



Text Part Number: OL-0137-01

# Configuration Notes for the Catalyst 2900 Series XL IOS Release 11.2(8)SA5

---

**April 12, 1999**

These configuration notes document those Cisco IOS Release 11.2(8)SA5 commands that are new or have been changed for the release of the Catalyst 2900 series XL ATM module. Commands documented in these notes are in one of these categories:

- Commands that are not supported for ATM interfaces
- Commands that have been changed to support ATM interfaces
- Commands that have been added to support ATM interfaces

The information in these configuration notes will eventually be incorporated into the *Cisco IOS Desktop Switching Command Reference* that describes all the commands that have been created or changed to support the Catalyst 2900 series XL.

## Contents

This document contains the following sections:

- “Commands Not Supporting ATM Ports” section on page 2
- “Commands Changed to Support ATM Ports” section on page 2
- “Commands Added to Support ATM Interfaces” section on page 9
- “Managing Configuration Conflicts” section on page 10
- “Related Documentation” section on page 10
- “Cisco Connection Online” section on page 10
- “Documentation CD-ROM” section on page 11

---

### Corporate Headquarters

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA

Copyright © 1999  
Cisco Systems, Inc.  
All rights reserved.

## Commands Not Supporting ATM Ports

The following interface configuration commands cannot be entered for an ATM port:

- **duplex**
- **port group**
- **port monitor**
- **port network**
- **spanning-tree portfast**
- **port security**
- **switchport**

## Commands Changed to Support ATM Ports

This section describes those commands that have been changed to support an ATM interface. You can specify an ATM interface on the commands listed in this section.

ATM interfaces on a Catalyst 2900 series XL switch are specified by the keyword **atm** and two parameters, one to indicate the switch expansion slot of the ATM module and one to indicate the ATM port.

---

**Note** The keyword ATM might not appear in the IOS help (?) if there is no ATM module installed on the switch.

---

Use the following syntax to specify an ATM port:

<b>atm</b>	Specifies the ATM module.
<i>slot</i>	Specifies the ATM module in an expansion slot (1 or 2).
<i>port</i>	Specifies ATM port 1. This parameter is always 1.

## Changed Interface Configuration and EXEC Commands

You can specify the **atm** keyword on the following commands:

- **clear counters**
- **clear interface**
- **clear mac-address-table**
- **mac-address-table dynamic**
- **mac-address-table secure**
- **mac-address-table static**
- **interface atm**

The following example shows how to delete a secure MAC address associated with the ATM port in expansion slot 2:

```
Switch(config)# clear mac-address-table secure 00c0.00a0.03fa atm 2/1
```

The following example shows how to associate a static address with the ATM port in expansion slot 2:

```
Switch(config)# mac-address-table static 00c0.00a0.03fa atm 2/1
```

## Changed Show Commands

Some IOS software **show** commands require that you specify an ATM interface, and some commands by default include ATM interfaces as part of their output. The following commands display ATM information when you specify the ATM interface:

- **show cdp**
- **show interface**
- **show mac-address-table**
- **show port block**
- **show port storm-control**
- **show spanning-tree**

The following commands display ATM information as part of their normal output.

- **show port monitor**
- **show version**
- **show file system**

## Commands Changed to Support ATM Ports

---

### show cdp

The following examples are sample output from the **show cdp** command:

```
Switch# show cdp interface atm 1/1

Atm1 is up, line protocol is up
Encapsulation ARPA
Sending CDP packets every 60 seconds
Holdtime is 180 seconds

Switch# show cdp neighbors atm 1/1

Capability Codes: R - Router, T - Trans Bridge, B - Source Route Br
S - Switch, H - Host, I - ICMP, r - Repeater

Device ID Local Intrfce Holdtme Capability Platform Port ID
Switch Atm1 171 S WS-C2916M Atm2
```

### show interface

The following examples are sample output from the **show interface** command:

```
Switch# show interfaces atm 1/1

Atm1/1 is up, line protocol is up
Hardware is Catalyst 2900 ATM, address is 0010.14d3.4e17 (bia 0010.14d3.4e17) MTU 1500
bytes, BW 156250 Kbit, DLY 100 usec, rely 255/255, load 1/255 Encapsulation ATM,
loopback not set, keepalive not set
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:47, output 00:00:00, output hang never
Last clearing of "show interface" counters never
Queueing strategy: fifo
Output queue 0/40, 0 drops; input queue 0/75, 0 drops
5 minute input rate 3000 bits/sec, 3 packets/sec
5 minute output rate 1000 bits/sec, 2 packets/sec
25 packets input, 7630 bytes, 0 no buffer
Received 24 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abrt
0 watchdog, 24 multicast
0 input packets with dribble condition detected
781 packets output, 70952 bytes, 0 underruns
0 output errors, 0 collisions, 5 interface resets
0 babbles, 0 late collisions, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out

Switch# show interfaces atm 1 accounting

Atm1/1
Protocol Pkts In Chars In Pkts Out Chars Out
Spanning Tree 1521062 63720
CDP 35 11270 70 22610
```

show mac-address-table

The following examples are sample output from the **show mac-address-table** command:

Switch# **show mac-address-table dynamic interface atm 1/1 vlan 1**

Non-static Address Table:

Destination Address	Address Type	VLAN	Destination Port
0000.0022.2222	Dynamic	1	ATM1/1
0000.0022.2223	Dynamic	1	ATM1/1
0000.0022.2224	Dynamic	1	ATM1/1
0000.0022.2225	Dynamic	1	ATM1/1
0000.0022.2226	Dynamic	1	ATM1/1
0000.0022.2227	Dynamic	1	ATM1/1
0000.0022.2228	Dynamic	1	ATM1/1
0000.0022.2229	Dynamic	1	ATM1/1
0000.0022.222a	Dynamic	1	ATM1/1
0000.0022.222b	Dynamic	1	ATM1/1
0000.0022.222c	Dynamic	1	ATM1/1
0000.0022.222d	Dynamic	1	ATM1/1
0000.0022.222e	Dynamic	1	ATM1/1
0000.0022.222f	Dynamic	1	ATM1/1
0000.0022.2230	Dynamic	1	ATM1/1
0000.0022.2231	Dynamic	1	ATM1/1
0000.0022.2232	Dynamic	1	ATM1/1
0000.0022.2233	Dynamic	1	ATM1/1
0000.0022.2234	Dynamic	1	ATM1/1
0000.0022.2235	Dynamic	1	ATM1/1

Switch# **show mac-address-table self interface atm 1/1 vlan 1**

Static Address Table:

Destination Address	VLAN	Input Port	Output Ports
0100.0c00.0000	ALL	AT1/1	
0100.0c00.0001	ALL	AT1/1	
0100.0c00.0002	ALL	AT1/1	
0100.0c00.0003	ALL	AT1/1	
0100.0ccc.cccc	ALL	AT1/1	VL1
0100.0ccc.cccd	ALL	AT1/1	VL1
0100.0cdd.dddd	ALL	AT1/1	Fa0/1 Fa0/2 Fa0/3 Fa0/4 Fa0/5 VL1
0180.c200.0000	ALL	AT1/1	VL1
0180.c200.0001	ALL	AT1/1	VL1
0180.c200.0002	ALL	AT1/1	VL1
0180.c200.0003	ALL	AT1/1	VL1
0180.c200.0004	ALL	AT1/1	VL1
0180.c200.0005	ALL	AT1/1	VL1
0180.c200.0006	ALL	AT1/1	VL1
0180.c200.0007	ALL	AT1/1	VL1
0180.c200.0008	ALL	AT1/1	VL1
0180.c200.0009	ALL	AT1/1	VL1
0180.c200.000a	ALL	AT1/1	VL1

## Commands Changed to Support ATM Ports

---

```
Switch# show mac-address-table self address 0180.c200.0005 interface atm 1/1 vlan 1
```

```
Static Address Table:
```

Destination Address	VLAN	Input Port	Output Ports
0180.c200.0005	ALL	AT1/1	VL1

```
Switch# show mac-address-table static interface atm 1/1 vlan 1
```

```
Static Address Table:
```

Destination Address	VLAN	Input Port	Output Ports
0000.2468.1122	1	AT1/1	
0000.2468.3344	1	AT1/1	
0000.2468.5678	1	AT1/1	

### show port block

The following example is sample output from the **show port block** command:

```
Switch# show port block unicast atm 1/1
```

```
Atm1/1 is receiving unknown unicast addresses
```

### show port storm-control

The following example is sample output from the **show port storm-control** command:

```
Switch# show port storm-control atm 1/1
```

Interface	Filter State	Trap State	Rising	Falling	Current	Traps
Atm1/1	<inactive>	<inactive>	500	250	0	0

### show spanning-tree

The following is sample output from the **show spanning-tree** command for VLAN 1:

```
Switch# show spanning-tree vlan 1
```

```
Spanning tree 1 is executing the IEEE compatible Spanning Tree protocol.  
Bridge Identifier has priority 32768, address 0010.14d2.4700  
Configured hello time 2, max age 20, forward delay 15  
We are the root of the spanning tree.  
Topology change flag not set, detected flag not set  
Times: hold 1, topology change 35, notification 2  
hello 2, max age 20, forward delay 15  
Timers: hello 1, topology change 0, notification 0
```

```
Interface At2/1 (port 36) in Spanning tree 1 is FORWARDING  
Port path cost 10, Port priority 128  
Designated root has priority 32768, address 0010.14d2.4700  
Designated bridge has priority 32768, address 0010.14d2.4700  
Designated port is atml, path cost 0  
Timers: message age 0, forward delay 0, hold 0  
BPDU: sent 91676, received 1
```

show port monitor

The following is sample output from the **show port monitor** command:

```
Switch# show port monitor fastethernet 0/1

Monitor portPort being monitored
-----
FastEthernet0/1 Atm1/1
```

show version

The following is sample output from the **show version** command:

```
Switch# show version

Cisco Internetwork Operating System Technology Software
IOS Technology(tm) C2900XL Software (C2900XL-H-M), Version 11.2
Copyright (c) 1986-1998 by cisco Systems, Inc.
Compiled Fri 24-Apr-98 10:51 by mollyn
Image text-base: 0x00003000, data-base: 0x001A582C

ROM: Bootstrap program is C2900XL boot loader

Switch uptime is 1 hour, 32 minutes
System restarted by power-on
System image file is "flash:boot", booted via

cisco WS-C2916M-XL (PowerPC403GA) processor (revision 0x11) with 4096K/1024K bytes of
memory.
Processor board ID 0x06, with hardware revision 0x00
Last reset from power-on

Processor is running Enterprise Edition Software
16 Ethernet/IEEE 802.3 interface(s)

32K bytes of flash-simulated non-volatile configuration memory.
Base ethernet MAC Address: 00:53:45:00:02:00
Motherboard assembly number: 73-2193-07
Motherboard serial number: FAA02060647
System serial number: FAA0209Z06U

Module Ports  Model          Hw Version Sw Version
-----
1            1            WS-X2951-XL  0           12.0      (19990209:004908)
```



show file system

The following is sample output from the **show file systems** command:

```
System# show file systems

File Systems:

Size(b)Free(b)Type Flags  Prefixes
- - opaque rw  null:
- - opaque rw  system:
- - opaque rw  xmodem:
- - rcp      rw  rcp:
- - tftp     rw  tftp:
1728000218624  flash rw  flash:
1728000218624  unknown rw  zflash:
- - opaque rw  bs:
- - opaque rw  esp_slot1:
→ 3354624      2306560  unknown      rw  slot1:
```

## Commands Added to Support ATM Interfaces

The session command has been created so that users can log in to the ATM module CLI.

### session

Use the **session** privileged EXEC command to log in to the ATM module operating system and start a virtual CLI session. Enter the **exit** command or **Ctrl-G** to return to the switch CLI.

#### Syntax Description

<b>session</b>	Log in to the ATM module.
<i>number</i>	Slot number (1 or 2).

#### Command Mode

Privileged EXEC

#### Examples

The following example starts a CLI session on the ATM module in slot 1:

```
Switch# session 1
```

## Managing Configuration Conflicts

Certain combinations of port features conflict with one another. Table 1 lists the port features that are incompatible with the ATM interface. *No* means that the feature cannot be enabled on an ATM port.

---

**Note** If you try to enable incompatible features by using Cisco Visual Switch Manager (CVSM), it sends a warning message and prevents you from making the change. Reload the web page to refresh CVSM.

---

**Table 1** Port Configuration Conflicts

	ATM Port	Port Group	Port Security	Monitor Port	Multi-VLAN Port	Network Port
<b>ATM port</b>	–	No	No	No	No	No
<b>Port group</b>	No	–	No	No	Yes	Yes
<b>Port security</b>	No	No	–	No	No	No
<b>Monitor port</b>	No	No	No	–	No	No
<b>Multi-VLAN port</b>	No	Yes	No	No	–	Yes
<b>Network port</b>	No	Yes (source-based only)	No	No	Yes	–

## Related Documentation

The product documentation for the Catalyst 2900 series XL switches and modules is as follows:

*Catalyst 2900 Series XL Installation and Configuration Guide*

*Quick Start: Catalyst 2900 Series XL Cabling and Setup*

*Catalyst 2900 Series XL Enterprise Edition Software Configuration Guide*

*Catalyst 2900 Series XL Command Reference (online only)*

*Catalyst 2900 Series XL Modules Installation Guide*

*Release Notes for the Catalyst 2900 Series XL Modules*

*Catalyst 2900 Series XL Gigabit Ethernet Module Installation Guide*

*Catalyst 2900 Series XL ATM Modules Installation and Configuration Guide*

*Release Notes for the Catalyst 2900 Series XL ATM Modules*

## Cisco Connection Online

Cisco Connection Online (CCO) is Cisco Systems’ primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco’s customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: [cco.cisco.com](http://cco.cisco.com)
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact [cco-help@cisco.com](mailto:cco-help@cisco.com). For additional information, contact [cco-team@cisco.com](mailto:cco-team@cisco.com).

---

**Note** If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or [tac@cisco.com](mailto:tac@cisco.com). To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800 553-6387, 408 526-7208, or [cs-rep@cisco.com](mailto:cs-rep@cisco.com).

---

## Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more current than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription. You can also access Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

If you are reading Cisco product documentation on the World Wide Web, you can submit comments electronically. Click **Feedback** in the toolbar and select **Documentation**. After you complete the form, click **Submit** to send it to Cisco. We appreciate your comments.

---

This document is to be used in conjunction with the documents listed in the "Related Documentation" section.

Access Registrar, AccessPath, Any to Any, AtmDirector, CCDA, CCDE, CCDP, CCIE, CCNA, CCNP, CCSI, CD-PAC, the Cisco logo, Cisco Certified Internetwork Expert logo, CiscoLink, the Cisco Management Connection logo, the Cisco NetWorks logo, the Cisco Powered Network logo, Cisco Systems Capital, the Cisco Systems Capital logo, Cisco Systems Networking Academy, the Cisco Technologies logo, ControlStream, Fast Step, FireRunner, GigaStack, IGX, JumpStart, Kernel Proxy, MGX, Natural Network Viewer, NetSonar, Network Registrar, Packet, PIX, Point and Click Internetworking, Policy Builder, Precept, RouteStream, Secure Script, ServiceWay, SlideCast, SMARTnet, StreamView, The Cell, TrafficDirector, TransPath, ViewRunner, VirtualStream, VisionWay, VlanDirector, Workgroup Director, and Workgroup Stack are trademarks; Changing the Way We Work, Live, Play, and Learn, Empowering the Internet Generation, The Internet Economy, and The New Internet Economy are service marks; and Asist, BPX, Catalyst, Cisco, Cisco IOS, the Cisco IOS logo, Cisco Systems, the Cisco Systems logo, the Cisco Systems Cisco Press logo, Enterprise/Solver, EtherChannel, EtherSwitch, FastHub, FastLink, FastPAD, FastSwitch, IOS, IP/TV, IPX, LightStream, LightSwitch, MICA, NetRanger, Registrar, StrataView Plus, Stratm, Telerouter, and VCO are registered trademarks of Cisco Systems, Inc. in the U.S. and certain other countries. All other trademarks mentioned in this document are the property of their respective owners. (9903b R)

Copyright © 1999, Cisco Systems, Inc.  
All rights reserved.