



ATLAS 300 Installation Manual

Teldat-Dm 699-I

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Table of Contents

I	Important Information	1
Chapter 1	Introduction	2
1.1	Recycling and the Environment	2
Chapter 2	Installing the Router	4
2.1	General Installation	4
2.2	Connections	4
2.2.1	LAN Ethernet connection	5
2.2.2	WAN or external modem connection	5
2.2.3	Connecting: Configuration	5
2.3	Rack installation	6
2.4	Switching the router on	6
Chapter 3	Description of the device	8
3.1	Description of the LEDs	8
3.2	Description of the microswitches	9
3.2.1	Procedure to ignore the configuration	10
Chapter 4	Appendices	12
4.1	Smart Card	12
4.1.1	Description and insertion	12
4.1.2	Viewing the content	12
4.1.3	Writing	13
4.1.4	Access Mode	14
4.1.5	Formatting	15
4.2	Troubleshooting	15
4.3	Updating the software and configurations	16
4.3.1	Updating via FTP	16
4.3.2	Updating via XModem	17
4.4	Connector specifications.	19
4.4.1	Twisted pair connections (RJ45)	19
4.4.2	WAN Connector	19
4.4.3	AUX port connections	20
4.5	Technical specifications	20
4.6	Installing PMC Cards	21

4.7 Translated safety warnings. 25

I Important Information



Note

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

Chapter 1 Introduction

The **ATLAS 300** router, developed by TELDAT, is designed to operate in a wide range of scenarios present in the most common teleprocessing networks: corporate, SME and SOHO.



Through its LAN/WAN connections, this device offers IP router functionality, supporting OSPF and other dynamic routing protocols. The **ATLAS 300** also offers a variety of connection possibilities in SNA environments: from LLC2 and SDLC to QLLC conversion, which allows direct LAN interconnection to the **ATLAS 300** (without a communications card in the server), to the SNA over IP function using Data Link Switching (DLSw). This option has enabled all transport network architecture to be standardized on TCP/IP.

In its basic configuration, the **ATLAS 300** is equipped with two LAN interfaces and three serial WAN interfaces. Teldat and PCI Mezzanine Cards (PMC), capable of supporting encryption, voice over IP (VoIP), xDSL, etc., can be inserted to expand the configuration.

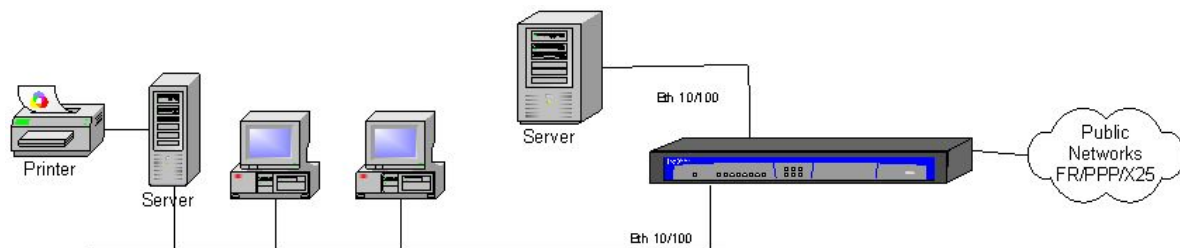


Fig. 2: User scenario: Teleprocess tasks

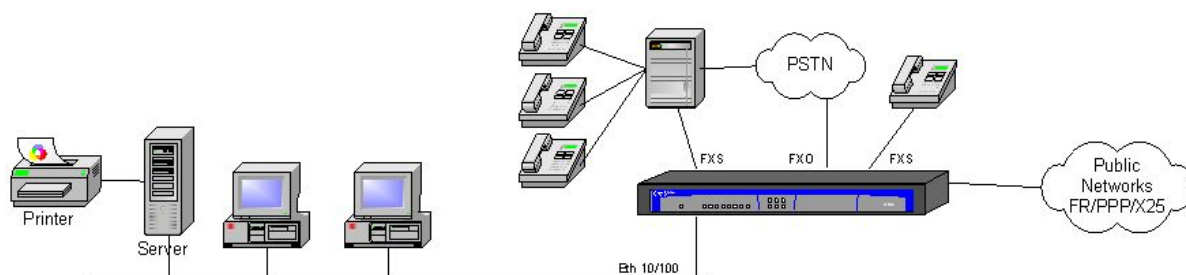


Fig. 3: User scenario: VoIP

1.1 Recycling and the Environment

The **ATLAS 300** should never be disposed of with normal household waste. Please check with your town or city hall about proper disposal that does not ruin the environment. Always comply with the current regulations on waste disposal. Conviction of environmental law violation can result in fines and other legal penalties.

The cardboard box, the plastic packaging and the components that make up the **ATLAS 300** may be recycled in accordance with the current recycling regulations in force in your country.


The symbol shown below, with a cross over the rubbish container, can be seen on the device. This means that, when a device reaches the end of its life, it must be taken to a waste collection point and disposed of separately from other

urban waste.



Chapter 2 Installing the Router

The **ATLAS 300** multimedia router can be a desktop or a rack-mounted device. In both cases, please be sure to follow the recommendations given below to ensure correct installation:

	<p>Important</p> <p>BEFORE CONNECTING THE ROUTER, PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY.</p>
---	--

2.1 General Installation

Workplace Conditions


The following recommendations should be noted:


- (1) Do not expose the device to direct sunlight, extreme heat, dampness or dusty conditions. Do not place the device among books, papers or other elements that could hinder natural air circulation.
- (2) Do not place the device near strong electromagnetic fields, such as those produced by speakers, motors, etc.
- (3) Avoid knocks and/or strong vibrations during transport, operation and storage.

Power supply

The **ATLAS 300** does not require any special conditions in terms of voltage stability or protection against power malfunctions, as it is already protected.

To avoid electric shocks, residual current circulation and other unwanted effects that may disrupt communication, the following is recommended:

	<p>Warning</p> <p>All interconnected communication devices should be plugged to THE SAME GROUNDED POWER OUTLET, which should, at the same time, be of good quality (lower than 10 ohms).</p> <p>Whether the workplace is provided with an uninterrupted power supply system (UPS), regulated supply, or it is independent from the rest (such as lighting, etc.), it is highly recommended that all data devices should be connected to the same power source. This will avoid operating and premature aging problems of drivers and other components.</p>
---	--

	<p>Warning</p> <p>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 following section.</p>
---	--

To connect the ATLAS300	To disconnect the ATLAS300
Make sure the power switch is OFF.	Switch off the device.
Connect all the data cables.	Disconnect the power supply cable.
Connect the power supply cable.	Disconnect the data cables.
Switch on the device.	

2.2 Connections

2.2.1 LAN Ethernet connection

The LAN interface has two female RJ45 connectors to connect to the Ethernet 10BaseT / 100BaseT networks. Connect them through shielded (STP), or unshielded (UTP) twisted pair cables. Since these cables are not supplied with the router and must be purchased separately, please contact your supplier.

Depending on the design of the network, the connection is done through a HUB or straight to the Ethernet interface of another terminal device by means of a crossover cable (please contact your supplier for information on Ethernet crossover cables).

2.2.2 WAN or external modem connection

DTE/DCE multi-standard serial interfaces have a female DB25 connector to connect to an external modem or to networks such as X.25, Frame Relay, etc.

The type of cable required will depend on the type of connection. This cable can be supplied by Teldat.

A flap on the underside of the device provides access to the sockets where the V.24 DTE/DCE, V.35 DTE/DCE, X.21 DTE/DCE and RS-485 2/4 wire drivers can be inserted. **The drivers are not multipurpose** and have a **T** and an **M** stenciled at either end. Define the mode you want by simply inserting the **T** end of the driver into the connector (if you want terminal mode) or the **M** end (if you want modem). Bear in mind that RS-485 drivers cannot change the behavior from modem to terminal. Setting 2-wire or 4-wire operation is done via the router's application software, using the associated interface's configuration commands. This driver must always be connected to the 2H/4H marking, with the arrow pointing towards the rear of the device (closest to the external connector).



Note

The default configuration for the drivers is shown on a label at the bottom panel of the device, close to the flap used to access the drivers.

The configuration of the drivers included in Figure 3 shows WAN 3 operating in DCE mode and WAN 2 in DTE mode. No driver is inserted in WAN 1 and the connectors are shown for didactic purposes.

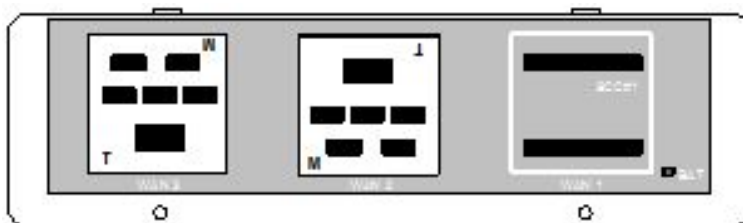


Fig. 5: Driver insertion, depending on the operating mode

2.2.3 Connecting: Configuration

The **ATLAS 300 routers** have a **DB-9 female connector on the rear panel labeled AUX**. This provides access to the router's local console for configuration and monitoring. To use it, connect the **AUX port to an asynchronous terminal (or to a PC with terminal emulation)**.

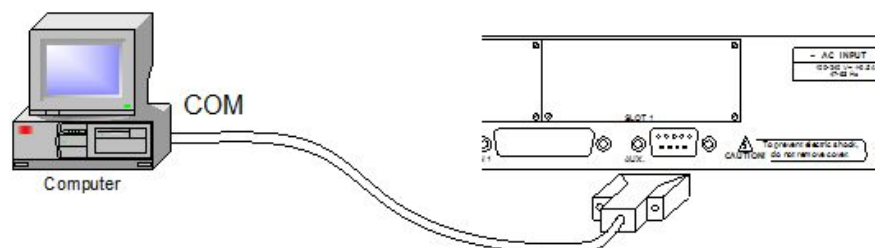


Fig. 6: Connection for configuration/monitoring via console

Terminal configuration is as follows:

- Speed: 9600 bps
- Eight data bits
- No parity bit
- One stop bit
- No type of flow control

Also expressed as 9600 8N1. The DB-9 female to DB-9 male cable supplied with the device can be used to connect to the configuration port. If the asynchronous terminal is equipped with DB25 connectors, you should use an additional DB9F to DB25F adapter (not included with the device).

This can also be used to update codes. For further information, please see [Updating the software and configurations](#) on page 16.

2.3 Rack installation

To install the **ATLAS 300** in a 19-inch rack you will need two plastic mounting brackets, as shown in Figure 5. Mounting brackets and screws are not included with the device and must be purchased separately.

Each mounting bracket is attached to the device using four screws (two at each side), as shown below:

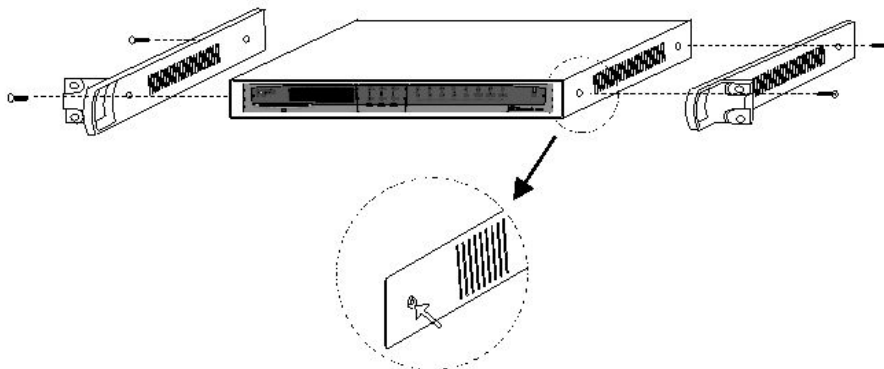


Fig. 7: Attaching the brackets

The **ATLAS 300** router comes with caps covering the screw holes. Remove these using a sharp tool (such as a small flat screwdriver). We recommend removing the upper cover to do this.



Fig. 8: Router with the strips attached

2.4 Switching the router on

Once the device has been installed in the workplace according to the foregoing instructions, it is time to switch it on. When the device is switched on, the auto-test and initialization begins (as explained below).

First, the device carries out a brief auto-test to check that the startup program is correct and to detect and activate the SDRAM present in the device. At each stage of the process, a LED lights up in yellow (starting with the **S** LED). If

a problem is detected, the process ends and the **S** LED flashes red. Once the process has finished, the console is available and starts showing data.

Once the device has finished booting up, it performs an auto-test and auto-detection test on the motherboard hardware. The device LEDs first light up in yellow, then red and finally green, thus serving as a visual operational check. Then, for each internal element checked, a device LED lights up yellow (starting with the **S** LED). If the test is successful, the LED stays green. If a fault is detected, the corresponding LED stays red and, once the auto-test has finished, depending on the problem, the device resets and repeats the process or lets you use the console to resolve the problem.

On startup, all the LEDs switch off and the routing applications code is decompressed. During this period, the **C** LED blinks in green. The console displays the depressed code in dots and blocks.

The application runs once the decompression process has finished. The configuration, if found, is read and the device prompt or an access login is displayed. At this point, if everything went smoothly, the **S** LED lights up in green. You will find an example of what is showing on the console in section 3.2.a.

Chapter 3 Description of the device

Both the front and the rear panels (depending on the version) can be seen in Figure 7.

The front panel is equipped with LEDs, which display the status of the various interfaces and devices (smart card for example) the **ATLAS 300** has.

The following can be found on the rear panel: 7 the power point, the AUX console connection (in DB-9 format) for local configuration and monitoring, and the microswitches. Connections to the LAN (RJ45 format) with the link LED (in yellow). The WAN connectors are in DB-25 format. Finally, depending on the version, there are a number of different slots allowing expansion cards to be placed inside the device. These slots come with blind covers which, once removed, allow access to the various connectors that support expansion cards.

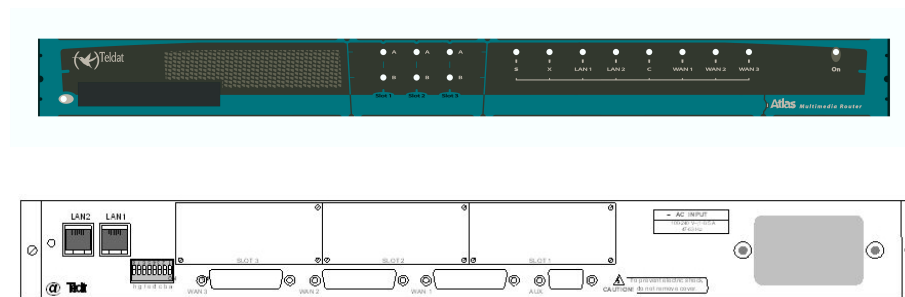


Fig. 10: Front and rear panels of the equipment

There is a flap on the bottom of the device that provides access to the serial line drivers. Here you can select the operation mode (DTE/DCE) and change from one to the other depending on the standard you are going to use.

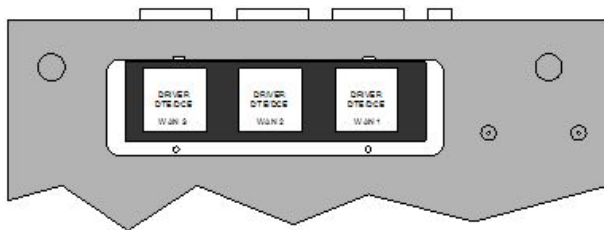


Fig. 11: Driver access flap

3.1 Description of the LEDs

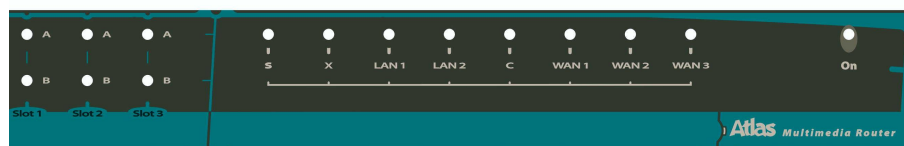


Fig. 12: LEDs: Front panel

ON	Power-on indicator. It lights up when connected to the power.	
S	DEVICE OPERATION: OFF: System off. RED: ERROR: Component operating incorrectly. YELLOW: The router has a telnet connection and is being remotely accessed. GREEN: System initialized and operating. The local console can be used to access the device.	
X	Not used in the current version.	
LAN 1 - 2	OFF: Interface not supported or unavailable. RED: Interface unavailable because it has not been enabled or due to an autotest malfunction. YELLOW: Interface initialization in progress. GREEN: Interface available. Flashing: Maintenance frame being sent.	
C	Not used in the current version.	
WAN 1 - 3	OFF: Interface not supported or not available. RED: ERROR: a component is malfunctioning. YELLOW: Interface initialization in process. GREEN: Flashing. System initialized and operating. GREEN-YELLOW: Depends on the type of interface. The interface is down and the backup mechanism is active.	
S L O T 1 - 3	A	OFF: Slot is empty. There is no card. RED: ERROR: a card has been detected in the slot but it is not working properly. YELLOW: Initialization/configuration in progress. GREEN: Card initialized and operating correctly.
	B	OFF: The card is not performing any operation. RED: Depends on the type of card. YELLOW: Depends on the type of card. GREEN: Depends on the type of card.

3.2 Description of the microswitches

On the rear of the **ATLAS 300** router, you will find a group of microswitches labeled **a** to **h** (see Figure 10). These activate test functions, software loading etc. All microswitches come in the OFF position. They should only be touched when you want to restore the device to its default settings as described below.

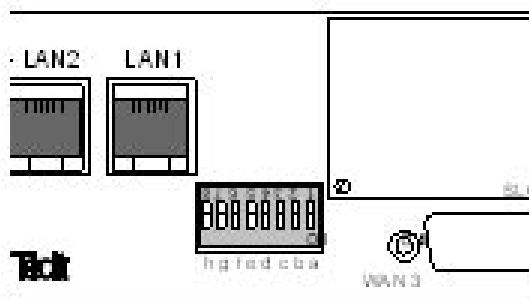


Fig. 13: Location of the microswitches



Note

All microswitches must be in the OFF position to ensure correct operation.

3.2.1 Procedure to ignore the configuration

Follow these steps when you have to reject the whole router configuration (for instance, if you cannot remember the password):

- Use the ON/OFF switch to turn the device off.
- Using a screwdriver or another sharp instrument, move the **e** microswitch to the ON position.
- Use the ON/OFF switch to turn the device on.

When the device is switched on, a message similar to the one shown below will appear on the configuration console:

```
*****
***** Router Teldat *****
*****

BOOT CODE VERSION: 01.00 Mar 18 2004 17:19:47
  gzip Mar 16 2004 18:15:43
P.C.B.: 70 MASK:0064 Microcode:002D
START FROM FLASH
BIOS CODE DUMP.....
BIOS DATA DUMP...
End of BIOS dump

=====
          BIOS TELDAT                               (c)Teldat
=====

BIOS CODE VERSION: 01.00
CLK=294912 KHz  BUSCLK=65536 KHz  L255
Date: 04/21/04, Wednesday      Time: 11:50:48

SDRAM size: 128 Megabytes
  BANK 0: 128 Megabytes (detected)
Caches: ON  Write-Back
FLASH: 16 Mb.
NVRAM: 128 Kb.
EEPROM: 2048 Bytes.
DPRAM: 16384 Bytes.
WAN1: DCE
WAN2: DTE
WAN3: DCE
FAST ETHERNET 1
FAST ETHERNET 2
PCI device: Host bridge
  (Bus: 0, Device: 0, Function: 0)
Current production date: 03 49
Current software license: 6 4
Current serial number: 472/06547

TRYING APP CODE DUMP
  (CONFIGURED) APPCODE1.BIN
Error on searching files
  (BY SEARCHING APP CODE FILES ON FLASH)
  TRYING: ATLAS300.BIN.....
.....
APP DATA DUMP.....
Running application
Configuration read
Default configuration used
Initializing

Teldat                (c)2001-2004

Router model ATLAS300 6 4 CPU MPC8260      S/N: 472/06547
2 LAN, 3 WAN Lines
*
```

As you can see, the text **Default configuration used** appears in the box. At this point, you can switch the e microswitch to OFF (you do not need to turn the device off). The next time you restart the router, the saved configuration will run.

Chapter 4 Appendices

4.1 Smart Card

The configuration is stored in a file within the device and is read each time the device is started. It is usually stored in the flash memory. In some models, however, an external device such as a smart card can be used to store the configuration, thus facilitating its transfer from one device to another. The information is compressed to make better use of the space available on the smart card. Console commands are used to choose the means of active storage from which the configuration is read and stored. These commands are explained in the *Dm704-I Configuration and Monitoring* manual.

4.1.1 Description and insertion

The smart card has an integrated circuit where you can store and process information. The amount of space on the card varies but is always in the order of kilobytes. Figure 11 shows the external appearance of the card: on one side of the card you can see the integrated circuit, and on the other there is an arrow that indicates which way to insert the card



Fig. 14: Smart Card: Aspect

The smart card is inserted in a slot on the router front panel. It must be placed in the slot with the arrow side facing up and the chip side facing down. Insert the card carefully, following the arrow, until you hear a small click.



Fig. 15: Smart Card Slot

A LED next to the slot indicates card activity. This LED glows green when reading or writing to the card. It remains off when there is no activity.



Note

DO NOT remove or insert the card when the activity LED is on. Data stored in the card may be lost if you do so.

4.1.2 Viewing the content

The smart card content can be viewed from the console or via FTP.

- In order to view the content of the smart card, or the free space, use the file list command on the configuration menu (please see the *Dm704-I Configuration and Monitoring* manual). Since the smart card is fairly slow, it may take a few seconds to respond.


```

Config>FILE LIST
Active Device: SmartCard only
A:   CODE.BIN      2734052      12/00/08      31:57      Flash
A:   ROUTER.CFG     960          03/01/35      03:00      Flash
A:   DEF.CFG        816          03/01/25      03:00      Flash
Flash Available Space : 5198 Kbytes
S:   PC.CFZ         2983                               SmartCard
S:   ROUTER.CFZ     543                               SmartCard
S:   TEST.CFZ       536                               SmartCard
SmartCard Available Space : 8040 bytes
Config>

```

Viewing the Smart Card files on the console

- To view the content of the smart card when accessing the device via FTP, use the `dir` command in the router containing the smart card. The steps are as follows:
 - Enter the login and password.
 - If you have defined users, use the names and passwords assigned to them.
 - If there are no defined users, use `root` as the login.
 - If you have not set a password, press **enter**.
 - If you have set a console password, enter it to access the FTP server.
 - If you have enabled RADIUS server authentication, enter the appropriate password.
 - Exit the default FTP device using the `cd ..` command.
 - Change to the FTP device using the smart card with the `cd smc` command.
 - Display the contents of the smart card using the `dir` command.

```

C:\atl>ftp 172.24.78.94
Connected to 172.24.78.94.
220 FTP server ready, 1 active clients of 1 simultaneous clients allowed.
User (172.24.78.94:(none)): root
331 User name accepted, need password.
Password:
230 User login complete.
ftp> cd ..
200 CWD root dir successful.
ftp> cd smc
200 CWD Command successful.
ftp> dir
200 PORT is set to IP ADDR = 172.24.51.23 PORT = 1964
150 Data connection open, list transfer in process...
-rwxrwxrwx  1 ftp    ftp      415 Jan 16 1999 ROUTER1.CFZ
-rwxrwxrwx  1 ftp    ftp      864 Jan 16 1999 ROUTER2.CFZ
-rwxrwxrwx  1 ftp    ftp    3551 Jan 16 1999 STARTUP.CFZ
-rwxrwxrwx  1 ftp    ftp      543 Jan 16 1999 ROUTER.CFZ
226 List transfer completed, data connection is closed.
591 bytes received in 18,25 seconds (0,03 Kbytes/sec)
ftp> bye
221 Goodbye.
C:\atl>

```

Viewing the files on the smart card, via FTP, through a Windows MSDOS screen

4.1.3 Writing

Configurations can be stored in the smart card via FTP or the console. To write via FTP, see the explanation under [Updating the software and configurations](#) on page 16.

From the console, you can use the *save* and *file copy* configuration commands. The *save* command always uses the active storage unit. The *file copy* command allows you to select a different unit. You must use the unit identifier **S:** (an **S** followed by a **colon**) to refer specifically to the smart card. For further information, please see *Dm704-I Configuration and Monitoring*.

Choose the active unit through the *config-media* configuration command. This offers the following options:

- SMARTCARD-FLASH. Both mediums are considered active but the smart card has priority over the flash memory.
- SMARTCARD. The smart card is considered as the only active medium or unit.
- FLASH. The flash memory is considered the only active medium or unit.

By default, the device has the SMARTCARD-FLASH value configured on those devices that support smart card and the FLASH option on those devices that do not. You can use the *file list* command to check which unit is active.

As noted earlier in this section, the configuration is stored on the smart card in compressed format. To indicate this, the files stored on the smart card have the last letter of the extension changed to **z**. A **.z** is added to any file you wish to store on the smart card that does not have an extension. Any file saved on the smart card will be recorded in compressed format using the gzip compression application.

If the file recorded on the smart card is compressed using the gzip compression application before it is sent, the extension will not be compressed or modified. Any files sent from the smart card to a PC via FTP will be transferred exactly as they were stored on the smart card (i.e., compressed). The compression format used can be decompressed with most decompression applications available on the market, including WinZip. However, if the file copy command has a smart card file as source file and a flash memory file as destination, the file is copied in decompressed format.

There are also commands that allow you to delete (*file delete* command) and rename (*file rename* command) files in a storage unit. For further information on these commands, please see *Dm704-I Configuration and Monitoring*.

4.1.4 Access Mode

Generally speaking, the device will use the active storage medium when booting or saving the configuration.

Depending on the active medium, the device will behave as follows when it boots up:

- SMARTCARD-FLASH. The smart card configuration is read. If there is no card, or if the file cannot be found, it will be read from flash memory. The device will boot with the default settings if it cannot find the file in the flash memory.

After reading the smart card configuration file, the device checks that it is written in the flash memory. If the file is not there then the device writes it to the flash memory so that both mediums are synchronized.

- SMARTCARD. The smart card configuration is read. The device will boot with the default configuration if the card is not there, or if the file is not found.
- FLASH. The flash configuration is read. The device will boot with the default configuration if the file is not found.

Depending on the active medium, the device will behave as follows when the configuration is saved using the *save* command:

- SMARTCARD-FLASH. **The configuration is saved on the smart card and in the flash memory.** The console shows the devices on which the configuration has been stored, highlighting with a warning text the devices where recording has not been possible.
- SMARTCARD. The configuration is saved on the smart card.
- FLASH. The configuration is saved to the flash memory.

Sometimes you might want to boot the smart card device independently of the active medium configured. You may even want the smart card configuration to be automatically recorded to flash memory, thus enabling the device to boot with the smart card configuration even though the card has been removed (this might be useful, for example, for updating the configuration in a device pool that needs to start from a common base configuration). This is achieved with the **e microswitch** (default configuration microswitch). When the **e microswitch** is active (in the ON position) the following procedure is followed:

- (1) The device first tries to read the STARTUP.CFZ configuration from the smart card. This configuration, if found, is copied to the device's flash memory as ROUTER.CFG (configuration file default name) and is marked as the active configuration file. If there is a ROUTER-CFG configuration in the device's flash memory, it is stored as

ROUTER.BAK. This is configured as FLASH regardless of the active medium configured.

- (2) If the configuration is not found, the device will search the smart card for a configuration with the default name of the configuration file (ROUTER.CFZ). If found, it is marked as active. It is NOT copied to the flash memory. This is configured as SMARTCARD-FLASH, regardless of the active medium configured.
- (3) If the device does not find any of the above files, it searches the smart card for a configuration file (files with the .cfz file extension). If one is found, the device boots with this configuration, marking it as the active configuration file. As in the previous case, the configuration is NOT copied to flash memory. This is configured as SMARTCARD-FLASH, regardless of the active medium configured.
- (4) Finally, if the smart card is not available or no configuration file is found, the device will boot with the default configuration. The active medium configured is not modified.

4.1.5 Formatting

Like any software, the smart card must be formatted before use. **The smart card comes pre-formatted by default.** However, should it be necessary, the **ATLAS 300** also has the means to carry out formatting.

To format a smart card, you can use the file format smartcard command from the configuration menu. Please note that the formatting process destroys any data on the smart card (i.e., you will not be able to retrieve data once you have formatted a card).

You can also format a smart card from the BIOS management menus which are accessible on booting the device: the format command that allows you to format the card is in the disk menu.

For further information on how to format your card, please contact your regular supplier or an authorized service center.

4.2 Troubleshooting

The following table can help you solve problems when installing the device. If you cannot solve the problem, contact your dealer for more information.

Symptom	Solution
The LEDs do not light up.	Check the power supply (power source, ON/OFF switch, mains outlet).
The S LED does not light up.	Check that the microswitches are all in the OFF position.
The local console does not respond.	Check that you are using the correct cable and that it is connected to the device and the asynchronous terminal. Check that the terminal has been configured with the correct port. Check that the terminal configuration is 9600 8N1. Check that the console is not in the middle of processing events. Make sure the device is not being remotely accessed by telnet.
The local console only shows garbage	Check the terminal has been configured with the correct port. Check that the terminal configuration is 9600 8N1.
The device does not initialize and the console displays the WARM-UP text.	Check that microswitch a is in the OFF position. In this situation, you may have to reload the device BIOS and the routing application.
The device is very slow in displaying the application prompt.	Check that microswitch c is in the OFF position.
You have forgotten the password to access the device	Ignore the configuration using microswitch e , as explained in the relevant section.
The LAN LED never lights up in green.	Check that the rear LINK LED is ON. Check the Ethernet cable and the network connection (you may need a crossover cable).

The WAW LED never lights up in green.	Check that you are using the appropriate cable and that the driver is inserted correctly (DTE or DCE). Check that the configuration is correct (speed, protocol, etc.).
The LEDs indicate that the interfaces are established but there is no data connection.	Check the configuration (routes, IP addresses, serial interface speed, etc.).

4.3 Updating the software and configurations

The BIOS, the routing application code and the configurations are stored in the device's flash memory and handled as a standard disk drive. The executable codes have a `.bin` extension and can be updated via FTP using the **ATLAS 300** router FTP server, and by XModem through the device's local console.

The configurations have a `.cfg` extension and can only be read and written via FTP. If you want to make copies of your configurations, just get the `.cfg` router file from the router. Similarly, if you want to use a configuration, simply overwrite that file.



Note

UPDATING THE APPLICATION

The code storage system simulates a standard disk drive. Make sure the application file name loaded in the device matches the existing one. If they do not match, the loaded code may not activate automatically and the system will continue to execute the code that existed prior to the updating.

If you always use the same file name, the system will delete the old code and replace it with the new one, activating said code automatically.

4.3.1 Updating via FTP

Teldat devices have an internal FTP server that knows whether the file being loaded comes from BIOS, an application or somewhere else. The server operation, therefore, is completely transparent.



Note

By default, the FTP server is located in port 21. The FTP server port can be changed through the configuration. Make sure you are accessing the correct port. Otherwise, you will not get a response from the server.

To transfer code (assuming you have not changed the server port):

- Enter the login and password.
 - If you have defined users, use their usernames and passwords as the login and password. Depending on the level of access, updates may or may not be performed.
 - If there are no defined users, use root as login.
 - If you have not set a password, press **enter**.
 - If you have set a console password, enter it to access the FTP server.
 - If you have enabled RADIUS server authentication, enter the appropriate password.
- Switch to binary mode using the `binary` command.
- Perform the transfer using the `put` command.
- Permanently save the loaded file with the `quote site savebuffer` command.
- If you want the device to restart automatically and start running the new code, you can send the `quote site reload`

- Once the transfer has successfully completed, the *WAN1* LED turns green and the *S* LED keeps flashing yellow, indicating that recording is in progress. If the *S* LED turns red, the recording process failed; if it turns green, the recording process completed successfully.
- Once the code has been successfully loaded, deactivate microswitch **c** to prevent the device from entering wait mode when downloading the code via XModem.



Note

By default, the application loaded via XModem is saved as APPCODE1.BIN. You can change this name by following the instructions that appear on the console during downloading.

You can also access the BIOS menus to load through the console. To access these menus, press CTRL-T when a series of dots appear after the >> symbols.

```

=====
BIOS TELDAT                                (c)Teldat
=====
BIOS CODE VERSION: 01.00
CLK=294912 KHz   BUSCLK=65536 KHz   L255
Date: 04/21/04, Wednesday           Time: 11:50:48
SDRAM size: 128 Megabytes
  BANK 0: 128 Megabytes (detected)
Caches: ON      Write-Back
FLASH: 16 Mb.
NVRAM: 128 Kb.
EEPROM: 2048 Bytes.
DPRAM: 16384 Bytes.
WAN1: DCE
WAN2: DTE
WAN3: DCE
FAST ETHERNET 1
FAST ETHERNET 2
PCI device: Host bridge
  (Bus: 0, Device: 0, Function: 0)
Current production date: 03 49
Current software license: 6 4
Current serial number: 472/06547

Current file name: APPCODE1.BIN
Press Ctrl+t to change file name
.....
Xmodem whith chk transfer. Default baud rate: 115200
Press any key to change the baud rate
...o.
Select the baud rate transfer:
  1. 9600           4. 38400
  2. 14400          5. 57600
  3. 19200          6. 115200
Press 0 to abort load...
4
Set baud rate to 38400 and send the file with Xmodem with chk protocol.
When the transfer finish, reset baud rate to 9600.

```

Changing the transfer speed

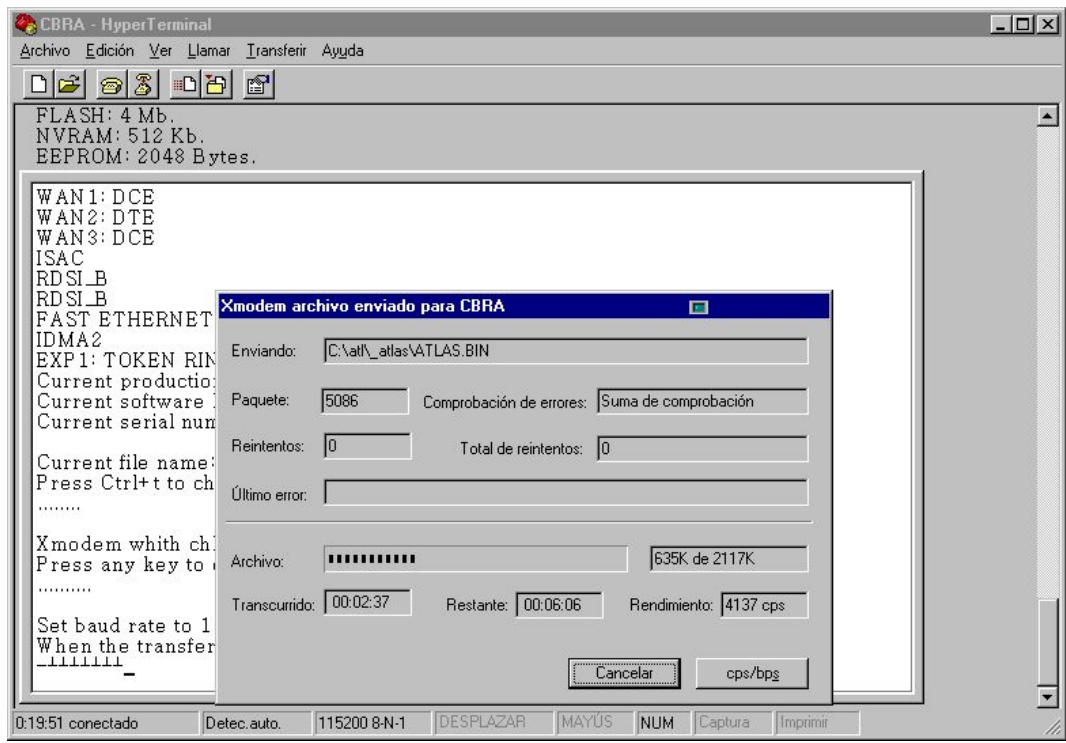
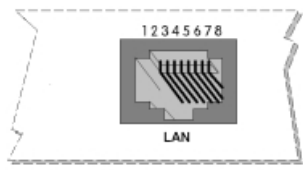


Fig. 16: Downloading code via XModem through Windows Hyperterminal

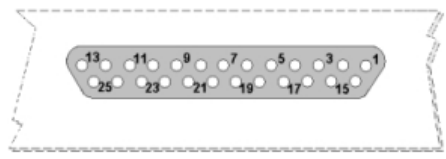
4.4 Connector specifications

4.4.1 Twisted pair connections (RJ45)

RJ45 LAN	RJ45 PIN	Ethernet
	1	Tx+(input)
	2	Tx-(input)
	3	Rx+(input)
	4	--
	5	--
	6	Rx-(output)
	7	--
	8	--

4.4.2 WAN Connector

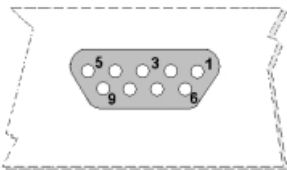
Note
 Cables used for multi-purpose Teldat drivers must not be used in these connections. You must use end-to-end pin-to-pin connector cables.



DB25 Connector	STANDARD							
	V.24		V.35		X.21		RS-485 2H	RS-485 4H
Pin	Signal	UIT	Signal	V.35	Signal	DB15	Signal	Signal
1	Ground	101	Ground	A	Ground	1	Ground	Ground
2	TxD	103	TxD (A)	P	TxD (A)	2	D (-)	TxD (-)
3	RxD	104	RxD (A)	R	RxD (A)	4		RxD (-)
4	RTS	105	RTS	C	CONT(B)	10		
5	CTS	106	CTS	D				
6	DSR	107	DSR	E				
7	GND	102	GND	B	GND	8	GND	GND
8	DCD	109	DCD	F				
9			ExTxC (B)	W				
14			TxD (B)	S	TxD (B)	9	D(+)	TxD (+)
15	TxC	114	TxC (A)	Y	IND(A)	5		
16			RxD (B)	T	RxD (B)	11		RxD (+)
17	RxC	115	RxC (A)	V	CLK(A)	6		
18			TxC (B)	AA	IND(B)	12		
19			RxC (B)	X	CLK(B)	13		
20	DTR	108	DTR	H	CONT(A)	3		
24	ExTxC	113	ExTxC (A)	U				

4.4.3 AUX port connections

This port is used to locally configure and monitor the device. It allows an asynchronous terminal operating at 9.600 bps with no parity and with one stop bit (9600 8N1) to be connected. It is a female DB9 connector that acts as DCE, thus allowing pin-to-pin connection with a PC asynchronous port or terminal.

DB9	DB9 PIN	Signal
	3	TXD
	2	RXD
	5	GND
	7-8	Joined Pins
	1-4-6	Joined Pins

4.5 Technical specifications

Hardware architecture

PROCESSORS	Motorola MPC8260, at 300 MHz,
MEMORY	128 SDRAM Mbytes
STORAGE UNIT	FLASH Memory, 8 or 16 Mbytes depending on version

	EEPROM 2 Kbytes, NVRAM 128 Kbytes
--	-----------------------------------

LAN Interface

PROTOCOLS	Ethernet (802.3) / Ethernet blue book
SPEED	10 Mbps (10BaseT)/ 100 Mbps (100BaseT)
Nº OF PORTS	2
CONNECTOR	RJ45 female

WAN Interfaces

PROTOCOLS	FRAME RELAY, X.25, PPP, SDLC, X.28, SCADA
INTERFACES	Pluggable Drivers V.24 / V.35 / X.21 DTE/ DCE and RS-485 2-4 Wires
No. PORTS	3
SPEED	200 to 2048 Kbps
CONNECTOR	DB-25 female

Configuration Interface

LOCAL TERMINAL	V.24 9.600-8-N-1-without flow control
CONNECTOR	DB-9 female

AC* power supply

INPUT VOLTAGE	100 – 240 V ~
INPUT CURRENT	1-0.5 A
INPUT FREQUENCY	47-63 Hz

DC* power supply

INPUT VOLTAGE	-48 V
INPUT CURRENT	1 A

Dimensions and weight

TYPE	Desktop
LENGTH x WIDTH x HEIGHT	310 x 415 x 43 mm
WEIGHT	3.5 Kg

Environmental specifications

AMBIENT TEMPERATURE	ON: 5° to 55 °C OFF: -20° to 60 °C
RELATIVE HUMIDITY	ON: 8 % to 85 % OFF: 5 % to 90 %

* Available depending on version

4.6 Installing PMC Cards

The **ATLAS 300** features and interfaces can be amplified by inserting PMC boards (PCI mezzanine card). The **ATLAS 300** supports up to 3 cards simultaneously. For proper installation, follow the steps listed below. Should you encounter any problems, please contact your usual supplier.

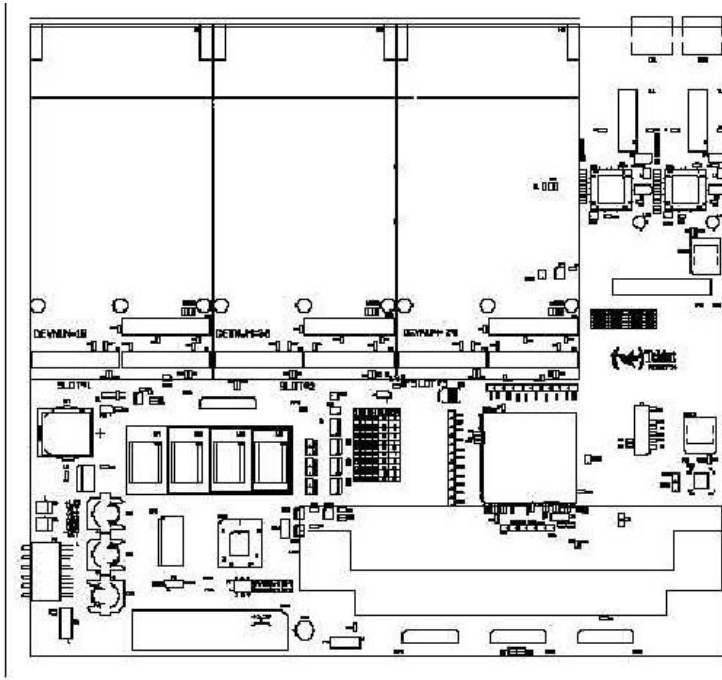
- (1) Switch off the device as described in *General Installation* on page 4.
- (2) Remove the device from the workplace and place it in a stable, safe location, where it can be easily accessed and handled.
- (3) Open up the device. To do this, remove the upper cover (secured to the rear panel by means of two screws). You will need a star screwdriver to do this. Keep the screws in a safe place for later use.



Once the screws have been removed, slide the cover some 10 mm towards the rear panel and then remove it by lifting it upwards and carefully separating it from the sides. Place it in a safe location.



- (4) Determine where the PMC board should go. This will depend on which slots are free and on the mechanical characteristics of the PMC board. The following figure shows the ATLAS300 motherboard as viewed from the front panel of the device. The different slots have rectangles printed on them and are labeled **H1**, **H2** and **H3**.

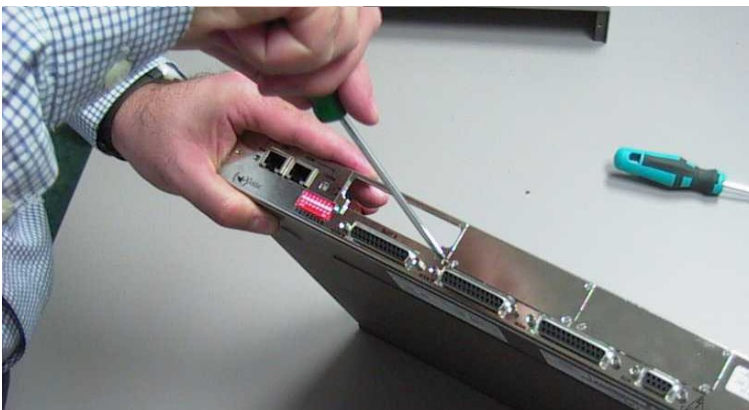


Each slot has a set of elevated connectors with gold contacts and a pair of screws.

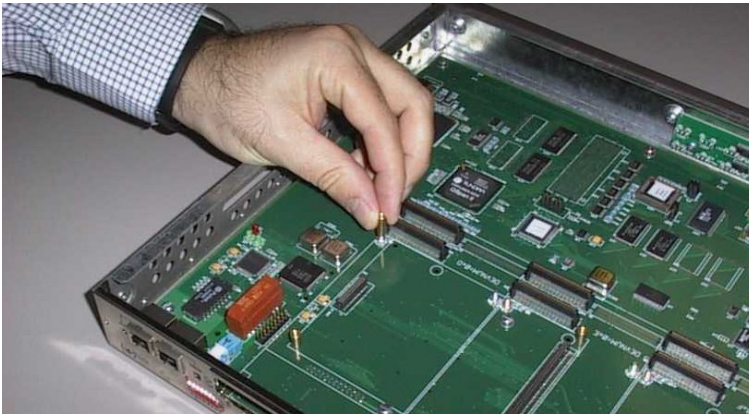
- (5) Remove the blind cover from the selected slot. This cover is located on the rear panel and is secured by three screws. You will need a flat screwdriver to do this.



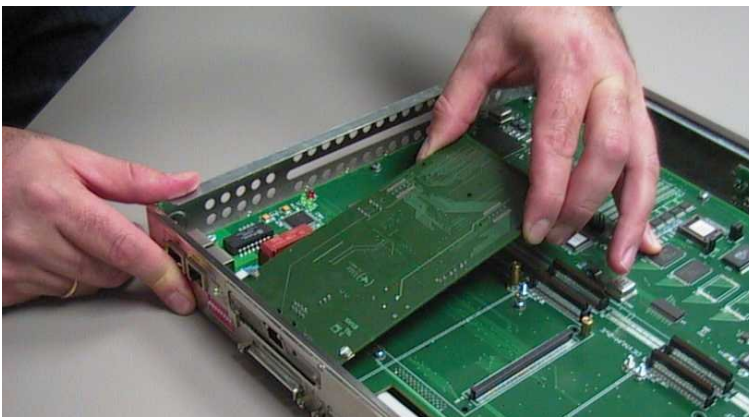
- (6) Screw the circuit board mold that came with the board and that allows the board to sit better in the rear panel of the device. Use the screws mentioned above to fasten it.



- (7) Place PMC board posts over the screws. Secure these firmly.



- (8) Place the PMC card in the slot by fitting it into the space on the device's rear panel first, followed by the two PMC connectors. Take care not to force any piece or part of the device. Check that the board is firmly seated in the PMC connectors.



- (9) Screw the PMC board to the posts using two screws and two washers. Firmly tighten the screws without damaging the board.



- (10) Close the device using the cover removed in step 3. To do this, place the cover on top of the device, without completely closing it, some 10 mm from the front panel. Check that the cover is sitting properly. Finally, slide the cover along in order to close up the device checking that the sides adjust below the front panel. Secure the cover using the screws mentioned in step 3.
- (11) Plug in and switch on the device (see [General Installation](#) on page 4). Check that the device boots as described in section 2.4. If you detect a problem, turn the device off and make sure that the above steps have been carried out correctly. If the problem persists, contact your supplier.
- (12) Connect a terminal to the console and check that the device detects the PMC board. This information is displayed at startup, as shown in the following figure.

```
=====
BIOS TELDAT
```

```
(c) Teldat
=====
```

```



BIOS CODE VERSION: 01.00
CLK=294912 KHz   BUSCLK=65536 KHz   L255
Date: 04/21/04, Wednesday           Time: 11:50:48

SDRAM size: 128 Megabytes
  BANK 0: 128 Megabytes (detected)
Caches: ON   Write-Back
FLASH: 16 Mb.
NVRAM: 128 Kb.
EEPROM: 2048 Bytes.
DPRAM: 16384 Bytes.
WAN1: DCE
WAN2: DTE
WAN3: DCE
FAST ETHERNET 1
FAST ETHERNET 2
PCI device: Host bridge
  (Bus: 0, Device: 0, Function: 0)
PCI device: Ethernet controller
  (Bus: 0, Device: 15, Function: 0)
Current production date: 03 49
Current software license: 6 4
Current serial number: 472/06547

```

(13) Finally, to use and configure the board, you need to boot the device with a default configuration.

4.7 Translated safety warnings

	<p>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.</p>
	<p>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 el orden que se detalla en el apartado correspondiente.</p>
	<p>All interconnected communication devices should be plugged to THE SAME GROUNDED POWER OUTLET, which should, at the same time, be of good quality (lower than 10 ohms).</p> <p>Whether the workplace is provided with an uninterrupted power supply system (UPS), regulated supply, or it is independent from the rest (such as lighting, etc.), it is highly recommended that all data devices should be connected to the same power source. This will avoid operating and premature aging problems of drivers and other components.</p>
	<p>Todos los equipos de comunicaciones interconectados deberán estar unidos a UNA MISMA TOMA DE TIERRA, a ser posible de buena calidad (inferior a 10 ohmios).</p> <p>Si la instalación está dotada de un Sistema de Alimentación Ininterrumpida (SAI), alimentación estabilizada, o bien es independiente del resto (alumbrado, etc.), conecte todos los equipos de comunicaciones a la misma fuente de alimentación. Así, se ahorrará problemas de funcionamiento y envejecimiento prematuro de drivers y demás componentes.</p>