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Version 2.1(1a) Configuration Note

This Configuration Note, Version 2.1(1a), contains the following information:

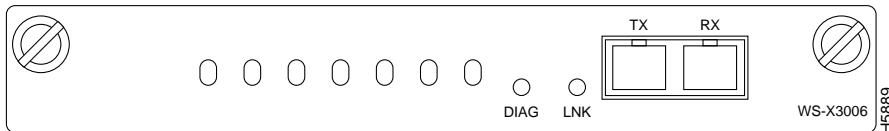
- Description of the Catalyst 3000 series ATM expansion module
- Introduction and information specific to the single-mode fiber (SMF) WS-X3006B model of the ATM expansion module.
- Information common to the WS-X3006A and WS-X3006B ATM expansion modules.
- Installation of the ATM expansion module.

For detailed information about configuring a Catalyst 3000 series ATM Expansion module, refer to the Installation and Configuration Guide of an appropriate model of the Catalyst 3000 series switch.

The WS-X3006 ATM Expansion Module

The WS-X3006 is a single-port ATM expansion module that is used to establish a high-speed 155 Mbps ATM connection between Catalyst 3000 Stack devices and ATM networks.

Figure 1 The ATM Expansion Module



Two versions of the Catalyst 3000 series switch ATM expansion module are now available:

- WS-X3006A for multimode fiber (MMF) connection.
- WS-X3006B for single-mode fiber (SMF) connection.

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The WS-X3006B ATM Expansion Module

Note The WS-X3006B model of the ATM expansion module is only available as a Field Replaceable Unit. The orderable part number for the WS-X3006B model is WS-X3006B=.

The new WS-X3006B model of the ATM expansion module is installed, configured, and managed the same as the WS-X3006A model (refer to the Installation and Configuration Guide for additional information). The WS-X3006B is identified by the “WS-X3006B SINGLE MODE ATM” label on the faceplate.

Note When using the Configuration menus to check the status of the WS-X3006B, the Module Information menu lists the WS-X3006B as “Model WS-X3006A.” To verify that the WS-X3006B is installed, check the Revision field in this menu; the Revision field displays “1” for the WS-X3006A and “2” for the WS-X3006B

The following section describes the cabling specifications for the WS-X3006B ATM expansion module.

WS-X3006B Cabling Specifications

Note The WS-X3006A ATM module’s network port is an OC-3 interface with an SC Duplex connector that uses 62.5/125 multimode fiber-optic cable rated for 155 Mbps ATM data transfer rate. The WS-X3006A module supports cable lengths up to 2 km.

The WS-X3006B ATM expansion module cabling specifications are listed in Table 1.

Table 1 WS-X3006B Cabling Specifications

Function	Specification
Optical Specifications:	
Transmitter output power	-14 to -8 dBm
Receiver sensitivity	-32.5 to -8 dBm
Wavelength	1261 to 1360 nm
Optical source	Laser
Maximum station-to-station cabling distance	6.2 mi (10 km)
Fiber Type	8.3 x 125 micron core

WS-X3006A and WS-X3006B Specifications

The WS-X3006 ATM expansion modules perform packet/cell conversions. Incoming data cells enter through the ATM physical interface and are processed by the module and converted to packets at network layer 2. Outbound data is converted from packets to cells and transmitted through the ATM physical interface.

The following table (Table 2) displays the specifications for the WS-X3006 ATM expansion modules.

Table 2 WS-X3006A and WS-X3006B Specifications

Function	Specification
Throughput	65,000 packets per second in each direction
Number of VLANs	64
Number of SVCs	1912 in each direction
Number of PVPs	One
Packet Buffers	512K Bytes in each direction
Operating Temperature	10 to 40 degrees Centigrade
Non-operating Temperature	-25 to 75 degrees Centigrade
Relative Humidity: operating	8 to 80%, non-condensing
Non-operating Altitude	40,000 feet
Safety	UL 1950 UL-C EN 60950 CE Mark
EMI Certifications	FCC Class A (Part 15) EN 55022 A VCCI Class 1

Installing a Catalyst 3000 Series Expansion Module

The Catalyst 3000 series expansion modules can be inserted in either of the two expansion slots in the front of a Catalyst 3000 series switch (see Figure 2).

Use the following steps when installing a module into an expansion slot of the Catalyst chassis.



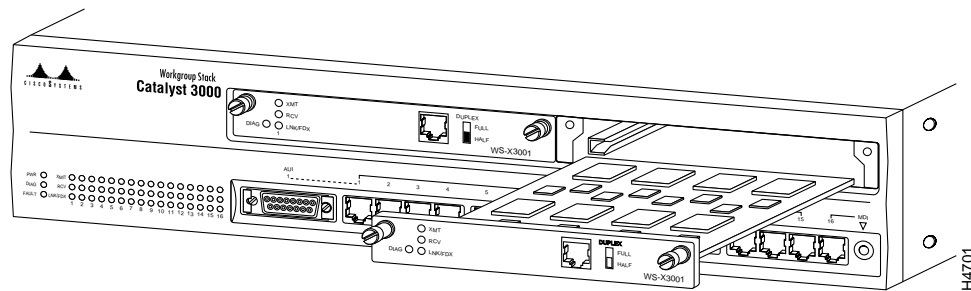
Caution The Catalyst 3000 series expansion modules are *not* hot-swappable. Power must be disconnected from the Catalyst chassis before an expansion module is inserted or removed.

Caution Do not touch the components or connectors on the expansion module. Do not touch cable connector pins when the other end is plugged in. Damage may result from static discharge.

Caution During installation, the connector on the expansion module must line up evenly with the connector inside the expansion slot. Misalignment may cause the connector pins to bend. When inserting the module into the expansion slot, be sure that the board is level and that the left and right sides slide evenly into the slot.

- Step 1** Disconnect the power to the Catalyst 3000 series switch.
- Step 2** If there is a blank cover over the expansion module slot, or if the slot has an installed module, remove it by unscrewing the two attachment screws.
- Step 3** Hold the module by the edges to prevent static damage. Be careful not to touch the top or bottom.
- Step 4** Slide the module into the slot evenly, taking care to line up the edges with the guides.

Figure 2 Inserting a Catalyst 3000 Series Expansion Module



- Step 5** Seat the module by pressing the front of the module with your thumbs.
- Step 6** Secure the module to the chassis by tightening the thumb (panel) screws at the left and right edges of the expansion modules front panel. Do not overtighten the screws.
- Step 7** Return power to the switch.

Connecting Cables to ATM Expansion Module Ports

The ATM expansion module is a full-duplex device. For its multiple VLAN (virtual LAN) features to be enabled, The ATM module must be installed in an enhanced version of the Catalyst switch. Refer to a Catalyst 3000 series Installation and Configuration Guide for more information on the differences between enhanced and unenhanced versions.

(If the ATM module is installed in a unenhanced version of the Catalyst switch, the unit supports creation of a single VLAN within its Stack, but does not support creation of multiple-stack VLANs.)

Use the following information to connect cables to the front of the ATM module:

Observe the following warnings and notes when cabling an expansion module with fiber-optic cable:



Warning Laser radiation is present when the system is open.

Warning Do not stare into the laser beam.

Step 1 Determine that you have the proper cable.

Step 2 Connect an ATM cable from a switch or network device to the SC Duplex ports on the front of the expansion module.

Step 3 Verify that the connection has the proper polarity. Be sure the Tx connector on the ATM module is linked to the Rx connector on the other device, and that the Rx connector on the ATM module is linked to the Tx connector on the other device. (ATM Duplex SC connectors are “keyed” to indicate proper polarity, but the polarity of your connector cables may not be clearly marked.)

Checking the Installation

The following tables (Table 3 and Table 4) describe the connectors, LEDs, and switches on the WS-X3006A/B module.

Table 3 ATM Expansion Module LEDs

Name	Description
LINK	Off = link not detected Green = link detected
DIAG	Running self-diagnostic or if ATM module fails

Table 4 ATM Expansion Module Connector

Name	Description
Network Port	SC type optical fiber connector

When the link is established, the LINK LED is on. The LED should be green. If the LED is not on, or if the LED is an amber color, try the following tests:

- Check the cable connections
- Try swapping the TX/RX fiber connectors at one end
- Verify that you are using the correct type of cable
- Test whether the cable is bad by trying a different one
- Check the power-up diagnostics to see if any problems were reported

If the above tests do not correct the problem, contact Cisco support.

If, after installation, there is poor system performance or the ATM module does not work at all, remove the module and check for any damage or bent connector pins. You may need a bright light to see inside the expansion module slot to check for bent pins. If you cannot find an immediate cause for the problem, contact Cisco support.

Obtaining Service and Support

For service and support for a product purchased from a reseller, contact the reseller. Resellers offer a wide variety of Cisco service and support programs, which are described in the section “Service and Support” in the information packet that shipped with your product.

Note If you purchased your product from a reseller, you can access Cisco Connection Online (CCO) as a guest. CCO is Cisco Systems’ primary, real-time support channel. Your reseller offers programs that include direct access to CCO’s services.

For service and support for a product purchased directly from Cisco, use CCO.

Cisco Connection Online

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

Note If you purchased your product from a reseller, you can access CCO as a guest. Your reseller offers programs that include direct access to CCO’s services.

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- Telnet: 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.

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This document is to be used in conjunction with the *Catalyst 3000 series Configuration and Installation Guide* publication.

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