



# Collage 740 Option Cards Installation Guide

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# Mandatory regulations

## General requirements

The sections that follow outline the mandatory regulations governing the installation and operation of Collage 740 option cards. Adherence to these instructions is necessary to ensure that regulatory compliance requirements are met. For safe operation and servicing, the socket-outlet shall be installed near the equipment and shall be easily accessible. This equipment must be earthed.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference that may cause undesired operation.

## Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference that may cause undesired operation.

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## European Directives

The CE mark indicates that the requirements of the following European Directives have been met

- 89/336/EEC Electromagnetic Compatibility Directive
- 73/23/EEC Low Voltage Directive
- 93/68/EEC CE Marking Directive

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

## Industry Canada

This Class A digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

*Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.*

## Food and Drug Administration (FDA)

The product complies with FDA 21 CFR 1040.10 and 1040.11 regulations which govern the safe use of lasers.

## Acknowledgments

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## Safety information: read this first

The following icons are used throughout the guide for safety purposes. You are advised to read, and understand clearly, any procedure marked with these icons.

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**Hazard:** A hazard icon calls attention to a procedure in the installation manual which, if not correctly performed, could result in injury or loss of life. Do not proceed beyond a section marked by this symbol until you fully understand the procedure and can meet the required conditions.

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**Warning:** A warning icon indicates the presence of a hazardous voltage.

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## Informations de sécurité: lisez attentivement le passage suivant, avant toute autre manipulation

Les icônes suivantes sont utilisées tout au long de ce guide pour les informations de sécurité.



**Danger:** Une icône de DANGER avertit qu'il existe une procédure spécifique dans le manuel d'installation, si celle-ci n'est pas scrupuleusement respectée, l'utilisateur prend le risque d'une blessure grave, voir la perte de vie. N'avancez pas dans une section qui est marquée par cette icône avant de comprendre entièrement la procédure en question. Assurez-vous de bien remplir les conditions nécessaires.

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**Attention:** Une icône d'avertissement indique la présence d'un voltage dangereux.

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## Sicherheitsinformation: zuerst lesen

Die folgenden Symbole werden in diesem Handbuch aus Gründen Ihrer Sicherheit verwendet. Wir raten Ihnen jede Prozedur, die mit diesen Symbolen gekennzeichnet ist, aufmerksam zu lesen und genau zu verstehen.



**Gefahr:** Das Gefahrensymbol macht auf jene Verfahren im Installationshandbuch aufmerksam, die zu Verletzung oder Tod führen können, wenn die Prozedur nicht richtig ausgeführt wird. Fahren Sie unter keinen Umständen fort, wenn Sie dieses Symbol sehen, bevor Sie die Prozedur verstehen und die notwendigen Voraussetzungen erfüllen können.

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**Warnung:** Das Warnsymbol weist auf vorliegende, gefährliche Stromspannung hin.

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## Safety information: associated documents

To make sure you do not injure yourself or damage your Madge product:

English	Read Madge Networks Safety Guidelines (part number: 102-002) before installing the product.
Chinese	在安装产品之前, 请读 Madge 网络产品安全指示 (102-002 部分).
Dansk	Læs Retningslinjer for sikkerhed mht. Madge netværk (delnummer: 102-002), før produktet installeres.
Nederlands	Lees eerst de Richtlijnen voor de veiligheid van Madge netwerken (artikelnummer 102-002) voordat u dit product installeert.
Suomi	Lue Madge-verkkojen turvaohjeet (osa numero: 102-002) ennen tuotteen asennusta.
Français	Lire les Règles de sécurité pour réseaux Madge (Référence No : 102-002) avant d'installer le produit.
Deutsch	Vor dem Installieren des Produkts die Sicherheitsrichtlinien für Madge Netzwerke (Teilenummer: 102-002) lesen!
Greek	<b>Διαβάστε τις Οδηγίες Ασφαλείας για Δίκτυα Madge</b> (αριθμός τεμαχίου: 102-002) πριν εγκαταστήσετε το προϊόν.

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Hebrew	<b>Madge</b> קרא את הוראות הבטיחות לרשתות (מס' פריט: 102-002) לפני התקנת המוצר.
Italiano	Leggere le Linee orientative per la sicurezza delle reti Madge (n. parte: 102-002) prima di installare il prodotto.
Japanese	製品を取り扱う前に、マジ ネットワークスのセーフティ ガイドラインをお読みください。 (部品番号: 102-002)
Norsk	Les Sikkerhet for Madge-nettverk (delnr. 102-002) før du installerer produktet.
Português	Leia as Instruções de Segurança dos Produtos Madge Networks (ref.a 102-002) antes de instalar o produto.
Español	Antes de instalar el producto, lea las Normas de seguridad de las redes Madge (número de pieza: 102-002).
Svenska	Läs gärna "Madge nätverk: säkerhetsföreskrifter" (delnummer: 102-002) innan du installerar produkten.

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## Introduction

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This chapter describes the Collage 740 Backbone ATM Switch and the option cards the Collage 740 supports.

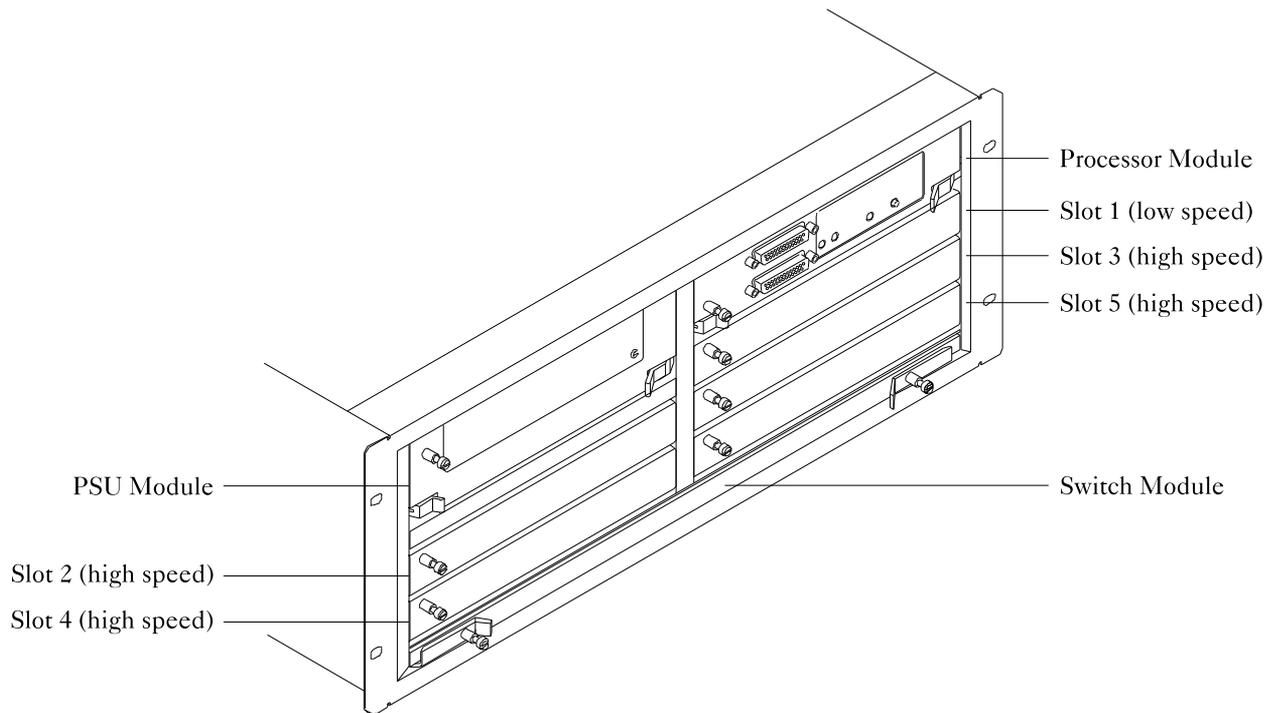
### About the Collage 740 Backbone ATM Switch

The Collage 740 Backbone ATM Switch is a high-performance Asynchronous Transfer Mode (ATM) switch that is designed for building and campus backbone applications, high-performance centralized servers, and power-user environments. Its advanced architecture, incorporating Madge Cellrunner switching technology, can support very high traffic loads with no data loss or breaks in communication. The Collage 740 also implements LAN emulation components. LAN emulation enables legacy LAN applications to use a transparent ATM transport medium, so endstations on existing Token Ring and Ethernet LANs can communicate with ATM endstations.

The Collage 740 has five option slots that support the installation of option cards. Option slots 2 through 5 are high-speed option slots, which each provide 622Mbps capacity. Option slot 1 is a low speed option slot, which provides 155Mbps capacity.

The Collage 740 supports a range of optional modules that enable you to customize the switch to accommodate applications that are appropriate to your networking requirements.

*Figure 1.1 Front panel of the Collage 740*



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The Collage 740 features two types of option card slot.

*Table 1.1 Low-speed and high-speed option slots*

Slot	Type	Description
1	Low speed	Slot 1 provides a 155Mbps data path to the Switch Module and supports the installation of low-speed option cards.
2, 3, 4, 5	High speed	Slots 2 through 5 each provide a 622Mbps data path to the Switch Module and support the installation of high-speed option cards. When you install an option card such as the Collage 743 155 Mbps Fiber Option Card, the bandwidth is divided to provide four 155Mbps output ports.

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## About the Collage 740 option cards

This section describes the option cards listed in Table 1.2.

*Table 1.2 Collage 740 option cards*

Option card	Rate	Media	Part number
Collage 743	155Mbps	4 Multi-Mode Fiber (MMF)	57-73
Collage 763	155Mbps	4 Single-Mode Fiber (SMF)	57-79
Collage 764	155Mbps	2 Multi-Mode Fiber (MMF) 2 Single-Mode Fiber (SMF)	57-80
Collage 744	155Mbps	4 Category 5 UTP	57-76



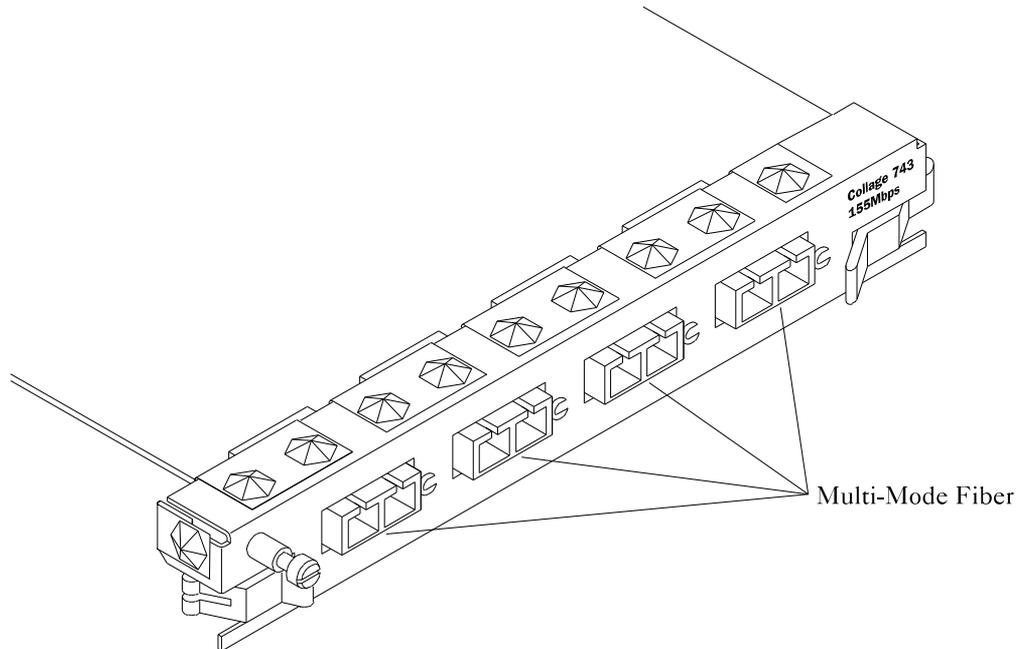
**Warning:** If you are installing an option card that supports fiber-optic cable, always replace the protective covers on the connectors when you remove the signal cables. Laser radiation may be emitted from the Single-Mode Fiber (SMF) ports of Collage 763 and Collage 764 modules when no cable is connected.

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## Collage 743 155 Mbps Fiber Option Card

The Collage 743 155 Mbps Fiber Option Card provides four ATM interfaces via SC duplex connectors to Multi-Mode Fiber (MMF) physical media. Each interface provides a data rate of 155.52 Mbps, conforming to ATM Forum User-to-Network Interface (UNI) specifications and International Telecommunications Union (ITU) I.432 recommendations.

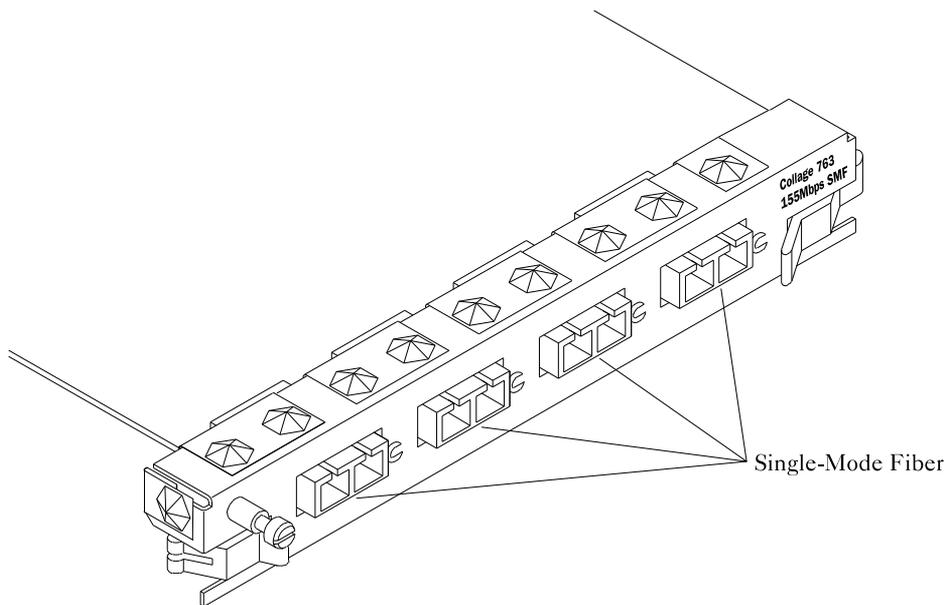
*Figure 1.2 Collage 743 155 Mbps Fiber Option Card*



## Collage 763 155 Mbps Fiber Option Card

The Collage 763 155 Mbps Fiber Option Card provides four ATM interfaces via SC duplex connectors to Single-Mode Fiber (SMF) physical media. Each interface provides a data rate of 155.52 Mbps, conforming to ATM Forum User-to-Network Interface (UNI) specifications and International Telecommunications Union (ITU) I.432 recommendations.

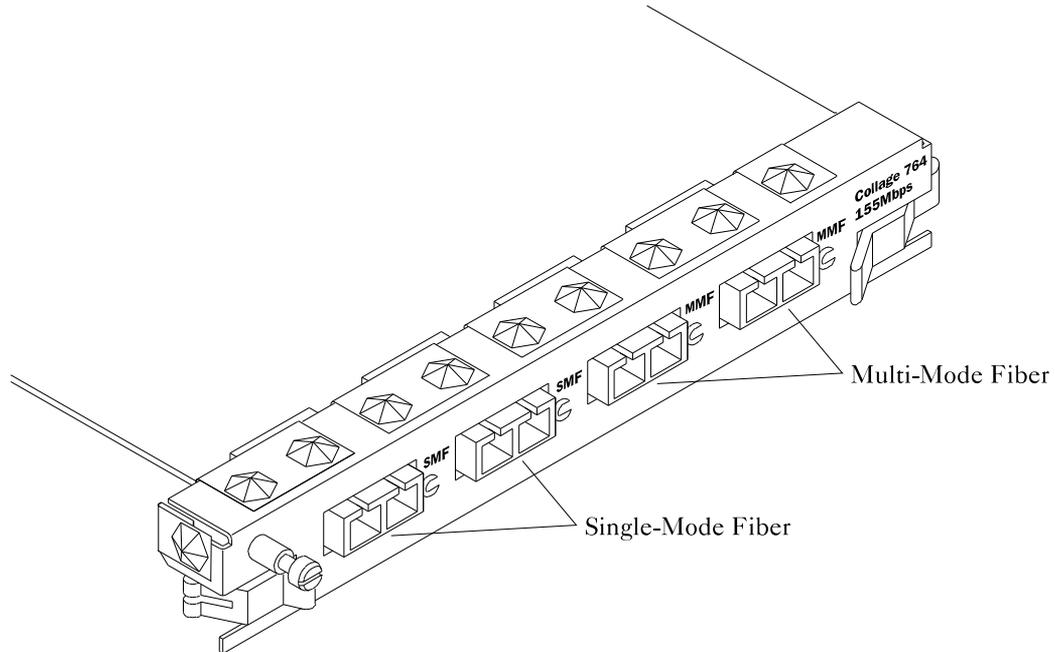
*Figure 1.3 Collage 763 155 Mbps Fiber Option Card*



## Collage 764 155 Mbps Fiber Option Card

The Collage 764 155 Mbps Fiber Option Card provides four ATM interfaces via SC duplex connectors. Two of the interfaces are for Single-Mode Fiber (SMF) physical media, and two are for Multi-Mode Fiber (MMF) media. The interfaces provide a data rate of 155.52 Mbps, conforming to ATM Forum User-to-Network Interface (UNI) specification and ITU I.432 recommendations.

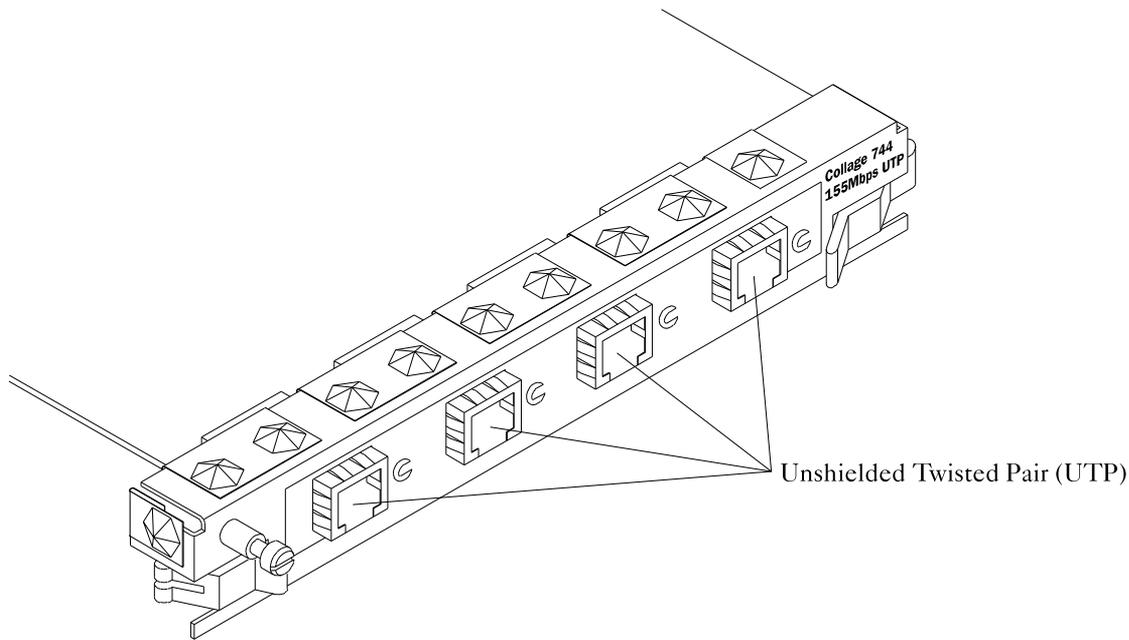
*Figure 1.4 Collage 764 155 Mbps Fiber Option Card*



## Collage 744 155 Mbps UTP Option Card

The Collage 744 155 Mbps UTP Option Card provides four ATM interfaces via RJ-45 connectors to Category 5 Unshielded Twisted Pair (UTP) physical media. Each interface provides a data rate of 155.52 Mbps, conforming to ATM Forum User-to-Network Interface (UNI) specifications and International Telecommunications Union (ITU) I.432 recommendations.

*Figure 1.5 Collage 744 155 Mbps UTP Option Card*



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## Upgrading software

The Collage 740 is a software-upgradable product, which means you can extend the functionality of the switch by downloading new microcode software. The *Collage 740 Backbone ATM Switch User Guide* (part number: 100-239) contains information about upgrading the Collage 740 software. Make sure the manual is up-to-date for the software that you download to the Collage 740.



## Installing option cards

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To make sure you do not injure yourself or damage your Madge product, always refer to the installation manual and the *Madge Safety Guide* (part number: 100-002) before installing hardware. If you are in doubt, contact your customer service representative.

The Collage 740 is a chassis-based switch. The Collage 740 is provided with a PSU Module, a Processor Module, and a Switch Fabric pre-installed. The pre-installed modules perform functions vital to the integrity of the switch, and can be replaced with modules of the same type should they develop a fault. The Collage 740 chassis also supports the installation of option cards into the five option slots, numbered 1 through 5. You need to install at least one option card that carries ATM traffic to communicate with other ATM devices.

This chapter provides guidelines for inserting or removing option cards; refer to the *Collage 740 Backbone ATM Switch Installation Guide* (part number: 100-238) for information about inserting and removing the pre-installed modules.



**Warning:** Electrical current from power, telephone, and communications cables is hazardous. To avoid an electrical shock when installing or moving the product or devices attached to the product, connect and disconnect cables as shown in the *Madge Safety Guide* (part number: 100-102).

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When you install an option card, you may need to download new code to the Collage 740. To find out whether your Collage 740 software supports the option card that you plan to install, refer to the *Collage 740 Backbone ATM Switch User Guide* (part number: 100-239).

## Prerequisites

This section lists the parts and tools you require to install the option card.



**Note:** Read through the entire installation procedure before starting the installation.

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### Parts and tools

To install the option card, you need the following parts and tools:

- 3/8" flat-blade screwdriver for the installation screws.
- Electrostatic discharge (ESD) cord and wrist strap.

### Associated manuals

The Collage 740 is a software-upgradable product, which means you can expand the functionality of the switch by downloading new microcode software. The *Collage 740 Backbone ATM Switch User Guide* (part number: 100-239) contains information about configuring the Collage 740 with a particular software release. Make sure the manual is up-to-date for the software that you have downloaded to the Collage 740.

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## Electrical considerations

This section provides important information about working with electrical equipment and preventing electrostatic discharge. This section also provides information about online insertion and removal, which is also known as hot swapping

### Electrical equipment

Follow these basic guidelines when working with any electrical equipment:

- Before beginning any procedures requiring access to the interior of the unit, locate the emergency power-off switch for the room in which you are working.
- Before moving the unit, disconnect all power and external cables.
- If potentially hazardous conditions exist, do not work alone.
- Never assume that power is disconnected from a circuit; always check.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.
- Carefully examine your work area for possible hazards such as moist floors and ungrounded power cables.
- Only connect the product to a correctly wired and earthed receptacle.

### Preventing electrostatic discharge damage

Electrostatic discharge (ESD) damage, which can occur when electronic cards or components are improperly handled, results in complete or intermittent failures. Collage 740 option cards comprise a printed circuit board that is fixed to a metal carrier. Electromagnetic interference (EMI) shielding and connectors are integral components of the carrier. Although the metal carrier helps protect the board from ESD, whenever you handle option cards you must use a preventative antistatic strap. Handle the option card by the metal carrier and the edges of the card only; never touch components on the board or the connector pins.

Observe the following guidelines to help prevent ESD damage:

- Always use an ESD-preventative wrist or ankle strap and ensure that it makes good skin contact.
- 



**Hazard:** For safety, periodically check the resistance value of the antistatic strap. The measurement should be between 1 and 10 megaohms.

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- Connect the equipment end of the strap to the metal case of the Collage 740.
  - Handle the option card by the metal carrier and the edges of the card only; never touch components on the board or the connector pins.
  - Place a removed option card on an antistatic surface or in a static shielding bag. If the component will be returned to the factory, immediately place it in a static shielding bag.
  - Avoid contact between the option card and clothing. The wrist strap only protects the board from ESD voltages on the body; ESD voltages on clothing can still cause damage.
- 



**Warning:** Do not attempt to remove the backplate on the rear panel of the Collage 740. Removing the backplate exposes you to hazardous voltages that could cause injury or loss of life.

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## Guidelines for online insertion and removal

The Collage 740 and option cards support the online insertion and removal of option cards into option slots 1 through 5. This means you can insert or remove option cards without disconnecting the power cable. This is also known as hot swapping.



**Note:** Close any open connections for ports on the option card and shut down the option card slot before removing an option card. For information about removing an option card, see “Removing an option card”.

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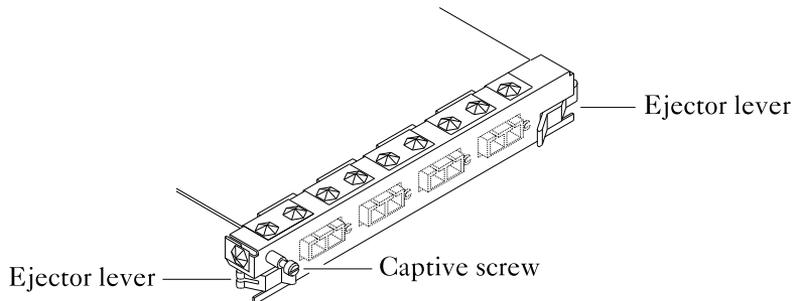
When you insert an option card, the Collage 740 needs to download code to the card to configure it. If your revision of Collage 740 software supports automatic configuration of the option card you want to install, the option card works as soon as you have completed the installation. For more information, refer to the *Collage 740 Backbone ATM Switch User Guide* (part number: 100-239).

If you replace an option card with another option card of the same type, the Collage 740 configures the replacement option card in the same state as the previously installed option card. However, if you remove an option card then install a different type of card into the option slot, or you install an option card into a previously unpopulated option slot, the new option card is initialized in its default state.

## Inserting an option card

Each option card has two ejector levers, and a captive screw. For example, Figure 2.1 shows the ejectors and screw on the Collage 743 option card.

*Figure 2.1 Option card ejectors and captive screw*



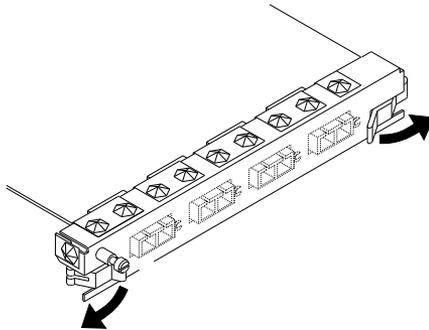
**Note:** Install the option card into option slot 2, 3, 4, or 5. Do not install the option card into slot 1, which is a low-speed option slot, as it will not function.

---

To insert an option card:

- 1 Using a flat-blade screwdriver, completely loosen the captive screw on the blanking plate from slot 2, 3, 4, or 5.
- 2 Remove the blanking plate by pulling the left-hand side of the plate away from the Collage 740. Keep the blanking plate in a safe place for future use.
- 3 Prepare the option card by pressing the ejectors away from the center of the card.

*Figure 2.2 Pressing ejectors away from the center of the card*



- 4 Line up the option card with the card guides of the empty option slot and, holding the ejectors with both hands, push the module towards the back of the unit.



**Note:** If the card does not slide into the chassis smoothly, do not force it. Check that the card is aligned with the card guides.

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- 5 When you are sure that the card is fully seated in the backplane, press the ejectors on the option card towards the center of the card. If the ejectors do not move easily, gently push the card towards the rear of the unit to make sure it is seated properly.
- 6 Using a flat-blade screwdriver, completely tighten the captive screw on the option card.
- 7 Connect the signal cables to the connectors on the option card.



**Note:** When you install an option card, the Collage 740 initializes it automatically using the default configuration.

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## Removing an option card

To remove an option card:

- 1 Close all active connections for ports on the option card.
- 2 Shut down the option card slot by connecting a management console to the switch and using the `hardware/linecard/shutdown` command, or by using TrueView Collage 740 Manager.

For information about the command-line interface, refer to the *Collage 740 Backbone ATM Switch User Guide* (part number: 100-239). For information about TrueView Collage 740 Manager, refer to the *TrueView Collage 740 Manager User Guide* (part number: 100-241).



**Note:** The `hardware/linecard/shutdown` command shuts down the slot and closes any outstanding connections for ports on the option card.

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The port LEDs on the option card should all be off, indicating that the slot has been shut down.

- 3 Disconnect the signal cables from the connectors on the option card.
- 4 Using a flat-blade screwdriver, completely loosen the captive screw on the option card.
- 5 Press the ejectors away from the option card and, holding the ejectors with both hands, remove the card. Place the option card on an antistatic mat or foam pad, or place it in an antistatic bag if you will return it to the factory.
- 6 Replace the blanking plate on the empty option slot (see “Replacing blanking plates”).

## Replacing blanking plates

If you are installing a module into an unused option card slot, remove the blanking plate and keep it in a safe place. If you are removing a module and leaving the slot empty, always insert a blanking plate into the empty slot and completely tighten the captive screw.

---



**Hazard:** When you remove a module or blanking plate, always replace it with another module or blanking plate. Never operate the product when the module slots are exposed except for short periods when you are replacing option cards.

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To screw a blanking plate into an empty option slot:

- 1 Push the metal part on the right-hand side of the blanking plate into the space on the right-hand side of the option slot.
- 2 Rest the left-hand side of the blanking plate on the mounting that houses the captive screw, on the left-hand side of the option slot.
- 3 Using a flat-blade screwdriver, completely tighten the captive screw.

## Replacing covers on fiber connectors

If you are installing an option card that supports fiber-optic cable, always replace the protective covers on the connectors when you remove the signal cables.

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**Note:** When no cable is connected to a Single-Mode Fiber (SMF) port, laser radiation may be emitted from the transmit socket.

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# Using the option cards

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This chapter provides recommended cable types and lengths for Collage 740 option cards, and explains the status indicators during startup and normal operation.

## Connecting fiber cables

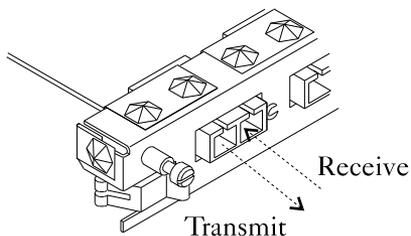
The Collage 743, Collage 763, and Collage 764 option cards are Single-Mode Fiber (SMF) and Multi-Mode Fiber (MMF) option cards that each provide four ATM interfaces via SC duplex connectors . Each interface provides a data rate of 155.52 Mbps, conforming to ATM Forum User-to-Network Interface (UNI) specifications and International Telecommunications Union (ITU) I.432 recommendations.

Always use the recommended type of cable, and observe the recommended maximum cable lengths (see Appendix A, “Technical specifications”).

### Connecting fiber cable to an SC duplex connector

When you connect fiber cables to a fiber option card such as the Collage 743, make sure you match the receive and transmit fibers to the correct sockets on the SC duplex connector.

*Figure 3.1 Receive and transmit sockets on SC duplex connector*



If your receive and transmit connectors are not physically joined, make sure you connect the fiber cables correctly:

- 1 Insert a fiber into the right-hand socket only.  
If the fiber is correct for the receive socket, the port LED turns red. If the LED does not turn red, insert the other fiber into the socket.
- 2 When the port LED is red, insert the other fiber into the left-hand transmit socket.  
The port LED should turn amber.

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## Connecting UTP cables

The Collage 744 option card provides four ATM interfaces via RJ-45 connectors to Category 5 Unshielded Twisted Pair (UTP) media. Each interface provides a data rate of 155.52 Mbps, conforming to ATM Forum User-to-Network Interface (UNI) specifications and International Telecommunications Union (ITU) I.432 recommendations.

Always use the recommended type of cable, and observe the recommended maximum cable lengths (see Appendix A, “Technical specifications”).

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## Understanding status indicators

The Collage 743, Collage 763, Collage 764, and Collage 744 option cards each have four ATM ports, and each port has an LED status indicator that provides information about the condition of the port.

### Status indicators during startup

During the startup tests, the Collage 740 sets the color of the LEDs on the option cards in the chassis. The color sequence is red, amber, then green, and the option slot sequence is Slot 2, Slot 3, Slot 4, Slot 5, and Slot 1.



**Note:** If any option slot does not contain an option card, it does not take part in the startup tests.

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If the Collage 740 fails the startup diagnostics, the Processor Module attempts to set the LEDs on any faulty option cards. However, the fault may prevent the Processor Module from setting the LEDs on the option card.

*Table 3.1 Option card LEDs during startup diagnostics*

LED color	Meaning
red	The port is faulty.
off	The port is operating normally. If a cable is connected, the LED displays the colors described in Table 3.2.

### Status indicators during normal operation

When the Collage 740 is operating, the LEDs indicate the status of the connection between the port and the ATM network as shown in Table 3.2.

*Table 3.2 Option card LEDs during normal operation*

LED color	Meaning
red	An error occurred at the physical level. Either framing was lost, cell delineation was lost, or the remote device is not receiving and has raised an alarm. The LED changes in real time, so you may only see it turn red for brief periods of time.
amber	The port is connected to the network, but it is not receiving or transmitting cells.
green	The port is connected to the network and is receiving or transmitting cells. Under moderate load, the LED appears amber and flickers green when the port receives cells. Under heavy load, the LED is constantly green.
off	No cable is connected to the port, or a cable is connected but the signal has been lost.



## Technical specifications

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This appendix provides:

- Physical specifications
- Ordering information

### Physical specifications

Table A.1 provides technical specifications for the Multi-Mode Fiber (MMF), Single-Mode Fiber (SMF), and Unshielded Twisted-Pair (UTP) interfaces.

*Table A.1 Physical specifications for MMF, SMF, and UTP interface*

Characteristic	MMF interface	SMF interface	UTP interface
Connectors	SC duplex		RJ-45
Cabling	62.5/125 $\mu\text{m}$	9/125 $\mu\text{m}$	Category 5 UTP
Frame format	OC-3/STM-1		
Cable length	2 km (1.2 miles)	15 km (9.3 miles)	100 m (328 feet)

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## Ordering information

You can order options and option cards for the Collage 740. You can also order the Collage 740 base product, and spares and replacement parts for the Collage 740.

This section lists part numbers for the option cards.

*Table A.2 Options card ordering information*

Part number	Description
57-73	Collage 743 155Mbps Fiber Option Card Provides 4 multi-mode fiber interfaces
57-79	Collage 763 155Mbps Fiber Option Card Provides 4 single-mode fiber interfaces
57-80	Collage 764 155Mbps Fiber Option Card Provides 2 multi-mode and 2 single-mode fiber interfaces
57-76	Collage 744 155Mbps UTP Option Card Provides 4 UTP interfaces

# Technical support services

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Technical support is available to all Madge customers.

To receive technical support:

- Use the PC Vendor G Forum on CompuServe.
- Use the Madge Networks section on NIFTY-Serve (only accessible in Japan)
- Email Technical Support (see “Telephone, fax, BBS, and email” on page 31)
- Telephone Madge Technical Support (see “Telephone, fax, BBS, and email” on page 31)

To get software upgrades and product information:

- Use the Bulletin Board System (BBS)
- Use the PC Vendor G Forum on CompuServe
- Use the Worldwide Web home page (<http://www.madge.com>)
- Use Madge Networks’ FTP server (<ftp.madge.com>)
- Contact your local Madge office or representative

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## Worldwide Web (WWW)

To access the Madge Networks service on the web, use either a web browser or FTP software.

### Using a web browser

To access the full home page service, enter the URL:

`http://www.madge.com`

To access the Japanese home page service, enter the URL:

`http://www.madge-jp.com`

### Using FTP software

If you do not have a web browser, you can still download new or updated software by using FTP software.

If you use FTP software:

- 1 Connect to `ftp.madge.com`
- 2 Connect to `ftp.madge-jp.com/pub`, for the Japanese service.  
The system prompts you for your login name.
- 3 Type `ANONYMOUS`  
The system prompts you for a password.
- 4 Type your full email address.

Once this is complete, you can issue file transfer commands.

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## Telephone, fax, BBS, and email

Region	Support Service	Support Number
Europe, Middle East, Africa	Telephone	+44 1628 858700
	Fax	+44 1628 858977
	BBS	+44 1628 858008
	Email	eurtech@madge.com
Americas	Telephone	800 876 2343
	BBS	+1 408 955 0262
	Email	us-suprt@madge.com
Asia, Australia, New Zealand	Telephone	+852 2593 9839
	BBS	+852 2593 9829
	Email	support@madge.com
Japan	Telephone	+81 3 5232 3275
	Fax	+81 3 5232 3276
	Email	support@madge.com

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## Toll-free regional support numbers

Country	Number
Americas	800 876 2343
Australia	02 9936 1739 *
Austria	0660 8366
Belgium	0800 10485
Denmark	800 17649
Finland	0800 118 074
France	05 90 82 50
Germany	0130 868828
Hong Kong	2593 9839 *
Israel	177 440 2530
Italy	1678 72092
Malaysia	800 4137

Country	Number
Netherlands	06022 7120
Norway	800 11759
Portugal	0505 44 4602
Singapore	800 852 3151
South Africa	0800 991013
Spain	900 974412
Sweden	020 793127
Switzerland ( <i>French</i> )	155 6432
Switzerland ( <i>German</i> )	155 1057
Thailand	2231 8191 *
United Kingdom	Lo-call: 0345 125539

\* Indicates local telephone numbers where the calls are charged at the normal rate

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## CompuServe

If you are a CompuServe member, access the Madge Networks Section by typing GO MADGE at the ! prompt or, load a Windows application such as WinCIM, and type MADGE in the Go option from the Services menu.

Madge Networks' service on CompuServe provides the following facilities:

- Message section
- Library
- Conference area
- Latest software releases

For customers who have not experienced the benefits that access to CompuServe can bring, Madge Networks offers a free introductory membership. This includes a user-ID and password, one month's access to all of CompuServe's Basic services, and an introductory US\$15 usage credit that enables you to access the Madge Networks Section of the PC Vendor G Forum and CompuServe's other Extended and Premium services. You also get complimentary subscription to the monthly CompuServe magazine. To obtain your free introductory membership, call:

Area	Number
UK	0800 289378
Germany	0130 3732
Rest of Europe	+44 272 255111
Americas	800 524 3388
Rest of the world	+1 614 457 0802

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## NIFTY-Serve

This is an equivalent service to CompuServe but is only available in Japan.

Log into NIFTY-Serve and, at the > prompt, type GO FLANVA.

## Bulletin Board System (BBS)

Madge Networks maintains a free 24-hour Bulletin Board System (BBS) that provides the latest software and technical support information.

You need a modem to access the BBS. We recommend you use an ANSI (VT100) terminal emulator (for example, ProComm) with your serial port set to: 8-bit data, NO parity check, and ONE stop bit. This is because it is likely that any other setup will cause transmission errors. The BBS supports modem speeds of up to 14 400 baud (with MNP5). Download protocols supported are X Modem, Y Modem, and Z Modem.

Because the BBS is an open system, anyone can log in. The first time that you log in, the system prompts you for your name and for a password. It also asks you to complete a brief questionnaire. Please take the time to complete the questionnaire. The system displays Madge's license agreement and asks you to acknowledge it.

When you log in on subsequent occasions, make sure you enter the same name and password that you entered when you first logged in. The system tells you the last time that you logged in, asks whether you want to read the bulletins, and tells you whether there are any new mail messages for you.

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To find out more about the Madge BBS service call:

Area	Number
Germany	0180 535 7273
Rest of Europe	+44 1628 858008
Americas	+1 408 955 0262
Asia, Australia, New Zealand	+ 852 2593 9829

## Madge FaxBack

The Madge FaxBack Product Information Service (based in the United States) is an international service for all Madge customers.

To request technical support documents, marketing documents, and information about seminars and events organized by Madge Networks, phone +1 408 383 1002.



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