



PMC Expansion cards for Atlas 60

Teldat-Dm 605-I

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Table of Contents

Chapter 1	About This Guide	1
1.1	Supported Devices	1
1.2	Who should read this manual?	1
1.3	When should I read this manual?	1
1.4	What is in this manual?	1
1.5	What is not in this manual?	1
1.6	How is the information organized?	1
1.7	Technical Support	1
1.8	Related documentation	2
Chapter 2	Expansion cards for the ATLAS 60	3
2.1	Expansion slots for the ATLAS 60PMC cards.	3
2.2	Software compatibility	4
Chapter 3	Installation Procedure	6
3.1	Warnings and notes.	6
3.1.1	Warnings	6
3.1.2	Notes	6
3.2	Installing PMC expansion cards in the ATLAS 60	6
3.2.1	Installing or replacing a PMC expansion card in SLOT 2	6
Appendix A	Safety information	11
A.1	Translated Safety Warnings	11

Chapter 1 About This Guide

This installation guide contains the instructions that you need to follow in order to correctly install PMC cards in the ATLAS 60 router.

1.1 Supported Devices

The information contained in this installation guide only applies to the ATLAS 60 router family.

1.2 Who should read this manual?

This manual should be read by support personnel who need to install, configure, maintain and monitor the device.

1.3 When should I read this manual?

Read this guide as soon as you are ready to familiarize yourself with the device and its components.

This manual will help you understand your new device in greater depth.

1.4 What is in this manual?

This installation guide contains the following information:

- Description of the general characteristics that this device offers for the installation of expansion cards.
- Description of the steps that need to be carried out in order to install PMC cards in the device.

1.5 What is not in this manual?

This manual does not contain information on the device software nor information on the configuration. For information on how to configure the device, please see the manuals for the different protocols in the following web: www.teldat.com.

1.6 How is the information organized?

This document aims to provide all the information necessary for installing the PMC cards in the ATLAS 60 router.

The content in the document is divided into two parts. The first part describes the expansion possibilities that the device offers through cards.

The second part sets out a detailed list of common installation steps for PMC cards.

1.7 Technical Support

Teldat SA offers a technical support service.

Contact information:

Web: <http://www.teldat.com>

Tel.: +34 918 076 565

Fax: +34 918 076 566

Email: support@teldat.com

1.8 Related documentation

Teldat-Dm693-I *ATLAS 60 Installation*.

Chapter 2 Expansion cards for the ATLAS 60

The ATLAS 60 is a modular router that offers the possibility to increase its interfaces and features through different types of expansion cards. There is a more detailed description to be found on the PMC and on its installation in manual “*Teldat-Dm693-I PMC Installation*”. These cards can be divided into three categories, depending on the interface being used to connect to the device motherboard.

- PMC (PCI Mezzanine Card): these cards interconnect with the device’s motherboard through the PCI (Peripheral Component Interconnect) bus.
- xDSL cards with an ATLAS 60 native connector: these cards use an interconnection bus whose specifications are native to the ATLAS 60.
- MiniPoE card: optional expansion module that adds the POE (Power Over Ethernet) feature to the ATLAS 60 8-port Switch.

The router has a limited number of slots to install each of the types of cards. The following table rounds up the number of available slots and a brief description on the feature that you obtain depending on the type of card.

Slots available depending on the type of expansion card

Type of card	Available slots	Features
PMC	2	E&M, PRI, BRI, ISDN, FXS/FXO, MODEM ANALOG., SFPs, SERIAL, E1/T1, etc.
xDSL	1	ADSL2+/VDSL, G.SHDSL,
MiniPoE	1	PoE (Power Over Ethernet)

2.1 Expansion slots for the ATLAS 60PMC cards

This section details the numeration and the location of the device elements that simplify the installation of PMC expansion cards in the ATLAS 60 router.

The following figure shows the front panel.

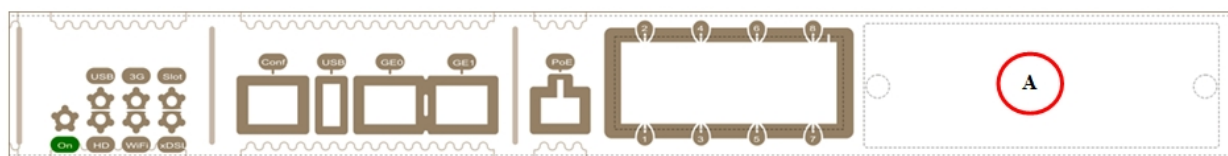


Fig. 1: Front Panel

The front panel elements are as follows:

Elements expansion table for the front panel

Item	Description
A	SLOT 1. Expansion slot for 8-port Switch Ethernet expansion boards or PMC-PCI cards.

The following figure shows the rear panel.



Fig. 2: Rear panel

The rear panel elements are as follows:

Elements expansion table for the rear panel

Item	Description
A	SLOT 2. Expansion slot for PMC-PCI cards.
B	SLOT 3. Expansion slot for xDSL cards.

The following figure shows the top panel.

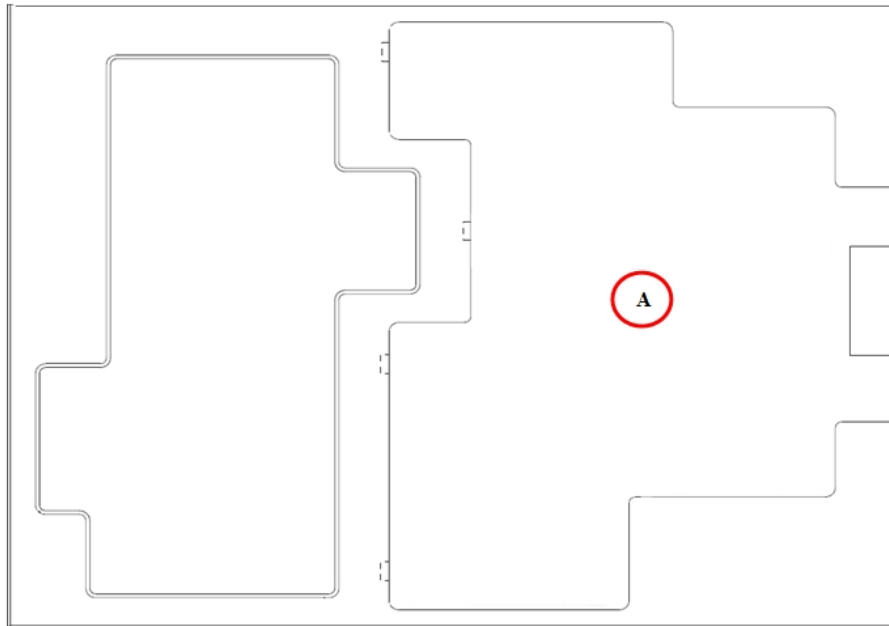


Fig. 3: Top panel

The top panel elements are as follows:

Top panel elements table

Item	Description
A	Flap that provides access to install the expansion cards.

The following figure shows the side panel.

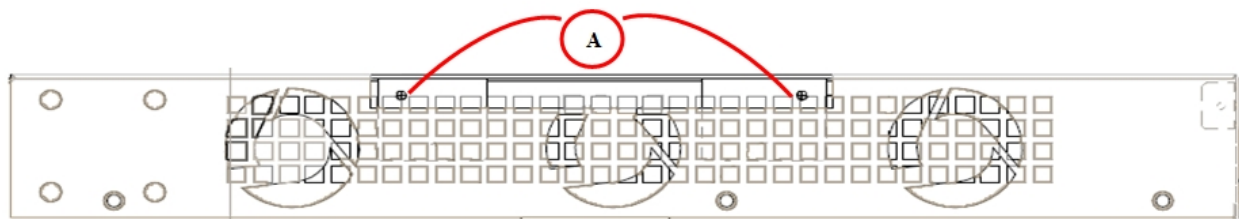


Fig. 4: Side panel

The side panel elements are as follows:

Side panel elements table

Item	Description
A	Securing screws for the flap on the top panel.

2.2 Software compatibility

If you use an expansion card in a router, make sure that it has a compatible software version and it also has the corresponding license for the aforementioned card feature.

For further information, please see the installation manual that corresponds to the card.

Chapter 3 Installation Procedure

3.1 Warnings and notes

3.1.1 Warnings

Before installing or uninstalling any card in the ATLAS 60 routers, please bear the following advice in mind:

The equipment is intended to be installed by Service Personnel and only handled by qualified personnel. If not, the device may be damaged and malfunction.

This device contains elements that are sensitive to electrostatic surges and shocks. Therefore, it is essential when handling the equipment that an antistatic wriststrap is connected to the device chassis and that this is placed on an antistatic mat. Furthermore, it is crucial to avoid any kind of contact between the device components and necklaces, bracelets, rings, ties, etc.

Always place the components on an antistatic surface.

Do NOT switch on the device before checking that all the components (chassis, power source, fans, etc.) are correctly connected.

3.1.2 Notes

The manufacturer reserves the right to make changes and improvements to the appropriate features in both the software and hardware of this product, modifying the specifications of this manual without prior notice.

The images presented on the front and back panels of the devices are provided as information guideline only. Some small modifications may exist in the actual device.

3.2 Installing PMC expansion cards in the ATLAS 60

The ATLAS 60 has two expansion slots (SLOT 1 and SLOT 2), which permit you to increase its features and interfaces by inserting PMC cards. For a more detailed description on the ATLAS 60 device and on its installation, please see manual “*Teldat-Dm693-I ATLAS 60 Installation*” .

3.2.1 Installing or replacing a PMC expansion card in SLOT 2

SLOT 2 is located on the left hand side of the device's . In this case, we insert a PMC expansion card in the SLOT.



Fig. 5: SLOT 2 Expansion Slot

Slot 2 expansion slot elements table

Item	Description
A	Screws to hold the cover of the expansion module in SLOT 2.
B	PMC-PCI expansion module.

In order to correctly insert or replace the PMC expansion cards, please follow the steps given below:

Before opening the device, please check that:

- You have all the elements described on the packing list and that the card that is going to be installed is the correct one.
- The device permits the upgrading (the label located on the underside of the device indicating the type of hardware should say: **HW: ATxxx-yyy**, i.e. one of the routers from the ATLAS family).
- You have the necessary tools:
 - Screwdriver.
 - Screws and washers.



Warning

The electric current in power cables, telephone lines and communication cables is dangerous. To prevent electric shocks, before installing, handling or opening the equipment covers, connect and disconnect the cables as follows:

- (1) Disconnecting the device:
 - Switch off the router. To do this put the ON/OFF switch in the OFF position.
 - Disconnect the power supply cable from the device.
 - Disconnect the data cables.
- (2) Remove the device from the workplace and place it in a stable, safe place where it can be easily accessed and handled.
- (3) Remove the screws from the side panel in order to be able to dismantle the flap that provides the access to installing the expansion cards. See Figure 6.



Fig. 6: Removing the screws for the top panel flap

- (4) Once the screws have been removed, in order to remove the flap you need to slide it, disconnecting the grooves that ensure the flap is attached to the top panel, and finally remove it by lifting it. Put it in a safe place.
- (5) Find the location where the expansion board needs to be placed. This slot has a set of standoff connectors with gold contacts and holding screws.

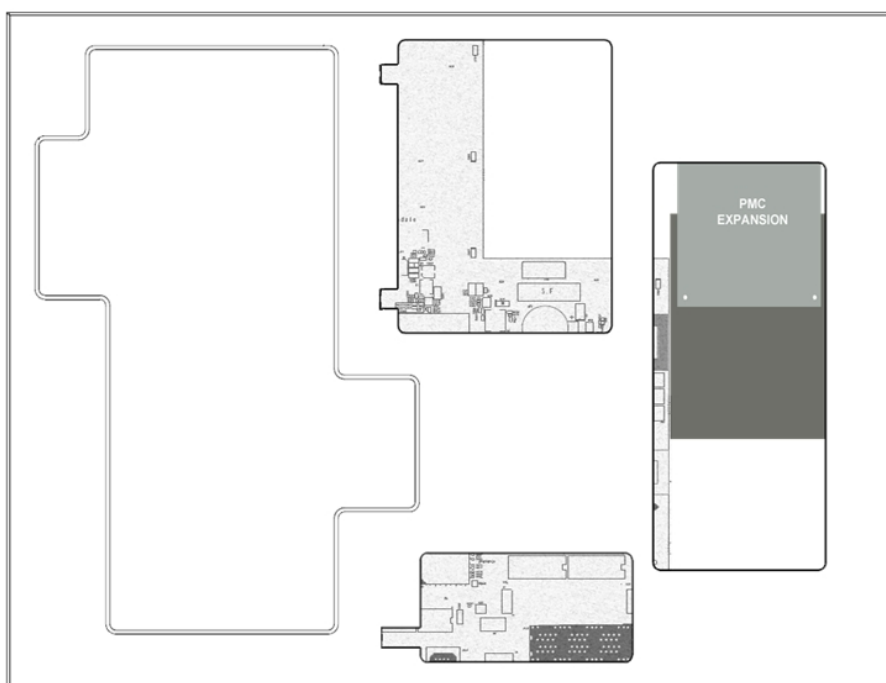


Fig. 7: Location of the PMC expansion board

(6) Remove the blind cover from slot 2 or remove the PMC expansion card if there is one already installed:

- Extracting a PMC expansion card:

Please see Table 7, Figure 8 and Figure 9.

Installing/uninstalling the card elements

Item	Description
A	Screws that hold the expansion card to the standoff posts.
B	Device rear panel.
C	Connector to connect the expansion card to the motherboard.

- Firstly remove the screws that hold the card to the standoff posts.

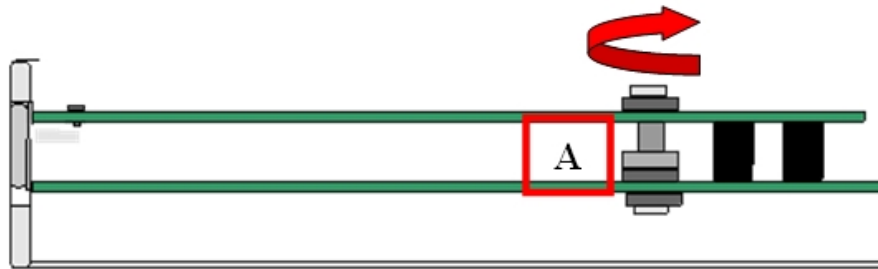


Fig. 8: Removing the holding screws

- Next remove the expansion card from the corresponding slot.

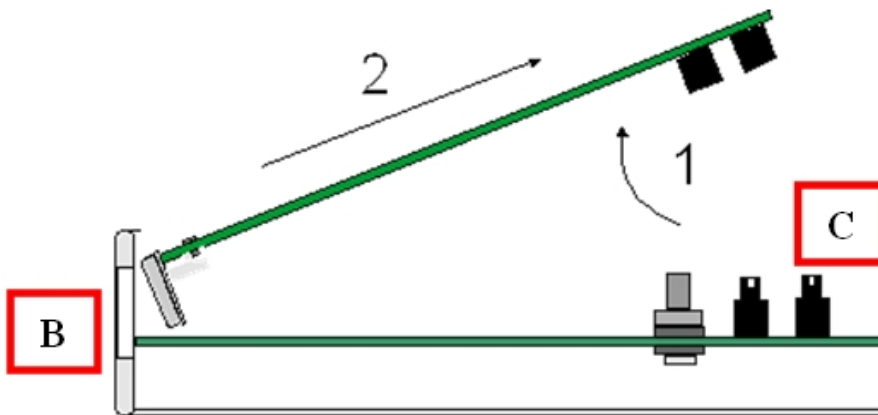


Fig. 9: Removing the expansion card

- To remove the blind cover from the slot:

- Remove the screws with the help of a screwdriver Figure 10.
- Press the cover outwards.



Fig. 10: Removing the expansion slot cover from SLOT 2.

(7) Insert the PMC expansion card or replace the cover over the empty slot.

In order to insert a PMC expansion card:

- Please see Figure 11 and Figure 12.
- Place the PMC expansion card in the corresponding slot so that this firstly adjusts to the space on the device panel and subsequently to the two PMC connections (Steps 1 and 2 in Figure 11).
- This operation must be carefully carried out without forcing any piece or part of the device. Check that the

board is clearly settled over the PMC connectors.

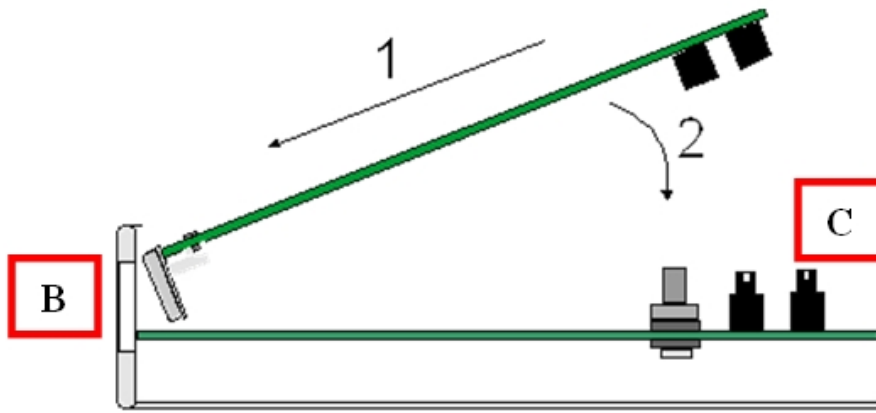


Fig. 11: Inserting the expansion card

- Screw the board to the standoff posts. For this use two screws with their corresponding washers. Firmly tighten the screws without damaging the board.

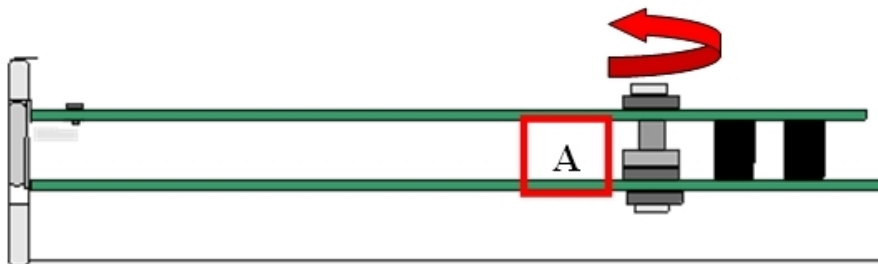


Fig. 12: Attaching the expansion card

- To insert the slot cover:
 - Place the cover in the empty slot.
 - Screw down the cover on the device Figure 13.



Fig. 13: Placing the expansion slot 2 cover

- (8) Place the upper panel flap and screw it down using the screws. See Figure 14.



Fig. 14: Placing the flap screw on the upper panel

- (9) Connect and switch on the device:
- Make sure that the device power supply switch is OFF.
 - Connect all the data cables.
 - Connect the power supply cable.
 - Put the ON/OFF switch to the ON position.
- (10) Should you detect any problems, switch off the device and make sure that the above steps have been carried out correctly. If the problem persists, please contact your usual supplier.
- (11) Connect a terminal to the console and check that the device detects the PMC board:

```
*****
*****
```

```
*****
BIOS CODE DUMP.....
BIOS DATA DUMP....
End of BIOS dump

FLASH BIOS CODE VERSION: 02.01   Mar   6 2013 17:59:56   L1
Current date: Mar 27 2013, Wednesday   Current time: 12:56:57

System Info:
PCB:0x128 GPPORCR:0x00280000 PVR:0x80212051 SVR:0x80EC0011
CLKs(KHz): CCB=393216 CPU0=786432 CPU1=786432 DDR(clk)=327680 LBUS=49152
Watchdog: Enabled
MMU Mode: Dynamic
ICache: ON; DCache: ON Write-Back; L2Cache: ON

Mem Info:
DRAM size: 512 Megabytes
   BANK 0: 512 Megabytes (detected)
FLASH: 65024 KB.
NVRAM: 128 KB.
EEPROM: 2048 Bytes.





Devices:
GIGABIT ETHERNET 1
GIGABIT ETHERNET 2
LAN OVER SWITCH
SWITCH(8) 10/100 CARD 0x18
POE CARD 1
SECURITY ENGINE
Slot 1 - PCI device: PowerPC processor, Host
   (Bus: 10, Device: 0, Function: 0)
   (Vendor: 0x1957, Device: 0x0100)
   (Subs. Vendor: 0x0000, Subs. Device: 0x0000)
Slot 1 - PCI device: PCI-to-PCI bridge
   (Bus: 11, Device: 0, Function: 0)
   (Vendor: 0x10B5, Device: 0x8112)
   (Subs. Vendor: 0x0000, Subs. Device: 0x0000)
Slot 1 - PCI device: bridge
   (Bus: 12, Device: 14, Function: 0)
   (Vendor: 0x1057, Device: 0x18C1)
   (Subs. Vendor: 0x5444, Subs. Device: 0x1700)

Current production date: 11 23
Current software license: 28 60
S/N: 754/00111
BIOS MAC Add: 00-a0-26-a2-00-2c
>>
.....
....
TRYING APP DUMP
   (CONFIGURED) appcode1.bin ver.: 0.11.0.1 0.0.0.0
APP0 CODE DUMP. Mode: 0.....
APP0 DATA DUMP.....
APP CODE DUMP.....
APP DATA DUMP.....
Running application at: 0x00200140
Flash configuration read
Parsing text mode configuration ...
Configuration parsed
Initializing

Press any key to get started
```

Appendix A Safety information

A.1 Translated Safety Warnings

	<p>The equipment is intended to be installed by Service Personnel and only handled by qualified personnel. If not, the device may be damaged and malfunction.</p>
	<p>Оборудование предназначено для установки обслуживающим персоналом и обрабатываются только квалифицированным персоналом. Если нет, то устройство может быть повреждена и неисправности.</p>
	<p>L'équipement est destiné à être installé par le Personnel de Service et seulement manipulé par du personnel qualifié. Sinon, l'appareil risque d'être endommagé et dysfonctionner.</p>
	<p>El equipo está diseñado para ser instalado por personal del servicio técnico y su manejo debe realizarlo personal cualificado. De lo contrario, el equipo puede resultar dañado y quedar inservible.</p>
	<p>This device contains elements that are sensitive to electrostatic surges and shocks. Therefore, it is essential when handling the equipment that an antistatic wriststrap is connected to the device chassis and that this is placed on an antistatic mat. Furthermore, it is crucial to avoid any kind of contact between the device components and necklaces, bracelets, rings, ties, etc.</p>
	<p>Это устройство содержит элементы, чувствительные к электростатическому скачков и ударов, поэтому очень важно при работе с оборудованием, антистатический браслет подключен к устройству шасси, и это находится на антистатический человека, и, кроме того избегая любого контакта между устройством компонентов и ожерелья, браслеты, кольца, галстуки и т.д.</p>
	<p>Cet appareil contient des éléments qui sont sensibles aux surtensions et les chocs électrostatiques. Il est donc essentiel lors de la manipulation de l'équipement de porter un bracelet antistatique relié au châssis de l'appareil et celui-ci placé sur un tapis antistatique, et éviter en outre toute forme de contact entre les composants du dispositif et des colliers, bracelets, bagues, cravates, etc.</p>
	<p>Este equipo contiene componentes sensibles a las sobrecargas y descargas electrostáticas. Por eso, durante la manipulación del equipo, utilice una pulsera antiestática conectada al chasis del equipo y colóquelo sobre una esterilla antiestática. Evite también el contacto de colgantes, corbatas, etc. con cualquier componente del equipo.</p>
	<p>Always place the components on an antistatic surface.</p>
	<p>Помещайте компоненты только на антистатическую поверхность.</p>
	<p>Placez toujours les composants sur une surface antistatique.</p>
	<p>Coloque siempre los componentes en una superficie antiestática.</p>
	<p>Do NOT switch on the device before checking that all the components (chassis, power source, fans, etc.) are correctly connected.</p>

	НЕ включайте устройство, не убедившись сначала в том, что все его компоненты (корпус, источник питания, вентиляторы и т.п.) подключены правильно.
	Ne mettez pas l'appareil avant de vérifier que tous les composants (châssis, source d'alimentation, ventilateurs, etc) sont correctement connectés.
	No encienda el equipo antes de verificar que todos los componentes (chasis, alimentación, ventiladores, etc.) están conectados correctamente.
	The electric current in power cables, telephone lines and communication cables is dangerous. To prevent electric shocks, before installing, handling or opening the equipment covers, connect and disconnect the cables following the steps set forth in the relevant section.
	Электрический ток в кабелях и проводах может быть опасен для жизни и здоровья. Чтобы предотвратить поражение током, перед установкой оборудования, его обслуживанием и снятием панелей необходимо отсоединять кабели в соответствии с правилами, изложенными в соответствующем разделе.
	Le courant électrique qui circule dans les câbles d'alimentation, les lignes téléphoniques et les câbles de communication est dangereux. Afin d'éviter tout choc électrique, brancher, puis débrancher les câbles en suivant les consignes préconisées dans chaque section avant d'installer, de manipuler ou d'ouvrir les caches de l'équipement.
	La tensión eléctrica de los cables de alimentación, de los cables de la línea telefónica y de los cables de comunicación es peligrosa. Para evitar descargas, antes de instalar, mover o abrir las cubiertas de este equipo, conecte y desconecte los cables siguiendo las recomendaciones indicadas.