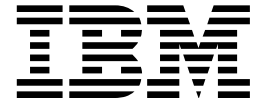


Multiprotocol Switched Services Client
Universal Feature Card



Planning and Installation Guide

Multiprotocol Switched Services Client
Universal Feature Card



Planning and Installation Guide

Note

Before using this information and the product it supports, be sure to read the general information in Appendix A, "Notices and Product Warranty" and "Electronic Emission Notices" on page A-1.

First Edition (April 1998)

This edition applies to the IBM Multiprotocol Switched Services Client Universal Feature Card.

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Contents

Safety Information	vii
About This Manual	xvii
Who Should Read This Manual	xvii
Prerequisite Publications	xvii
Related Publications	xviii
Chapter 1. Introduction to the MSS Client Universal Feature Card	1-1
Functions of the MSS Client	1-2
Physical Characteristics	1-2
ATM Port	1-3
MAC Address Label	1-3
LED Indicators	1-3
Planning for Installation	1-3
MSS Client Slot Restrictions	1-4
MSS Client Installation Recommendation	1-4
Dimensions and Weight	1-4
Operating Environment	1-4
Chapter 2. Installation	2-1
Updating the Base Switch Microcode	2-1
Installing the MSS Client in the Base Switch	2-1
Cabling	2-4
Verifying Operation	2-5
Configuring the MSS Client	2-6
Removing the MSS Client	2-6
Chapter 3. Troubleshooting	3-1
Troubleshooting the UFC	3-1
Obtaining Service	3-1
Obtaining Software	3-1
Parts Listing	3-1
Appendix A. Notices and Product Warranty	A-1
Electronic Emission Notices	A-1
Federal Communications Commission (FCC) Statement	A-1
Industry Canada Class A Emission Compliance Statement	A-1
Avis de conformité aux normes d'Industrie Canada	A-1
EMC Directive 89/336/EEC Statement	A-2
Japanese Voluntary Control Council for Interference (VCCI) Statement	A-2
CISPR22 Compliance Statement	A-2
Korean Communications Statement	A-3
Class 1 LED Statement	A-3
Class 1 Laser Statement	A-3
Trademarks	A-3
Warranty	A-4
Index	X-1


Figures

1-1.	The IBM MSS Client	1-1
1-2.	The IBM MSS Client Faceplate	1-2
1-3.	Slot Restrictions	1-4
2-1.	Removing the UFC Slot Covers	2-2
2-2.	Installing the UFC in a Standalone Switch	2-3
2-3.	Installing the UFC in a Switch Module	2-4
2-4.	Cabling the UFC	2-5

Tables


1-1.	UFC Status LEDs	1-3
1-2.	ATM Port Status LEDs	1-3
1-3.	MSS Client Cables	1-4


Safety Information

 **Danger:** Before you begin to install this product, read the safety information in *Caution: Safety Information—Read This First*, SD21-0030. This booklet describes safe procedures for cabling and plugging in electrical equipment.


 **Caution:** Danger of explosion if battery is incorrectly replaced.


Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.


 **Gevaar:** Voordat u begint met de installatie van dit produkt, moet u eerst de veiligheidsinstructies lezen in de brochure *PAS OP! Veiligheidsinstructies—Lees dit eerst*, SD21-0030. Hierin wordt beschreven hoe u elektrische apparatuur op een veilige manier moet bekabelen en aansluiten.

 **WAARSCHUWING:** Explosiegevaar als de batterij door een verkeerde batterij wordt vervangen.

Vervang alleen door hetzelfde of gelijkwaardige type dat door de fabrikant is aanbevolen. Volg voor het wegdoen van gebruikte batterijen de instructies van de fabrikant.

 **Danger:** Avant de procéder à l'installation de ce produit, lisez d'abord les consignes de sécurité dans la brochure *ATTENTION: Consignes de sécurité—A lire au préalable*, SD21-0030. Cette brochure décrit les procédures pour câbler et connecter les appareils électriques en toute sécurité.

 **Perigo:** Antes de começar a instalar este produto, leia as informações de segurança contidas em *Cuidado: Informações Sobre Segurança—Leia Isto Primeiro*, SD21-0030. Esse folheto descreve procedimentos de segurança para a instalação de cabos e conexões em equipamentos elétricos.

 **CUIDADO:** Perigo de explosão, se a bateria for substituída incorretamente.

Substitua apenas por uma bateria igual ou equivalente, recomendada pelo fabricante. Descarte as baterias usadas de acordo com as instruções do fabricante.



危險：安裝本產品之前，請先閱讀
"Caution: Safety Information--Read
This First" SD21-0030 手冊中所提
供的安全注意事項。這本手冊將會說明
使用電器設備的纜線及電源的安全程序。



注意

如果不正确地更换电池，它将会有爆炸的危险。

仅可用制造商推荐的同一种或相同类型的电池进行更换。
按制造商的指示来销毁使用过的电池。



注意

更換電池不當時，會有爆炸的危險。

請更換相同的電池或製造商所建議的型號相當。
請依製造商的指示回收廢棄的電池。



Opasnost: Prije nego što počnete sa instalacijom produkta, pročítajte naputak o pravilima o sigurnom rukovanju u Upozorenje: Pravila o sigurnom rukovanju - Prvo pročítaj ovo, SD21-0030. Ovaj privitak opisuje sigurnosne postupke za priključivanje kabela i priključivanje na električno napajanje.



UPOZORENJE

Ako se kod zamjene baterija nepravilno uloži, postoji opasnost od eksplozije.

Zamijenite samo s istim tipom ili istovrsnim dijelom kojeg preporuča proizvođač.
Uklonite istrošene akumulatore prema uputama proizvođača.



Upozornění: než zahájíte instalaci tohoto produktu, přečtěte si nejprve bezpečnostní informace v pokynech „Bezpečnostní informace“ č. 21-0030. Tato brožurka popisuje bezpečnostní opatření pro kabeláž a zapojení elektrického zařízení.



POZOR

Nebezpečí výbuchu při nesprávné výměně baterie.

Zaměňte pouze stejným nebo ekvivalentním dílem, doporučeným výrobcem.
Použité baterie zlikvidujte v souladu s instrukcemi výrobce.



Fare! Før du installerer dette produkt, skal du læse sikkerhedsforskrifterne i *NB: Sikkerhedsforskrifter—Læs dette først* SD21-0030. Vejledningen beskriver den fremgangsmåde, du skal bruge ved tilslutning af kabler og udstyr.



Pas på! Batteriet kan eksplodere, hvis det ikke udskiftes korrekt.

Udskift batteriet med et batteri af samme eller tilsvarende type, som forhandleren anbefaler. Brugte batterier skal kasseres i overensstemmelse med gældende miljøbestemmelser.



Gevaar: Voordat u begint met het installeren van dit product, dient u eerst de veiligheidsrichtlijnen te lezen die zijn vermeld in de publicatie *Caution: Safety Information - Read This First*, SD21-0030. In dit boekje vindt u veilige procedures voor het aansluiten van elektrische apparatuur.



WAARSCHUWING: Explosiegevaar als de batterij door een verkeerde batterij wordt vervangen.

Vervang alleen door hetzelfde of gelijkwaardige type dat door de fabrikant is aanbevolen. Volg voor het wegdoen van gebruikte batterijen de instructies van de fabrikant.



VAARA: Ennen kuin aloitat tämän tuotteen asennuksen, lue julkaisussa *Varoitus: Turvaohjeet—Lue tämä ensin*, SD21-0030, olevat turvaohjeet. Tässä kirjassessa on ohjeet siitä, miten sähkölaitteet kaapeloidaan ja kytketään turvallisesti.



Varoitus: Paristo voi räjähtää, jos se asennetaan väärin.

Pariston saa vaihtaa vain samanlaiseen tai vastaavaan valmistajan suosittelemaan paristoon. Hävitä paristo ongelmajätteistä säädettyjen lakien ja viranomaisten määräysten mukaisesti.



Danger: Avant d'installer le présent produit, consultez le livret *Attention: Informations pour la sécurité — Lisez-moi d'abord*, SD21-0030, qui décrit les procédures à respecter pour effectuer les opérations de câblage et brancher les équipements électriques en toute sécurité.



Attention: Pour éviter tout risque d'explosion, remplacez la pile selon les instructions du fabricant qui en définit les équivalences.

Conformez-vous à la réglementation en vigueur pour le recyclage ou la mise au rebut des piles usagées.



Vorsicht: Bevor mit der Installation des Produktes begonnen wird, die Sicherheitshinweise in *Achtung: Sicherheitsinformationen—Bitte zuerst lesen*, IBM Form SD21-0030. Diese Veröffentlichung beschreibt die Sicherheitsvorkehrungen für das Verkabeln und Anschließen elektrischer Geräte.



ACHTUNG: Die Batterie kann bei unsachgemäßem Austauschen explodieren.

Nur die vom Hersteller empfohlene oder eine gleichwertige Batterie verwenden. Nach Gebrauch als Sondermüll entsorgen.



Κίνδυνος: Πριν ξεκινήσετε την εγκατάσταση αυτού του προϊόντος, διαβάστε τις πληροφορίες ασφάλειας στο φυλλάδιο *Caution: Safety Information—Read this first*, SD21-0030. Στο φυλλάδιο αυτό περιγράφονται οι ασφαλείς διαδικασίες για την καλωδίωση των ηλεκτρικών συσκευών και τη σύνδεσή τους στην πρίζα.



ΠΡΟΣΟΧΗ

Κίνδυνος έκρηξης αν η μπαταρία δεν αντικατασταθεί σωστά.

Αντικαταστήστε τη μόνο με μπαταρία ίδιου ή ισοδύναμου τύπου προτεινόμενη από τον κατασκευαστή.

Πετάξτε τις χρησιμοποιημένες μπαταρίες σύμφωνα με τις οδηγίες του κατασκευαστή.



Vigyázat: Mielőtt megkezdi a berendezés üzembe helyezését, olvassa el a *Caution: Safety Information— Read This First*, SD21-0030 könyvecskében leírt biztonsági információkat. Ez a könyv leírja, milyen biztonsági intézkedéseket kell megtenni az elektromos berendezés huzalozásakor illetve csatlakoztatásakor.



FIGYELEM!

A szakszerűtlenül kicserélt telep robbanást okozhat.
Csak azonos, vagy a gyártó által ajánlott másik
típusra cserélje!
Az elhasznált telepeket az erre kijelölt hulladék-
gyűjtőkben helyezze el..



Pericolo: Prima di iniziare l'installazione di questo prodotto, leggere le informazioni relative alla sicurezza riportate nell'opuscolo *Attenzione: Informazioni di sicurezza — Prime informazioni da leggere* in cui sono descritte le procedure per il cablaggio ed il collegamento di apparecchiature elettriche.



ATTENZIONE: Pericolo di esplosione se la batteria non è sostituita correttamente. Sostituirla solo con batterie dello stesso tipo o di tipo equivalente. Le batterie usate vanno smaltite in accordo alla normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali).



危険： 導入作業を開始する前に、安全に関する小冊子SD21-0030 の「最初にお読みください」(Read This First)の項をお読みください。
この小冊子は、電気機器の安全な配線と接続の手順について説明しています。



危険

『バッテリーの取扱いが正しくないと爆発の危険があります』

交換は製造者の勧める同一品または同等品
だけを使ってください。
使用済みバッテリーの廃棄は製造者の説 明
どおりにして



위험: 이 제품을 설치하기 전에 반드시
"주의: 안전 정보-시작하기 전에"
(SD21-0030) 에 있는 안전 정보를
읽으십시오.



주의

배터리를 올바르게 교체하지 않으면 폭발의 위험이 있습니다.

반드시 제조업체가 지정한,
같거나 비슷한 종류로 교체하십시오.
사용하신 배터리는 제조업체의
지시에 따라 폐기 처리하십시오.



ОПАСНОСТ

Пред да почнете да го инсталирате овој продукт, прочитајте ја информацијата за безбедност:

"Предупредување: Информација за безбедност: Прочитајте го прво ова", SD21-0030.

Оваа брошура опишува безбедносни процедури за каблирање и вклучување на електрична опрема.



ПРЕДУПРЕДУВАЊЕ

Опасност од експлозија ако батеријата е погрешно заменета.

**Заменете ја само со ист или еквивалентен тип препорачан од производителот.
Ослободете се од употребените батерии според инструкцијата.**



Fare: Før du begynner å installere dette produktet, må du lese sikkerhetsinformasjonen i *Advarsel: Sikkerhetsinformasjon — Les dette først*, SD21-0030 som beskriver sikkerhetsrutinene for kabling og tilkobling av elektrisk utstyr.



ADVARSEL: Batteriet kan eksplodere hvis det ikke settes inn riktig.

Batteriet må bare erstattes med samme type batteri eller med et tilsvarende batteri som anbefales av fabrikanten. Ikke kast det brukte batteriet som vanlig avfall. Lever det til forhandleren, på en miljøstasjon eller ved et mottak for spesialavfall.



Uwaga:

Przed rozpoczęciem instalacji produktu należy zapoznać się z instrukcją:

"Caution: Safety Information - Read This First", SD21-0030.

Zawiera ona warunki bezpieczeństwa przy podłączaniu do sieci elektrycznej i eksploatacji.



UWAGA

Nieprawidłowe włożenie baterii grozi eksplozją.

Należy wymienić tylko na baterię tego samego lub zamiennego typu zalecanego przez producenta.

Zużyte baterie należy usuwać zgodnie z instrukcjami producenta.



Perigo: Antes de iniciar a instalação deste produto, leia as informações de segurança *Cuidado: Informações de Segurança — Leia Primeiro*, SD21-0030. Este documento descreve como efectuar, de um modo seguro, as ligações eléctricas dos equipamentos.



CUIDADO: Perigo de explosão se a bateria for incorrectamente substituída.

Substitua a bateria por outra igual ou de um tipo equivalente recomendado pelo fabricante. Destrua as baterias usadas de acordo com as instruções do fabricante.



ОСТОРОЖНО: Прежде чем устанавливать этот продукт, прочтите Инструкцию по технике безопасности в документе "Внимание: Инструкция по технике безопасности -- Прочестъ в первую очередь", SD21-0030. В этой брошюре описаны безопасные способы каблирования и подключения электрического оборудования.



ОСТОРОЖНО

При неправильной замене батареи возможен взрыв.

Заменяйте батарею на такую же или на батарею эквивалентного типа, рекомендованного изготовителем. При утилизации использованных батарей следуйте инструкциям изготовителя.



Nebezpečenstvo: Pred inštaláciou výrobku si prečítajte bezpečnosté predpisy v

Výstraha: Bezpečnosté predpisy - Prečítaj ako prvé, SD21-0030. V tejto brožúrke sú opísané bezpečnosté postupy pre pripojenie elektrických zariadení.



VÝSTRAHA

Nebezpečie výbuchu pri nesprávnej výmene batérie.

Nahrádzajte iba za ten istý alebo equivalentný typ podľa doporučenia výrobcu.
Použité batérie skladujte podľa pokynov výrobcu.



Pozor: Preden začnete s inštaláciou tohto produktu prečítajte kapitulu: "Upozornenie: Informácie o varovaní pred použitím," SD21-0030. Táto kapitula opisuje správne postupy káblovania.



OPOZORILO

Nevravnosť eksplozie, čo sa batéria nesprávne mení.

**Za výmenu použijete rovnaký alebo rovnaký typ batérie, ako odporučil výrobca.
Používané batérie odstráňte podľa návodu výrobcu.**



Peligro: Antes de empezar a instalar este producto, lea la información de seguridad en *Atención: Información de Seguridad — Lea Esto Primero*, SD21-0030. Este documento describe los procedimientos de seguridad para cablear y enchufar equipos eléctricos.



Precaución: Peligro de explosión si se sustituye incorrectamente la batería.
Sustituya solamente por el mismo tipo o tipo equivalente recomendado por el fabricante. Deseche las baterías usadas siguiendo las instrucciones del fabricante.



Varning — livsfara: Innan du börjar installera den här produkten bör du läsa säkerhetsinformationen i dokumentet *Varning: Säkerhetsföreskrifter— Läs detta först*, SD21-0030. Där beskrivs hur du på ett säkert sätt ansluter elektrisk utrustning.



Varning: Explosionsrisk vid batteribyten.

Byt endast till samma typ av batteri eller till likvärdigt batteri som rekommenderas av tillverkaren. Följ tillverkarens instruktioner vid borttagning av utbytta batterier.



危險：

開始安裝此產品之前，請先閱讀安全資訊。

注意：

請先閱讀 - 安全資訊 SD21-0030

此冊子說明插接電器設備之電纜線的安全程序。

About This Manual

This manual describes planning and installation procedures for the IBM Nways Multiprotocol Switched Services (MSS) Client Universal Feature Card (hereafter referred to as the MSS Client) for use in the IBM Nways LAN switches. See Chapter 1, "Introduction to the MSS Client Universal Feature Card" for a list of the Nways LAN switches.

This manual is intended for use in conjunction with the MSS Configuration publications and the publications provided with the base switches. These publications contain the information you will need to configure and manage the MSS Client. This manual contains references to these publications at appropriate points in the installation procedure.

Who Should Read This Manual

Different sections of this manual are intended for different audiences. Chapter 2, "Installation" is intended for the technician. Chapter 3, "Troubleshooting" is intended for the service engineer or network administrator.

Prerequisite Publications

The following publication is provided with the IBM MSS Client:

Caution: Safety Information—Read This First, SD21-0030

Depending upon the LAN switch in which you are installing the MSS Client, you will need to refer to one of the following publications to complete the MSS Client installation procedure. These publications are provided with the base switch:

- *8270 Nways LAN Switch Model 800 Planning and Installation Guide*, GA27-4145
- *8272 LAN Switch Module Planning and Installation Guide*, GA27-4163

You will need to refer to the following publications if you want to change any of the MSS Client configuration settings. These publications are provided in the *Multiprotocol Switched Services (MSS) Client and Domain Client Version 2.1 Microcode, Configuration Tool, and Softcopy Library*, SK2T-0429, which is shipped with the MSS Client:

- *MSS Clients Interface Configuration and Software User's Guide*, SC30-3966
- *MSS Configuring Protocols and Features*, SC30-3819
- *Configuration Program User's Guide for Nways Multiprotocol Access, Routing, and Switched Services*, GC30-3830

Related Publications

The following related publication is available from IBM:

An Inside Look at IBM Workgroup Hubs and Switches, GG24-2528

Chapter 1. Introduction to the MSS Client Universal Feature Card

The Universal Feature Card (UFC) slot is a feature of the IBM Nways LAN Switches. The UFC slot accommodates optional, field-installable UFCs that provide additional connections.

The MSS Client UFC is designed for installation in the following IBM Nways LAN switches:

- 8270 Token-Ring LAN Switch Model 800
- 8272 Token-Ring LAN Switch Module for the Nways 8260 Multiprotocol Switching Hub, FN 6308.

In this manual, the term *base switch* refers to any of these switches.

There are two versions of the MSS Client available: Single-mode optical fiber (SMF) ATM port (PN 85H4599) and multimode optical fiber (MMF) ATM port (PN 85H4596).

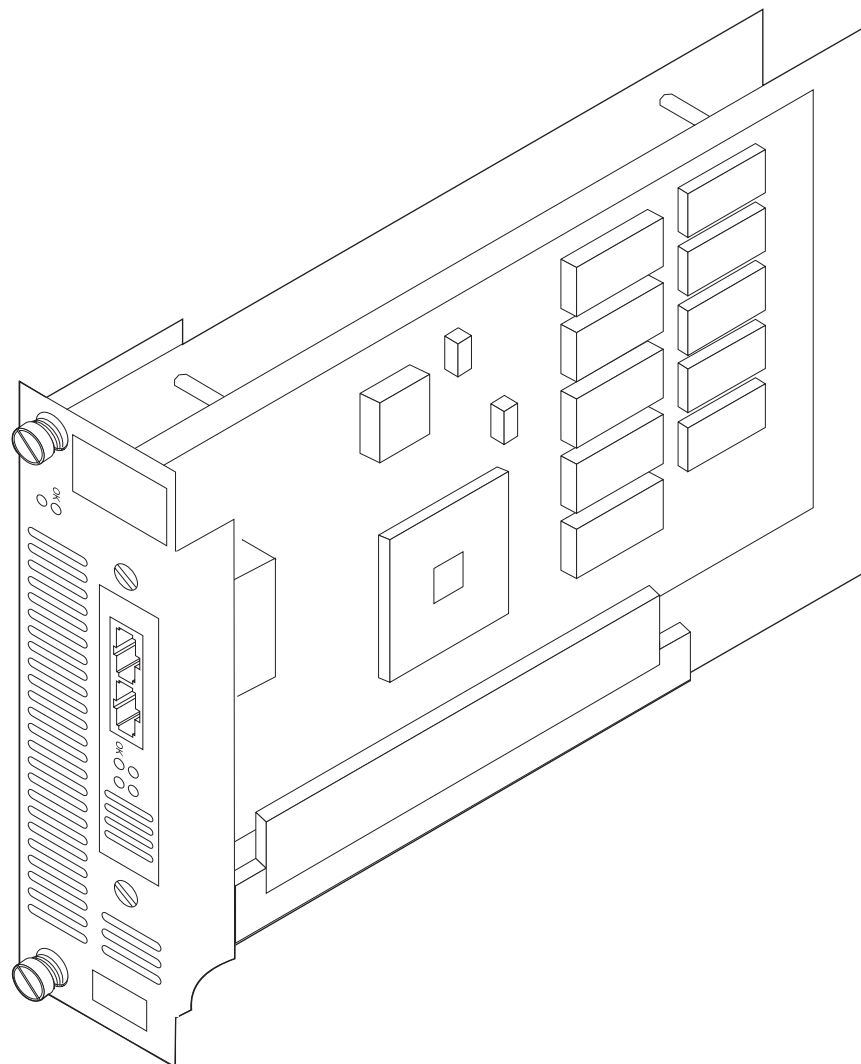


Figure 1-1. The IBM MSS Client

Functions of the MSS Client

The MSS Client UFC provides:

- Network-layer forwarding between LAN ports on the LAN switch and the ATM network connected to the LAN switch through the ATM port on the MSS Client
- Multiprotocol, high-speed routing capability with an independent microprocessor
- Hardware-based source-route bridging (SRB) between the ATM network and the LAN ports

Refer to the *MSS Clients Interface Configuration and Software User's Guide* for a complete list of the software and hardware interfaces supported on the MSS Client.

The MSS Client can be configured through a configuration console, an offline graphical user interface (GUI), or a web browser. It can be managed using an SNMP network manager. Software upgrades can be installed by the customer.

Physical Characteristics

The MSS Client occupies two adjacent standard UFC slots. It consists of an assembly of three circuit cards, a faceplate bracket, and a rear connector.

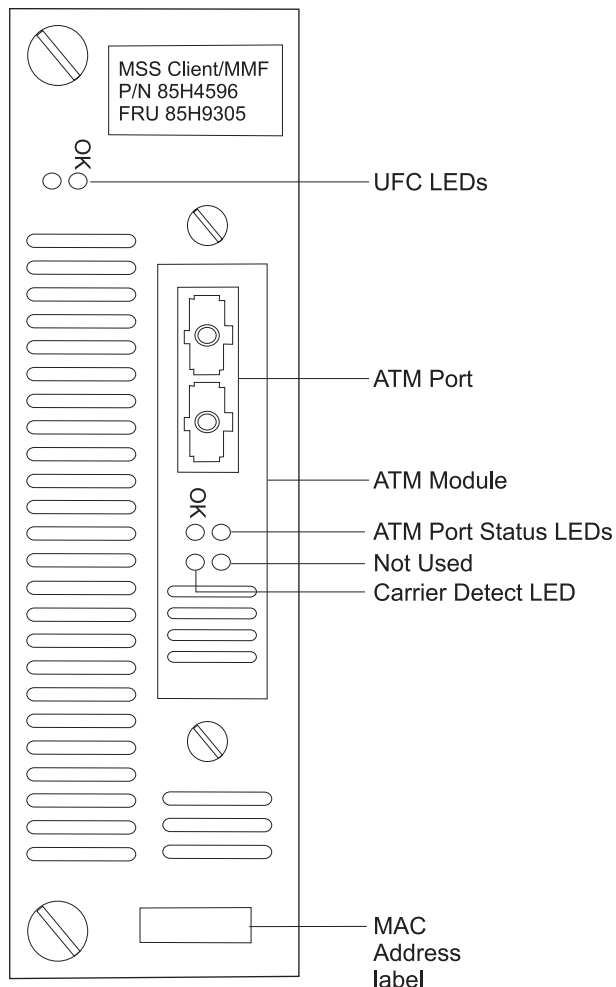


Figure 1-2. The IBM MSS Client Faceplate

ATM Port

The ATM port is on the ATM module faceplate, and can be used with either single-mode or multimode optical fiber, depending on which version of the MSS Client you have. The ATM connection is through industry-standard SC optical connectors.

MAC Address Label

The MAC address assigned to the MSS Client at the time of manufacture is shown on a label affixed to the faceplate. This address is the first of a block of 32 addresses assigned to the MSS Client.

LED Indicators

The MSS Client has two UFC status LEDs and four ATM port status LEDs. See Figure 1-2 on page 1-2 for the locations of the LEDs.

Table 1-1. UFC Status LEDs

	Yellow on	Yellow off	Yellow blinking
Green on	*	1	*
Green off	2	3	4
Green blinking	*	5	6

Description:

- 1 MSS Client is operational. Either the firmware or operational code is running.
 - 2 There is an MSS Client card error, or code must be downloaded to the MSS Client.
 - 3 MSS Client is resetting or without power.
 - 4 MSS Client is writing a code image to flash memory.
 - 5 MSS Client is writing a code image to flash memory, or is loading operational code.
 - 6 The MSS Client is running diagnostics as part of initial program load (IPL).
- * Not defined.

Table 1-2. ATM Port Status LEDs

Green:	On	The MSS Client ATM port is configured, enabled, and operational.
	Off	The MSS Client ATM port is not configured, not enabled, or not operational.
Yellow:	On (not blinking)	The adapter in the ATM port has failed.
	On (blinking)	There is a potential network problem, or problem with the ATM port.
	Off	No problem is detected in the ATM port.

Note: There are four LEDs on the ATM module faceplate. One of the four LEDs, as shown in Figure 1-2 on page 1-2, is not used.

Planning for Installation

The MSS Client is automatically connected to the base switch internal backplane when it is installed. It can also connect to an ATM network through the ATM ports on the UFC faceplate. Depending on which version of the MSS Client you have, you will need either single-mode or multimode optical fiber cables with industry-standard SC connectors to cable it to an ATM network.

Refer to Table 1-3 on page 1-4 for information about optical-fiber cables for the MSS Client.

Table 1-3. MSS Client Cables

Adapter	Part Number	Cable Type	Connector Type
ATM 155-Mbps multimode fiber	85H4596	62.5-micron, plenum-rated multimode fiber	Industry-standard SC
ATM 155-Mbps single mode fiber	85H4599	9-micron, plenum-rated single mode fiber	Industry-standard SC

Note: ATM cables are not provided and must be separately purchased. You can order them through your IBM representative.

The MSS Client also requires an operating environment as described in “Operating Environment.”

MSS Client Slot Restrictions

- The MSS Client cannot be installed in slots 2 and 4 of the 8272 LAN Switch Module, FN 6308. See Figure 1-3.

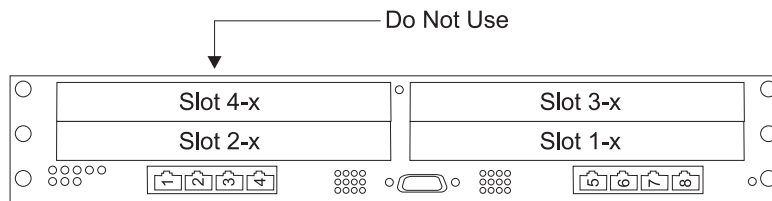


Figure 1-3. Slot Restrictions

- Only two MSS Client, MSS Domain Client, and ATM UFCs (in combination) can be installed in the base switch.

MSS Client Installation Recommendation

The MSS Client should always be installed to the left of all Token-Ring UFC modules in an 8270 Token-Ring LAN Switch, Model 800.

Dimensions and Weight

Width: 170 mm (6.7 in.)
Depth: 214 mm (8.4 in.)
Height: 50.3 mm (2.0 in.)
Weight: 0.64 kg (1.4 lb)

Operating Environment

Temperature: 10° to 40°C (50° to 104°F)
Relative humidity: 8% to 80%
Maximum wet-bulb temperature: 27°C (81°F)
Caloric value: 23 Kcal/hr (92 BTU/hr)
Electrical power: 27 W

Chapter 2. Installation

This chapter explains how to install the MSS Client in a base switch.

Before installing the MSS Client, be sure to read “Electronic Emission Notices” on page A-1.

Updating the Base Switch Microcode

You might need to update the microcode on your base switch to support the MSS Client before configuring it. To determine whether you need to do this, perform the following check:

- 1** Start a console session using the procedure in your base switch documentation.
- 2** Go to the Switch Information Panel, which is one of the selections on the Configuration panel.
- 3** Check that the value of the Interface Description entry for the software is 4.0 or higher.
 - If the software version is 4.0 or higher, you do not need to update the base switch microcode. Continue with “Installing the MSS Client in the Base Switch.”

Note: It is recommended that you always get the most current version of the software, which is available on the Web. See “Obtaining Microcode Updates from the Web.”

 - If the software version is lower than 4.0, you must update the base switch microcode. To do so, refer to the section on downloading software and BootP information in the base switch documentation. (Software version 4.0 is on the Web.) Then, continue with “Installing the MSS Client in the Base Switch.”

Obtaining Microcode Updates from the Web

You can obtain base switch microcode updates at:

<http://www.networking.ibm.com/nes/neshome.html>

Installing the MSS Client in the Base Switch

- 1** Open the carton and remove the publication package.

Along with this manual, the package should contain:

 - One MSS Client UFC
 - One safety manual

One IBM Multiprotocol Switched Services (MSS) Client and Domain Client Version 2.1 Microcode, Configuration Tool, and Softcopy Library CD-ROM, SK2T-0429.

If any item is missing or damaged, contact your place of purchase.

Note: In these instructions, the illustrations show an 8270 Model 800 LAN Switch and an 8272 Token-Ring LAN Switch Module, FN 6308 as an example. The procedure for installing the MSS Client in other IBM LAN switches is the same.

2 UFCs **cannot** be hot-plugged in the base switch. Disconnect power from the base switch.

- For standalone base switches, power the switch off.
- For base switches that are switch modules installed in an IBM 8260, slide the module out of the 8260 to remove the power.

3 See “MSS Client Slot Restrictions” on page 1-4 to verify the correct slot locations for installation.

4 Remove the plates covering two adjacent UFC slots in the faceplate of the base switch by removing the two screws holding the plates in place. See Figure 2-1. Keep the plates and screws in case the UFC is ever removed.

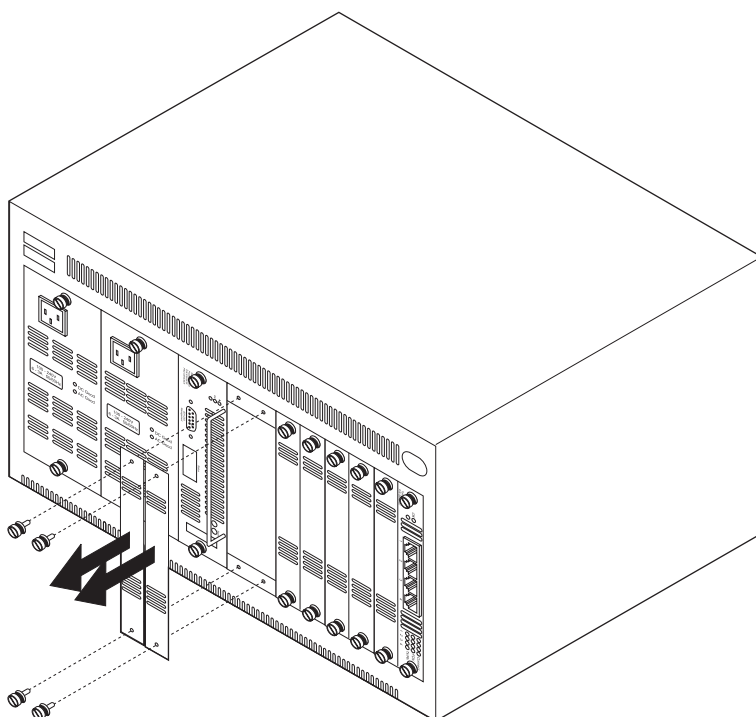


Figure 2-1. Removing the UFC Slot Covers

5 Remove the MSS Client UFC from its protective packaging.

Important: Before removing the MSS Client from its antistatic bag, ensure that you are static-free by use of appropriate grounding precautions.

Electrostatic discharge into or around the uninstalled UFC can permanently damage it.

- 6 Carefully insert the card into the UFC slot, making sure that the card edges are correctly aligned in the guides and that the connector on the card is seated in the connector at the back of the slot. See Figure 2-2 and Figure 2-3 on page 2-4. When the UFC is fully seated, the UFC faceplate rests against the front of the base switch.

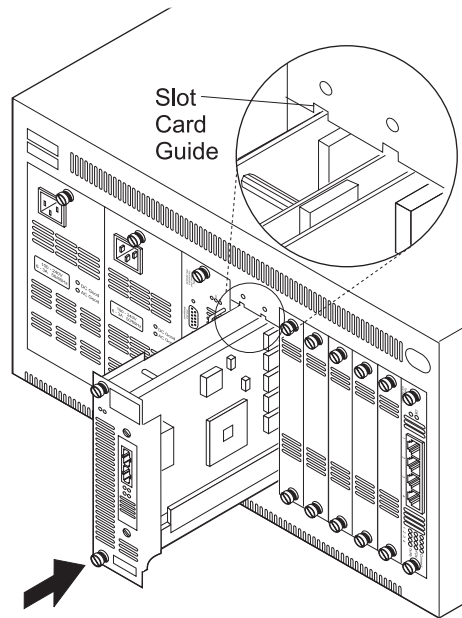


Figure 2-2. Installing the UFC in a Standalone Switch

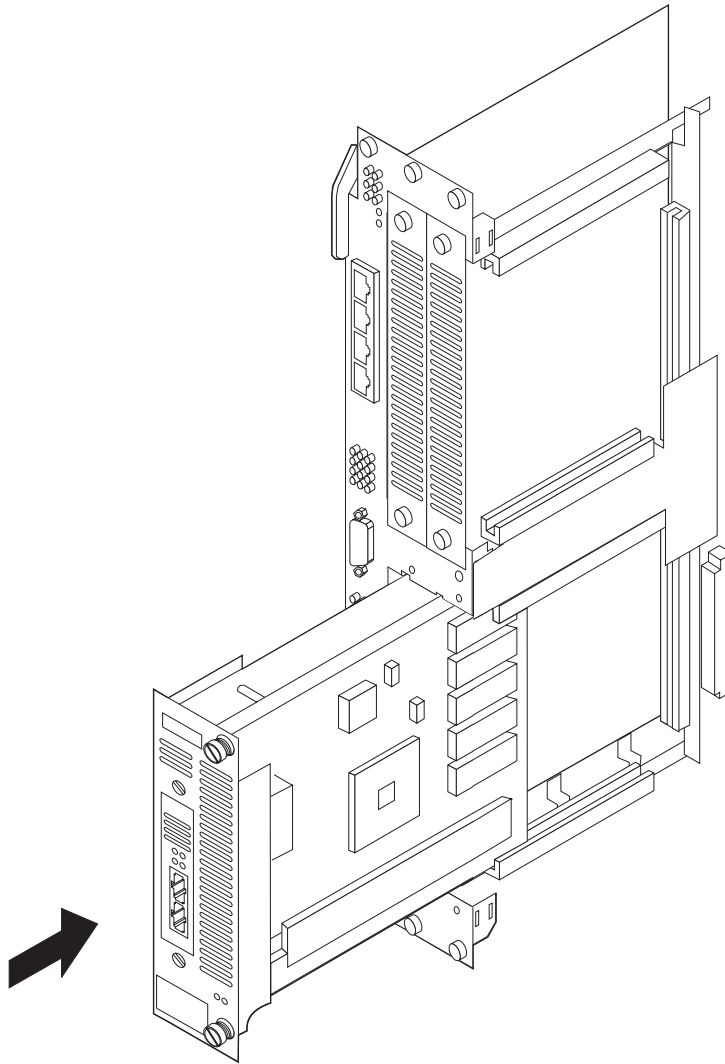


Figure 2-3. Installing the UFC in a Switch Module

7 Secure the card with the two attached thumbscrews.

8 Continue with the instructions under “Cabling.”

Cabling

Remember these tips when connecting cables:

- Avoid stretching or bending the cables excessively.
- Avoid trip hazards by routing the cables away from aisles and other areas where people walk. If such routes cannot be avoided, use floor cable covers or similar materials to secure and protect the cables.
- Be sure that the cables connected to the MSS Client are supported so that the cable connectors are not excessively strained.

To cable the ATM port on the MSS Client, match the key-notches and gently insert the connector on the optical fiber cable until it clicks.

Note: With some cables, you may have to reverse the TX and RX connectors so that they are correctly crossed.

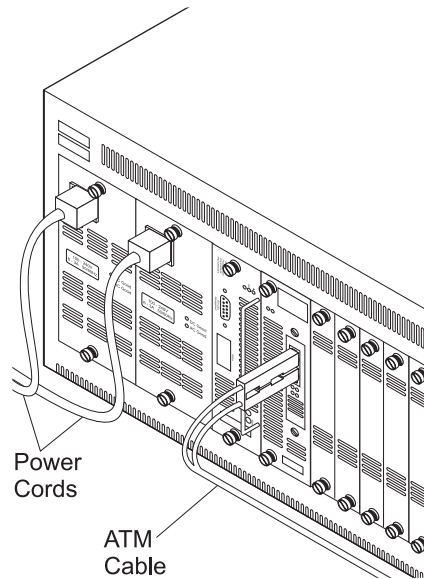


Figure 2-4. Cabling the UFC

Verifying Operation

Perform the following steps to verify operation of the MSS Client. See Figure 1-2 on page 1-2 for the location of the LEDs.

- 1** Power on the base switch to initiate diagnostics. Within 1 minute, the MSS Client indicates that diagnostics are in progress by blinking the Fault and OK LEDs in unison.
- 2** Verify that the base switch diagnostics have been completed successfully. If necessary, refer to the base switch documentation for this step. Diagnostics can take up to 7 minutes to complete. If the base switch does not complete diagnostics successfully, use the troubleshooting procedures in the base switch documentation.
- 3** Verify that the MSS Client OK LEDs are on and the Fault LEDs are off.
 - If these conditions are met, physical installation is complete. Go to “Configuring the MSS Client.”
 - If these conditions are not met, power the base switch off, verify that the UFC has been correctly seated in the slot, and power the base switch on again.
- 4** If either of the MSS Client Fault LEDs is on again, the UFC is defective. Contact your place of purchase.

Configuring the MSS Client

1 The MSS Client has to be configured to work in the network. After physical installation of the MSS Client is complete, notify your network administrator so that any necessary configuration changes or code downloads can be done. The following publications describe configuring and managing the MSS Client:

- *MSS Clients Interface Configuration and Software User's Guide*, SC30-3966
- *MSS Configuring Protocols and Features*, SC30-3819

2 Place this manual in the three-ring binder that was included with the base switch manual.

Removing the MSS Client

Should it ever become necessary to remove the MSS Client from the base switch, ensure that power has been disconnected from the base switch **before** unplugging the MSS Client.

- For standalone base switches, power off the switch.
- For base switches that are modules installed in an IBM 8260, slide the module out of the 8260 to remove the power.

The removal process is the reverse of the installation process. Be sure to reinstall the UFC slot covers after the UFC is removed. This is important for safety and for correct air flow through the base switch.

Chapter 3. Troubleshooting

This chapter contains procedures that help you troubleshoot problems with an MSS Client.

Troubleshooting the UFC

- 1** If the LEDs do not come on when the base switch is powered on, verify that the UFC is correctly seated in the base switch's backplane connector. All LEDs should be on during reset.
- 2** During diagnostics, the UFC OK and Fault LEDs blink in unison. If the UFC or the ATM Fault LED is on at any other time, either the UFC is defective and must be replaced, or the UFC is waiting for a code download.

Obtaining Service

There are no serviceable parts in the MSS Client. The MSS Client is individually replaceable if it becomes defective. If you need assistance troubleshooting your MSS Client, call IBM at **1-800-772-2227** in the United States or **1-800-565-3344** in Canada. Outside the United States and Canada, call your service representative.

Note: This product contains a lithium battery; however, it is *not* to be replaced by the customer. Because it contains a lithium battery, the following statement is required by IEC 950:

Caution: Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

See "Warranty" on page A-4 for information concerning service for the product.

Obtaining Software

You can obtain updated versions of IBM software through the Internet at:

<http://www.networking.ibm.com/nes/neshome.html>

You can obtain updated versions of the software through FTP at:

<ftp://ftp.networking.ibm.com/pub/products/lanprods/switch>

Parts Listing

The replacement part numbers for the MSS Client are :

UFC	Part Number
MSS Client/SMF	85H9304
MSS Client/MMF	85H9305

Appendix A. Notices and Product Warranty

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Avis de conformité aux normes d'Industrie Canada

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Machine: IBM MSS Client Universal Feature Card

Warranty Period*: One Year

**Contact your place of purchase for warranty service information.*

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Index

A

ATM port 1-3

C

cabling 2-4
configuration 2-6
contacting IBM 3-1

D

dimensions 1-4

E

electronic emission notices A-1

F

faceplate 1-2
features 1-2
functional overview 1-2

I

installation 2-1
installing the MSS Client 2-2
introduction to the MSS Client 1-1

L

LEDs 1-3

M

MAC address label 1-3

N

notices A-1

O

operating environment 1-4
overview, functional 1-2

P

parts listing 3-1
physical characteristics 1-2
power consumption 1-4
powering on 2-5

publications
prerequisite xvii
related xviii

R

removing the MSS Client 2-6
replacement part numbers 3-1

S

safety information vii, xvii
service, obtaining 3-1
software, updating 3-1

T

temperature 1-4
testing 2-5
trademarks A-3
troubleshooting 3-1

U

unpacking instructions 2-1

V

verifying operation 2-5

W

warranty A-4
weight 1-4
who should read this manual xvii
WWW 3-1

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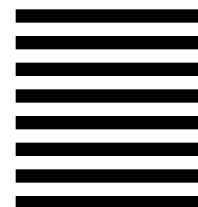
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