLAN mapping (not common) • Priority value for each instance Rapid PVST+ Mode: • Any VLANs with Spanning Tree disabled (not common) • Priority value for each VLAN PortFast • BPDU Filtering with PortFast (enabled by default) • BPDU Guard with PortFast (enabled by default) • PortFast state per port (typically determined by the Smartport role) • Any ports with PortFast Trunk enabled	Configure > Network > STP Settings
Link Layer Data Protocol (LLDP): • LLDP state (enabled or disabled) • Enabled TLVs (default is all)	Configure > Network > LLDP
Resilient Ethernet Protocol (REP): • REP ports and their REP Segment ID • Port types: Transit, Edge or Edge No-neighbor, with Primary or Preferred option • REP Admin VLAN • Any STCN settings per port (not common)	Configure > Redundancy Protocols > REP
Device Level Ring (DLR)[2]: • DLR Mode: Supervisor, Node, or None • DLR ports • Supervisor Role (Precedence) • Beacon Interval and Timeout (if changed from default 400/1960 uSec) DLR Redundant Gateway (if enabled): • Redundant Gateway Role (Precedence) • Uplink ports DLR DHCP (if enabled): • DLR DHCP Server role • Number of devices in the ring • For each device: ring index, DHCP IP address, host name, and pool name	Configure > Redundancy Protocols > DLR
Port Security[1]: • Ports with Port Security enabled (typically determined by the Smartport role) • Maximum MAC count • Static MAC assignments (not common)	Configure > Security > Port Security
Network Address Translation (NAT)[2]: For each existing NAT instance: • Instance name • If NAT is enabled and selected VLAN for ports Gi1/1 and Gi1/2 • Private to Public translations: type, range, or subnet mask, private / public IP • Gateway Translation: public and private IP • Public to Private translations: type, range, or subnet mask, public / private IP • Traffic Permits for non-translated, multicast, and IGMP • Fix Up enabled for ARP and ICMP	Configure > Security > NAT

Table 7 - Existing Stratix 5700 Switch Settings

Stratix 5700 Feature	Stratix 5700 Device Manger
Internet Group Management Protocol (IGMP): • If IGMP Snooping enabled – global setting and per VLAN • If IGMP Snooping Querier enabled • Querier address (not common)	Configure > Security > IGMP Snooping
Access Control Lists (ACL)[1]: Some ACLs are added by default for QoS or security features. These are numbered ACLs 101...107 and named ACLs "CISCO-CWA...", "preauth...". There is no need to recreate them manually on a new switch if running Express Setup. For any other user-created ACLs: • ACL type: standard or extended • ACL name or number • ACL entries in exact order ACL entry settings: • Permit or deny • Protocol • Source: type, address, wildcard, operator, port number • Destination: type, address, wildcard, operator, port number • Log option Applied ACL settings: • Inbound ACLs per port	Configure > Security > ACL
Authentication, authorization and accounting (AAA): • If AAA Model is enabled • TACACS+ server settings • RADIUS server settings • TACACS+ and RADIUS server groups: name, list of servers AAA Method settings (some are visible in the Edit dialog only): • Method name, types, server group • Fallback to Local option • Other settings specific to the type	Configure > Security > AAA
Simple Network management Protocol (SNMP): • If SNMP is enabled globally • System location and contacts • SNMP Host settings: IP address, SNMP v2 community or SNMP v3 user, security model, type and port • Community strings (SNMP v2), read-only or read/write access • SNMP v3 groups: name and version / mode • SNMP v3 users: name, group, security model, authentication and privacy type, access list name or number • Enabled SNMP traps (typically all are enabled) SNMP v3 user passwords (Authentication and Privacy) are NOT visible in Device Manager and must be obtained from your network administrator. SNMP user credentials are not stored in the startup configuration file.	Configure > Security > SNMP
Alarm Settings: • Alarm Relay Setup per relay: normally opened or closed • What alarm types are enabled for each global event: DM, SNMP trap, hardware relay, syslog • Alarm Profile names per port	Configure > Alarms > Alarm Settings
Alarm Profiles: • Profile names (ab-alarm and defaultPort are pre-defined) • What alarm types are enabled for each port event: DM, SNMP trap, hardware relay, syslog	Configure > Alarms > Alarm Profiles
Users : • Usernames and privilege: admin or read-only	Admin > Users
Access Management: • SSH Enabled • Telnet Enabled (not recommended)	Admin > Access Management
Maximum Transmission Unit (MTU): • System MTU value (if different from the default 1500 bytes) MTU of 1506 bytes or higher is normally configured on infrastructure switches in a PRP topology.	Admin > MTU

(1) Stratix 5700 Switch Full software

(2) Selected Stratix 5700 Switch hardware

Not all configuration parameters are visible in the Stratix 5700 Device Manager. If required by your organization, some of the advanced network and security features are configured after the initial setup using CLI. If so, these settings must be migrated using a CLI template provided by the network administrator in your organization.

3. Configure initial settings on the new Stratix 5200 switch using Express Setup.
4. Sign in to the new Stratix 5200 switch and configure settings using WebUI. The order of steps and the workflow can differ from the Stratix 5700 switch. For more information, see Table 8.

Table 8 - Stratix 5200 Configuration Steps

Stratix 5200 Switch Feature	Stratix 5200 Switch on WebUI
Configure initial switch settings in Express Setup mode: • Admin user credentials • Command-Line password (it must differ from the admin password) • Device Name • NTP Server or set the time/date manually • IP Address mode: Static or DHCP • Management VLAN ID • Management IP Address / Mask • Default Gateway • Ports associated with the Management VLAN (default is all ports) • If SSH is enabled • If CIP is enabled for switch management • CIP VLAN ID, IP address and mask (if different from the Management VLAN) • CIP password (if different from the admin password) Review settings and submit	Initial configuration using Express Setup The default IP address of the switch is 192.168.1.254 The default login is admin / switch
Configure additional VLANs (if necessary): • VLAN ID • VLAN Name • IGMP Snooping Enabled • VLAN SVI IP Address (if assigned)	Configuration > Layer 2 > VLAN Use VLAN tab to configure VLAN ID and name Use SVI tab to assign an IP address
Configure NAT instances (if any)[1]: • Configure Private to Public translations (add to the Inside table) • Configure Public to Private translation (add to the Outside table) • Configure Gateway Translation in the Outside table (check the Gateway option) • Configure advanced NAT settings for traffic types and fix-ups (if changed from default) Configure NAT on ports Gi1/1 and Gi1/2: • Select NAT instance for each port • Configure VLAN ID to be translated	Configuration > Security > L2NAT
Configure EtherChannels (if any): • Channel Group Number • Channel Mode: LACP (Active/Passive) or Static • Assigned ports • Operational Mode: trunk or access • VLAN settings: Access or Native VLAN, Allowed VLAN List	Configuration > Interface > Logical
Configure Smartport Roles for each port: • Select one port or multiple ports to apply the same role and VLAN settings. • Select VLAN option depending on the role: Access VLAN or Native VLAN	Configuration > Layer 2 > Smartports
Configure other Port Settings if needed: • Description • Speed and duplex • Allowed VLAN list (in Trunk Mode) Verify Operational Mode (Trunk or Access) and VLAN settings (These settings are meant to already be applied based on the Smartport role).	Configuration > Interface > Ethernet Ports > General
Port Security settings are typically determined by the Smartport role. If necessary, disable or change Port Security settings on the Ethernet Ports page. • Ports with Port Security enabled • Maximum MAC count • Static MAC assignments (not common)	Configuration > Interface > Ethernet Ports > Advanced
Configure port thresholds (if any): • Incoming – unicast, multicast, broadcast • Outgoing	Configuration > Interface > Ethernet Ports > Advanced

Table 8 - Stratix 5200 Configuration Steps

Stratix 5200 Switch Feature	Stratix 5200 Switch on WebUI
Configure DHCP Snooping (if necessary) • Enable DHCP Snooping and associate VLANs Add DHCP pools (if any) • DHCP Pool Name • Network / Subnet Mask • Starting and Ending IP • Default Router • Reserved Only	Administration > DHCP Pools > Pools
Configure DHCP Persistence (if necessary) making sure that port assignment and DHCP reservations on the new switch match the placement of intended control devices • Interface, DHCP Pool Name, and reserved IP address	Administration > DHCP Pools > DHCP Persistence
Configure PTP(2) • PTP Mode - Boundary, End to End Transparent or Forward • Disable PTP on ports as needed Configure PTP (Boundary Mode only) • Priority1 and Priority2 values • PTP VLAN ID per port • Any non-default PTP settings per port (if needed)	Administration > Time > PTP
Configure additional NTP servers (if necessary): • IP address • Preferred option	Administration > Time > NTP Servers
Configure static routes (if any): • Destination IP Prefix and Mask • Route Path (typically Next Hop IP address) Connected routing (routing between VLANs) is enabled by default on switches with multiple IP addresses (VLAN SVI).	Configuration > Routing Protocols > Static Routing
Configure STP global settings: • Select mode per existing network requirements: MST or RPVST. • Enable or disable BPDU Filtering and BPDU Guard for PortFast (default is enabled) MST mode: • Configure MSTO Priority (if different from default 32768) • Configure additional MST instances (if any), mapped VLANs and priorities RPVST mode: • Configure non-default priorities for each VLAN (if necessary required) • Disable STP per VLAN (not common and not recommended)	Configuration > Layer 2 > Spanning Tree
Discovery Protocols (CDP and LLDP) are enabled by default on all ports. These protocols can be disabled, if necessary, per network and security requirements.	Configuration > Layer 2 > Discovery Protocols
Configure REP (if necessary) • REP ports and their REP Segment ID • Port types: Transit, Edge or Edge No-neighbor, with Primary or Preferred option • REP Admin VLAN • Any STCN settings per port (not common)	Configuration > Redundancy Protocol > REP
Configure DLR (if necessary)(3) • DLR Ring ID: 1 or 2(1) • DLR Mode: Supervisor, Node, or None • DLR ports • Supervisor Role (Precedence) • Beacon Interval and Timeout (if changed from default 400/1960 uSec) DLR Redundant Gateway (if enabled) • Redundant Gateway Role (Precedence) • Uplink ports DLR DHCP (if enabled) • DLR DHCP Server role • DHCP Snooping: Enabled • Number of devices in the ring • For each device: ring index, DHCP IP address, host name, and pool name	Configuration > Redundancy Protocol > DLR
Verify global IGMP Snooping settings and change if needed: • IGMP Snooping is enabled by default • IGMP Snooping Querier is enabled by default	Configuration > Services > Multicast

Table 8 - Stratix 5200 Configuration Steps

Stratix 5200 Switch Feature	Stratix 5200 Switch on WebUI
Configure user-defined ACLs (if any): • ACL type: standard or extended • ACL name or number • ACL entries in exact order ACL entry settings: • Sequence number • Permit or deny • Protocol • Source: type, address, wildcard, operator, port number • Destination: type, address, wildcard, operator, port number • Log option Associate interfaces with ACLs • Inbound ACLs per port	Configuration > Security > ACL
Configure AAA settings (if necessary) using the AAA Wizard: • Add RADIUS and/or TACACS+ servers • Create RADIUS and/or TACACS+ server groups and assign servers to groups • Configure AAA methods and types and assigned server groups • Configure Fallback to Local option (if necessary) • Configure other settings specific to the AAA type	Configuration > Security > AAA
Configure SNMP (if necessary): General SNMP Settings • Enable SNMP (disabled by default) • System location and contact • Enabled SNMP Traps (typically all supported are enabled by default) SNMP v2 Community Strings • Community name and access mode: Read-only or read/write SNMP v3 settings • SNMP v3 groups: name and security level • SNMP v3 users: name, group, security mode, authentication and privacy protocols, authentication and privacy passwords SNMP Host settings • IP address, SNMP v2 community or SNMP v3 user, security level, type and port Use CLI to configure ACLs if any applied to SNMP v2 community or SNMP v3 users.	Administration > SNMP
Configure Alarm Settings (if any changes are required): • Alarm Relay Setup per relay: normally opened or closed • Alarm types that are enabled for each global event: Alarm, SNMP trap, hardware relay, syslog • Alarm Profile names per port	Administration > Alarms > Alarm Settings
Configure Alarm Profiles (if different from default): • Profile names (ab-alarm and defaultPort are pre-defined) • Alarm types that are enabled for each port event: Alarm, SNMP trap, hardware relay, syslog	Administration > Alarms > Alarm Profiles
Configure additional local users (admin or read-only) if needed. A local admin user is created during Express Setup.	Administration > User Administration
Configure MTU: • System MTU value (if different from the default 1500 bytes) MTU of 1506 bytes or higher is normally configured on infrastructure switches in a PRP topology.	Administration > Device > General

(1) Stratix 5200 Switch advanced catalog numbers (-N)

(2) Stratix 5200 Full and Advanced catalog numbers (-P, -N)

(3) Stratix 5200 with DLR support (-DB, -DP, -DN)

Additional CLI commands that are required by your organization can be applied in WebUI using Administration > Command-Line Interface page. CLI syntax can change between the Stratix 5700 Switch and Stratix 5200 Switch platforms.

Diagnostics

Stratix 5200 System Status Indicators

Stratix® 5200 switches have status indicators on the front panel. The color and behavior of each status indicator helps you to monitor the status of the switch, network, power, alarms, and individual ports.

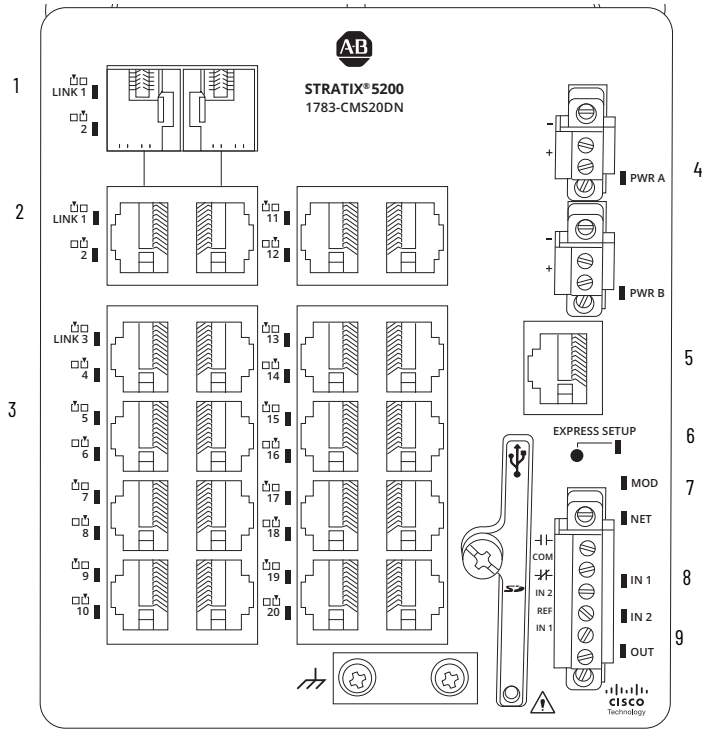


Table 9 - Stratix 5200 Status Indicators

Item	Status Indicators
1	Dual-media SFP port
2	Dual-media copper port
3	1000BASE-T port
4	Power connectors
5	Management console
6	Express setup
7	EtherNet/IP™
8	Alarm input
9	Alarm output

Port Status Indicators

Each Ethernet port has a status indicator that displays information about the individual port. The dual-media ports have two status indicators, one by the SFP connector and the second by the RJ45 connector.

Table 10 - Port System Status Indicators

Indicator	Status	Description
Dual-media SFP port Dual-media copper port	Off	No link, or the port is administratively shut down.
	Steady green	Link present, but no activity.
	Flashing green	Activity: Port is sending or receiving data.
	Alternating green and amber	Link fault. Error frames can affect connectivity, and errors such as excessive collisions, CRC errors, and alignment and jabber errors are monitored for a link-fault indication.
	Steady yellow	Port is blocked by Spanning Tree Protocol (STP) and is not forwarding data. After a port is reconfigured, the port status indicator can remain amber for up to 30 seconds as STP checks the switch for possible loops.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	rok.auto/support
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Technical Documentation Center	Quickly access and download technical specifications, installation instructions, and user manuals.	rok.auto/techdocs
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

Waste Electrical and Electronic Equipment (WEEE)

At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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