ATLAS 6x/i6x Router

Installation Manual

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I Related Documents

Teldat-Dm748-I *Software Updating*

Teldat-Dm781-I *Cellular Interface.*

Teldat-Dm776-I *Power Over Ethernet.*

Chapter 1 About This Guide

This is the installation guide for the **ATLAS 60** router and contains information on how to correctly install this device in a working environment.

1.1 Supported Devices

The information provided 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 the support personnel who need to install, configure, maintain and monitor the device.

1.3 When should this manual be read?

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:

- A description of the available features in the **ATLAS 60** family.
- Technical specifications.
- Power supply requirements.
- Description of the device LEDs and the connectors.
- Troubleshooting.

1.5 What is not in this manual?

This manual does not contain information relative to the device software or its configuration. For information on how to configure this device, please see the relevant protocol manuals, to be found on the Teldat website:

http://www.teldat.com.

1.6 How is the information organized?

Each chapter focuses on a specific part of the hardware and its components. All descriptive, technical specifications and information on a component can be found in the relevant chapter.

1.7 Technical Support

Teldat S.A. offers a technical support service. Device software can be upgraded on a regular basis for maintenance purposes and for new features.

Contact information:

Web: http://www.teldat.com

Tel.: +34 918 076 565

Fax: +34 918 076 566

Email: support@teldat.com

Chapter 2 ATLAS 60 Routers

2.1 Characteristics

The **ATLAS 60** routers are modular devices that combine router and switch functions in a single device. They have been designed for a corporate environment, and include advanced security among their characteristics. The **ATLAS 60** routers incorporate encryption hardware and wireless LAN and WAN features. Consequently, they have internal slots for 802.11/b/g/n and 3G/4G connectivity.

The **ATLAS 60** executes the Teldat CIT (Teldat Internetworking Code - Código de Internetworking de Teldat), which runs over all the Teldat router families and is characterized by a wide variety of functionalities. It is especially designed to satisfy the access requirements to corporate data networks. CIT offers management capabilities, the possibility of implementing Quality of Service mechanisms (both at the link layer as well as at the network layer) and security mechanisms, the potential to create Virtual Private Networks through IPSec or L2TP, plus an extensive range of protocols and IP routing functionalities.

The **ATLAS 60** router family can be expanded by means of a PMC card, allowing you to increase the range of interfaces in the device.

This manual shows you how to install and connect these devices.

2.1.1 Power supply

For further information on the different **ATLAS 60** power supplies, please see *Components and Power Supply* on page 5, section *Power Source* on page 18.

2.1.2 Hardware Monitoring

The only way to monitor the **ATLAS 60** router family hardware is through the LEDs on the front panel. The LEDs provide visual information on what is happening in the device. They indicate the state of the hardware components, if there is connectivity, data flow, etc.

For further information on the LEDs panel, please see *Components* on page 5.

Chapter 3 Components and Power Supply

The following chapter provides detailed information on the chassis of the **ATLAS 60** router family and its components. This information includes:

- Components.
- Expansion modules.
- Information on assembly.
- Power supply.
- Micro-switches.
- Data connection.
- SIM card installation.

3.1 Components

3.1.1 Front Panel

The following figure shows the front panel.

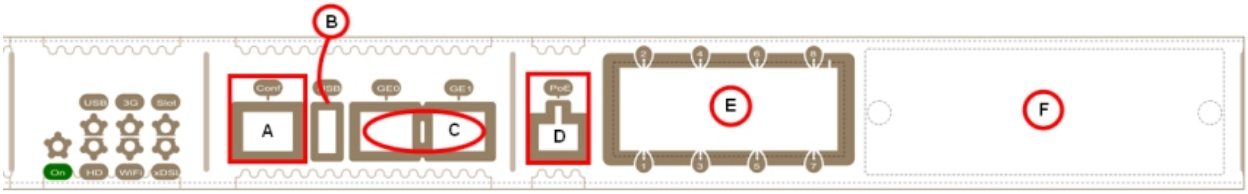


Fig. 1: **Front Panel**

The front panel elements are as follows:
Front panel elements table

Item	Description
A	Conf. RJ45 Connector, which provides access to the device's local console for configuration and monitoring purposes.
B	USB. Slot to take an USB device.
C	GE0/GE1. GigaEthernet Interfaces.
D	PoE. Connector for power supply through Ethernet (Power over Ethernet).
E	8-port Switch Ethernet.
F	SLOT 1. Expansion slot for 8-port Switch Ethernet expansion boards or PMC-PCI cards. For further information, please see section *SLOT 1 - Expansion Slot* on page 9.

In addition to the connections, the front panel has several LEDs that provide information on the state of the router.

The following figure shows the front panel LEDs:

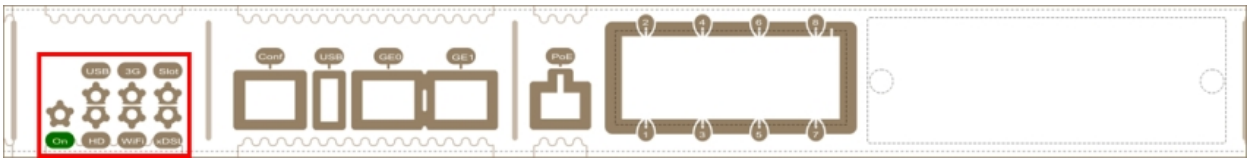


Fig. 2: **Front panel LEDs**

Below, you can find a description of each LED:

Front panel LEDs table

LED	Description	State
On	Power-on indicator.	It lights up when connected to the power.
USB	Shows the state of the device connected to the USB connector	Off -> Device not connected, not detected or incompatible. Green -> Compatible device detected.
HD	Indicates the activity on the internal Hard Disk.	Off -> Hard disk is not connected or is inactive. Green -> There is activity on the hard disk if flashing.
3G	Shows the cellular interface status (3G)	Off -> Interface not available or not installed (not supported). Red -> Interface not found, no data connection. Amber -> Connecting. Green -> Communications established. Flashes depending on the activity
WiFi	Shows the state of the WLAN interface.	Off -> Interface not available or not installed (not supported). Red -> Interface not found, no data connection. Yellow -> Connecting. Green -> Communications established. Flashes depending on the activity
SLOT	Depends on the card installed in the PCI slot.	Off -> Interface not available or not installed (not supported). Red -> Interface not found, no data connection. Yellow -> Connecting. Green -> Communications established.
xDSL	Shows the status of the xDSL interface.	Off -> Interface not available or not installed (not supported).

		Red -> Interface not found, no data connection. Yellow -> Connecting. Green -> Communications established.

In addition to the LEDs described in the above table, the front panel also has the LEDs for the Gigabit and Switch Ethernet interfaces.

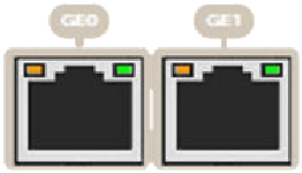


Fig. 3: **Gigabit ethernet interface LEDs**

Below, you will find information on the LEDs associated to the Gigabit Ethernet interfaces:
Gigabit ethernet interface LEDs table

LED	Description	State
Orange	Ethernet connection speed	Off -> Link has not been detected Orange -> 10 Mbps: Flashes once 100 Mbps: Flashes twice 1000 Mbps: Flashes three times
Green	Ethernet (link) connection established	Off -> Link has not been detected Green -> Flashes depending on the activity.

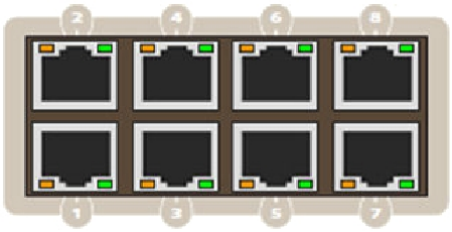


Fig. 4: **Switch Ethernet interface LEDs**

Below, you will find information on the LEDs associated to the Switch Ethernet interface:
Switch ethernet interface LEDs table

LED	Description	State
Orange	PoE activity	Please see manual "*Teldat-Dm776-I Power Over Ethernet*" .
Green	Ethernet (link) connection established	Off -> Link has not been detected Green -> Link detected. Blinking: connection data activity.

3.1.2 Rear Panel

The following figure shows the rear panel.

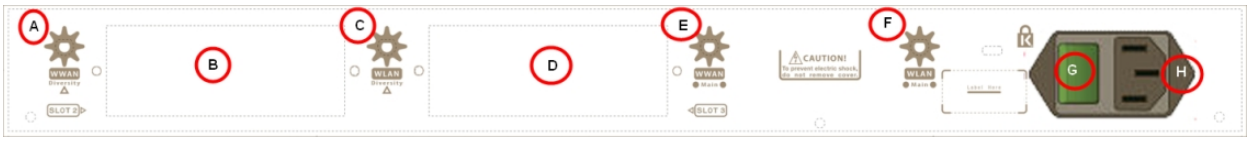


Fig. 5: **Rear panel**

The rear panel elements are as follows:
Rear panel connectors table

Item	Description
A	WWAN Diversity. Auxiliary antenna for the **ATLAS 60** cellular module. This module is optional, so your device may not have any antennas.
B	SLOT 2. Expansion slot for PMC-PCI cards. For further information, please see section *SLOT 2 - Expansion Slot* on page 12.
C	WLAN Diversity. Auxiliary WiFi antenna for the Wireless LAN module. This module is optional, so your device may not have any antennas.
D	SLOT 3. Expansion slot for xDSL cards. For further information, please see section *SLOT 3 – Expansion Slot* on page 15.
E	WWAN Main. Main antenna for the **ATLAS 60** cellular module. This module is optional, so your device may not have any antennas.
F	WLAN Main. Main WiFi antenna for the Wireless LAN module. This module is optional, so your device may not have any antennas.
G	ON/OFF switch.
H	Power cable connection.

3.1.3 Top Panel

The following figure shows the top panel.

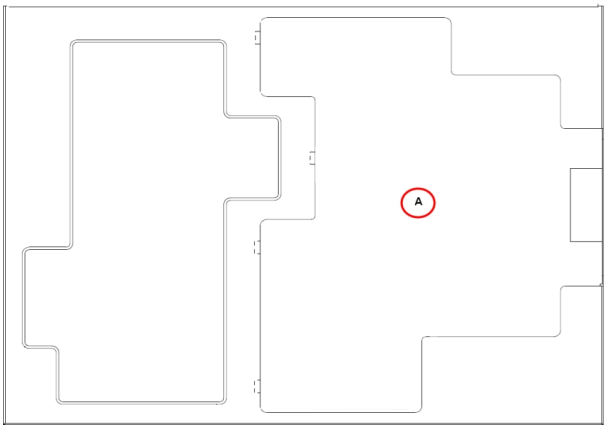


Fig. 6: **Top panel**

The top panel elements are as follows:
Top panel elements table

Item	Description

A	Flap that provides access to the expansion cards.

3.1.4 Side Panel

The following figure shows the side panel.

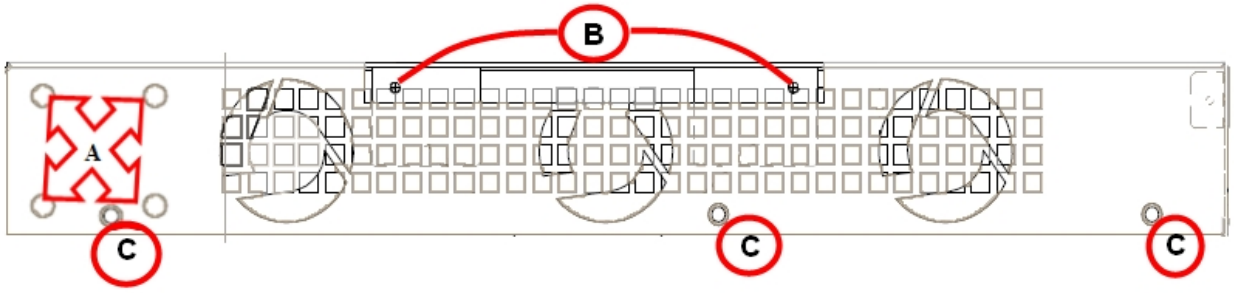


Fig. 7: **Side panel**

The side panel elements are as follows:
Side panel elements table

Item	Description
A	Slots for the screws to assemble this in rack.
B	Securing screws for the flap on the top panel.
C	Securing screws for the top panel

3.2 Expansion Slots

The **ATLAS 60** has three expansion slots (SLOT 1, SLOT 2 and SLOT 3), allowing you to increase its features and interfaces by inserting different cards or boards.

3.2.1 SLOT 1 - Expansion Slot

SLOT 1 is located on the right hand side of the device's *Front Panel* on page 5. In this case, we insert an eight-port Switch expansion card.

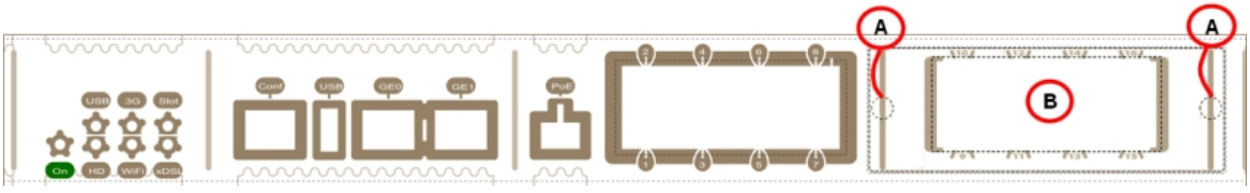


Fig. 8: **SLOT 1 Expansion Slot**
SLOT 1 expansion slot elements table

Item	Description
A	Screws to hold the cover of the expansion module in SLOT 1.
B	8-port Switch Ethernet expansion module.

In order to correctly insert the card, please follow the steps given below:

(1) Switch off the device and remove the cables, as described in section *Disconnecting* on page 19.

(2) Remove the device from the workplace and place it in a stable, safe location where it can be easily accessed and handled.

(3) Remove the screws from the side panel to be able to dismantle the flap that gives access to the expansion

cards. Please see *Fig. 9* on page 10.

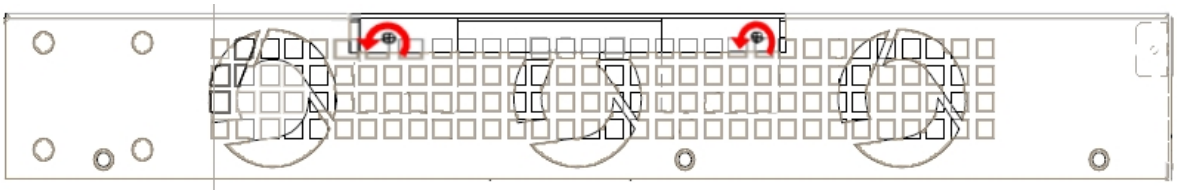


Fig. 9: **Remove the flap's screws from the top panel**

(4) Once the screws have been removed, slide the flap and lift it (making sure no grooves attach the flap to the top panel) to remove it. Place it in a safe location.

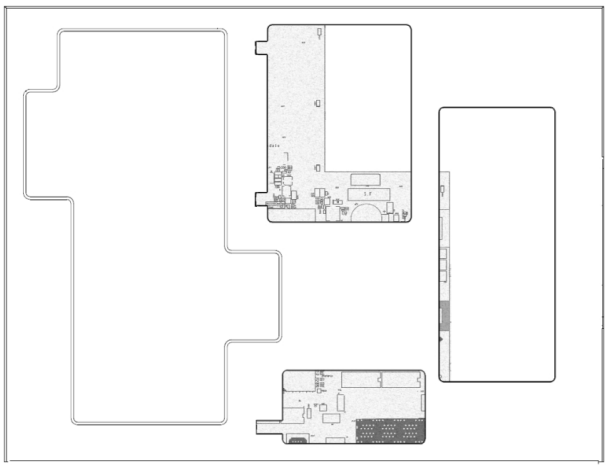


Fig. 10: **Top panel without flap**

(5) Find the place where the expansion board needs to be located. Look for the lateral connector of the card connection and the card standoff posts to the chassis.

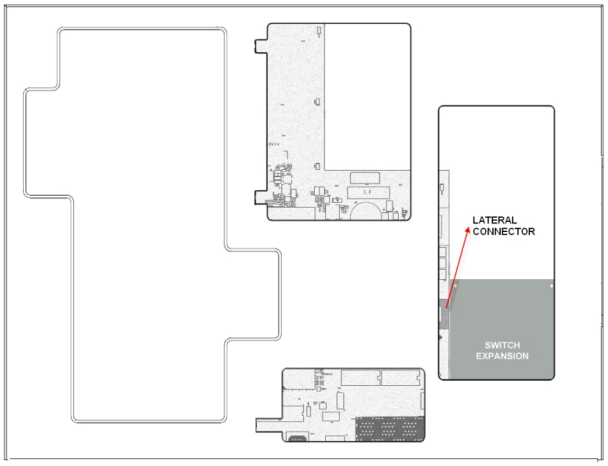


Fig. 11: **Location of the lateral connector for SLOT 1 expansion module**

(6) Using a screwdriver, remove the cover over the expansion slot. This cover is located on the front panel. Please see *Fig. 12* on page 10.

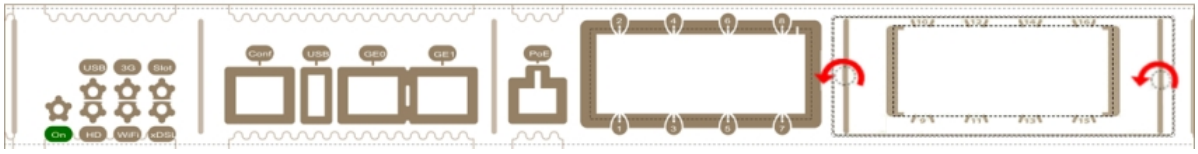


Fig. 12: **Remove the cover from SLOT 1**

(7) Insert the expansion board and connect it. This operation must be carried out carefully, without forcing any piece or part of the device.

(8) Screw in the board. Firmly tighten the screws without damaging the board.

(9) Reposition the expansion slot cover and screw it down. Please see *Fig. 13* on page 11.

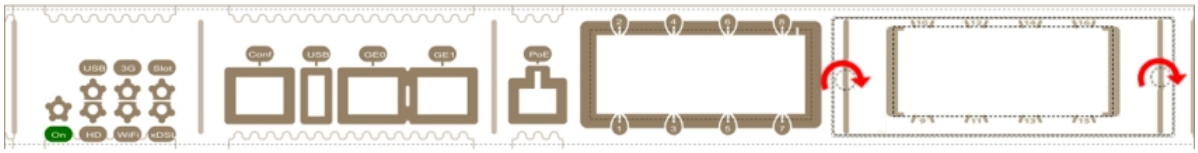


Fig. 13: **Reposition the cover on SLOT 1**

(10) Reposition the top panel flap and screw it into place using the screws. Please see *Fig. 14* on page 11.

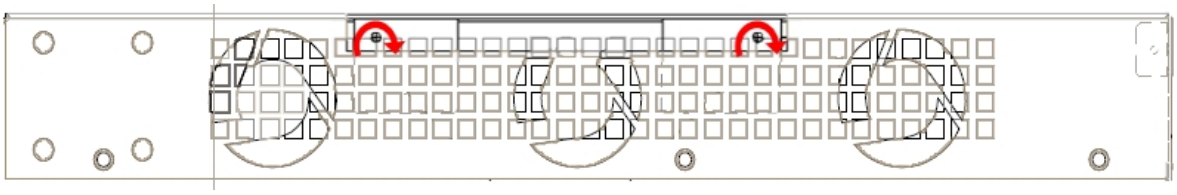


Fig. 14: **Rearrange the screws on the top panel flap**

(11) Connect and switch on the device, as described in section *Connecting* on page 19. 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.

(12) Connect a terminal to the console and check that the device detects the expansion 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(16) 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
```

3.2.2 SLOT 2 - Expansion Slot

SLOT 2 is located on the left hand side of the device's *Rear Panel* on page 8. In this case, we insert a PMC (PCI mezzanine card) in the SLOT.

Fig. 15: **SLOT 2**

SLOT 2 elements

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

To correctly insert the card, please follow these steps:

(1) Switch off the device and remove the cables, as described in section *Disconnecting* on page 19.

(2) Remove the device from the workplace and place it in a stable, safe location 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 gives access to the expansion cards. Please see *Fig. 9* on page 10.

(4) Once the screws have been removed, slide the flap and lift it (making sure no grooves attach the flap to the top panel) to remove it. Place it in a safe location.

(5) Find the place where the expansion board needs to be located. This slot has a set of elevated connectors with gold contacts and a pair of standoffs.

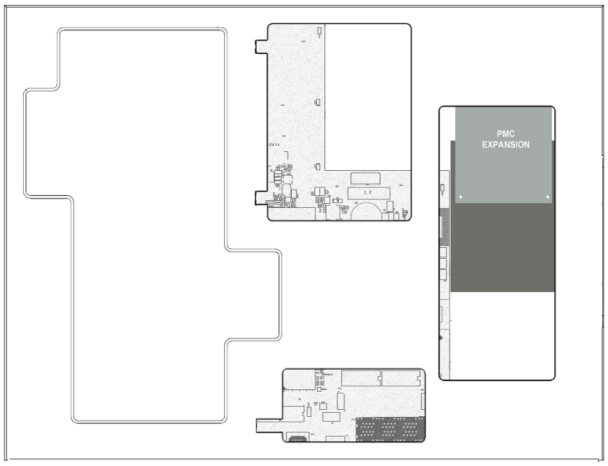


Fig. 16: **PMC Expansion board: Location**

(6) Using a screwdriver, remove the cover over the expansion slot. This cover is located on the rear panel. Push this out.

Fig. 17: **Removing the SLOT 2 cover**

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

(8) Place the PMC card in the slot so that this firstly adjusts to the space on the device rear panel and subsequently to the two PMC connections. This operation must be carried out carefully, without forcing any piece or part of the device. Check that the board is clearly settled over the PMC connectors. Please see *Fig. 18* on page 13.

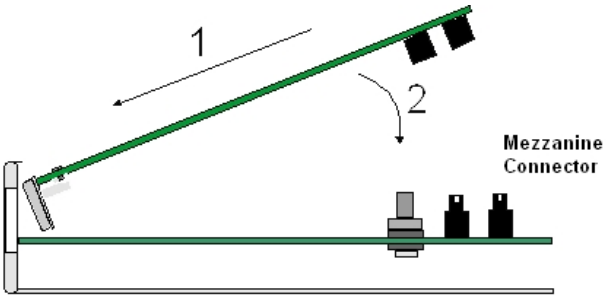


Fig. 18: **Inserting the PMC expansion card**

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

Fig. 19: **Screwing down the PMC expansion card**

(10) Reposition the expansion slot cover and screw it down

Fig. 20: **Repositioning the SLOT 2 cover**

(11) Rearrange the top panel flap and screw it into place using the screws. Please see *Fig. 14* on page 11.

(12) Connect and switch on the device, as described in section *Connecting* on page 19. 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.

(13) 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
```

3.2.3 SLOT 3 – Expansion Slot

SLOT 3 is located in the middle of the device's *Rear Panel* on page 8. Insert an xDSL expansion board in this SLOT.

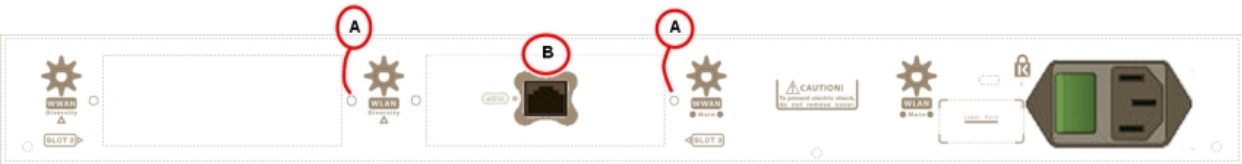


Fig. 21: **xDSL expansion card module**
SLOT 3 elements

Item	Description
A	Screws to hold the cover of the expansion module in SLOT 3.
B	xDSL expansion module.

To correctly insert the card, please follow these steps:

(1) Switch off the device and remove the cables, as described in section *Disconnecting* on page 19.

(2) Remove the device from the workplace and place it in a stable, safe location 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 gives access to the expansion cards. Please see *Fig. 9* on page 10.

(4) Once the screws have been removed, slide the flap and lift it (making sure no grooves attach the flap to the top panel) to remove it. Place it in a safe location.

(5) Find the place where the xDSL expansion board needs to be located.

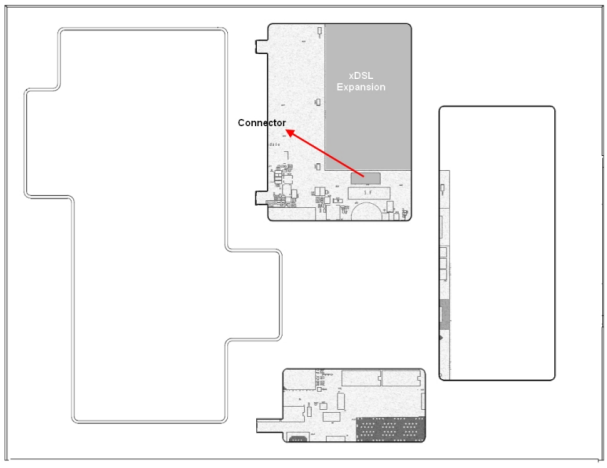


Fig. 22: **xDSL expansion board: Location**

(6) Remove the lid that holds the back cover located on the rear panel.

Fig. 23: **Lid cover for xDSL**

(7) Using a screwdriver, remove the cover over the expansion slot.

Fig. 24: **Remove the SLOT 3 cover**

(8) Place the xDSL expansion card so that this firstly adjusts to the space on the device rear panel and subsequently to the motherboard connection. This operation must be carried out carefully, without forcing any piece or part of the device. Check that the board is clearly settled over the motherboard connector.

(9) Screw the board to the securing posts using two screws and their corresponding washers. Firmly tighten the screws without damaging the board.

(10) Reposition the expansion slot cover and screw it down.

Fig. 25: **Reposition the SLOT 3 cover**

(11) Rearrange the top panel flap and screw it into place using the screws. Please see *Fig. 14* on page 11.

(12) Connect and switch on the device, as described in section *Connecting* on page 19. 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.

(13) Connect a terminal to the console and check that the device detects the xDSL board.

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

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

BIOS menu address: 0x4BD78
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
ADSL CARD 0x08
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
```

3.3 Installation in a rack

The **ATLAS 60** can be installed in a 19” rack. To do this, you need two plastic strips like the ones shown below. The strips and screws are not included in the basic packet and need to be acquired separately.

Both strips are attached to the device by means of 8 screws (4 on each side), as shown.

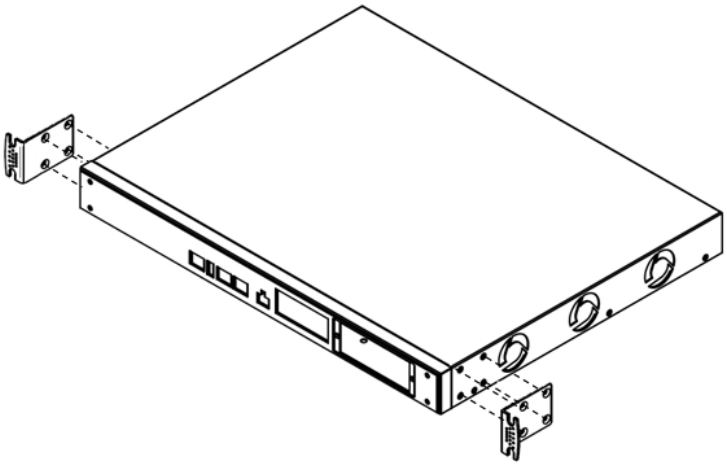


Fig. 26: **Attaching the strips**

The spaces for the screws in the **ATLAS 60** router leave the factory protected by covers. These can be removed with a sharp tool (such as a small flat screwdriver). We recommend removing the upper cover to simplify the process.

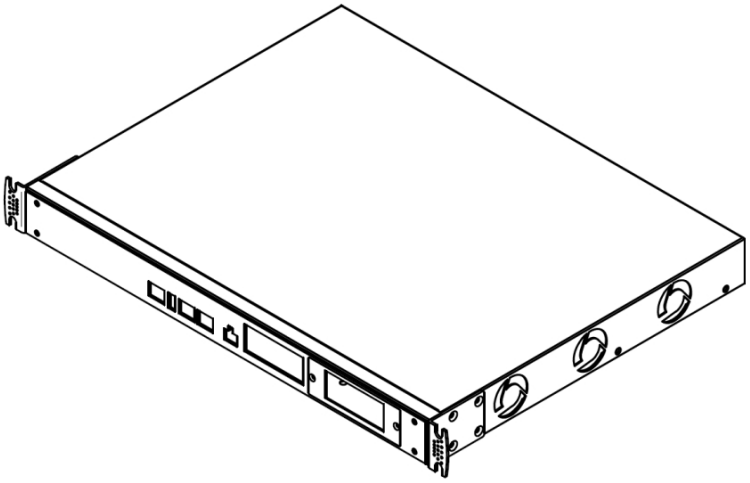


Fig. 27: **Device with the strips**

3.4 Power Source

The **ATLAS 60** router is powered with an internal power source.

Additionally, the **ATLAS 60** router can incorporate an optional card to inject PoE through the 8-port Switch. In this case, the device has to be connected to an AC/DC external power source to power said module.

Workplace Conditions. Main Characteristics

- Excessive cold and heat should be avoided, as should humidity and dust.
- Direct exposure to sunlight should be avoided, as well as other heat sources. The device should not be placed amongst papers, magazines or other elements that could hinder natural air circulation.
- The device should not be placed very close to strong electromagnetic fields such as speakers, engines, etc.
- Knocks and/or strong vibrations should be avoided during transport, operation and storage.

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 following the steps set forth in *Connecting* on page 19 and*Disconnecting* on page 19.

3.4.1 Internal Power Source

To connect the power cable to the device, follow the steps set forth in section *Connecting* on page 19.

Warning

To avoid electric shocks, residual current circulation and other unwanted effects, also affecting communications, the following is recommended:

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).

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.

3.4.1.1 Connecting

- Ensure that the on/off power supply switch is in the OFF position.
- Connect all data cables.
- Connect the power supply to the device.
- Set the device's on/off power supply switch in the ON position.

3.4.1.2 Disconnecting

- Set the on/off power supply switch in the OFF position.
- Disconnect the power supply from the device.
- Disconnect the data cables.

Fig. 28: **Connecting the power**

To connect the power source to the device, follow the steps listed in the previous table: ensure that the switch is OFF (0) and the power supply is NOT connected to the main electricity supply; find the POWER plug (located on the rear panel of the device) and plug it into the power source using the grounded cable that is supplied for this purpose.

3.4.2 PoE Source

The **ATLAS 60** router can be powered through an Ethernet cable that complies with the PoE 802.3af standard (15.4 W per port).

To use the PoE source option, you need to install a MiniPoE card.

3.4.2.1 Installing the MiniPoE card

To correctly insert the card, please follow these steps:

(1) Switch off the device and remove the data cables, as described in section *Disconnecting* on page 19.

(2) Remove the device from the workplace and place it in a stable, safe location where it can be easily accessed and handled.

(3) Remove the two screws from the side panel in order to be able to dismantle the flap that gives access to the MiniPoE card. Please see *Fig. 29* on page 19.

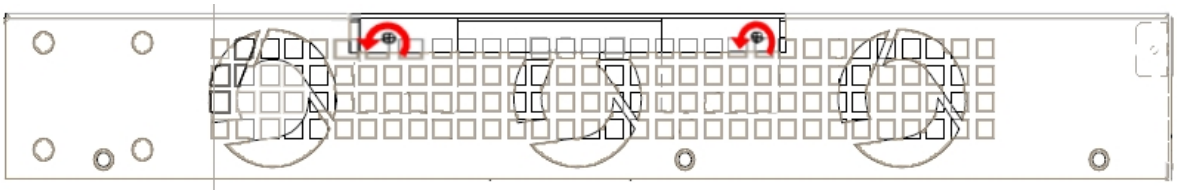


Fig. 29: **Removing the screws of the top panel flap**

(4) Once the screws have been removed, slide the flap and lift it (making sure no grooves attach the flap to the top panel) to remove it. Place it in a safe location.

(5) Find the place where the MiniPoE card needs to be located.

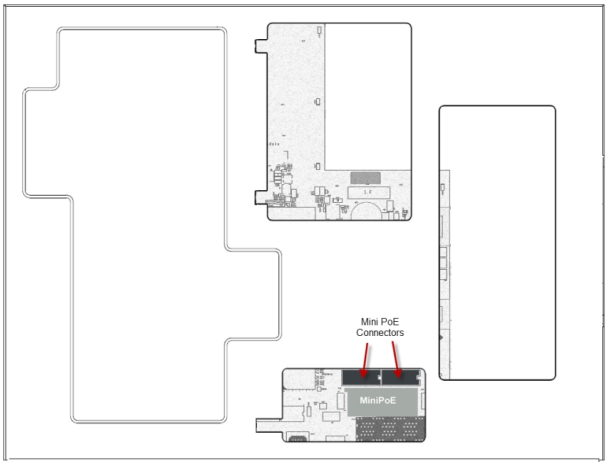


Fig. 30: **MiniPoE card***: Location*

(6) Place the MiniPoE card so that it matches the two connectors. This operation must be carried out carefully, without forcing any piece or part of the device. Check that the card is clearly settled over the connectors.

(7) Reposition the top panel flap and screw it into place using the screws. Please see *Fig. 31* on page 20.

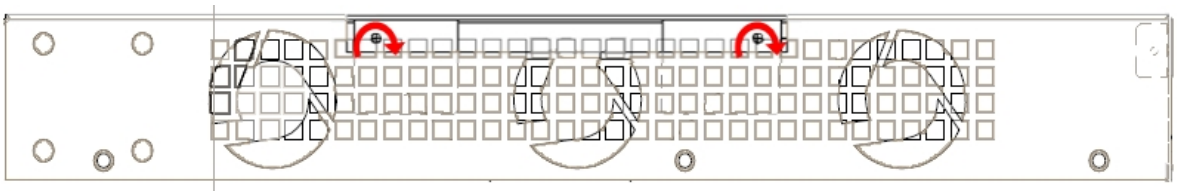


Fig. 31: **Rearranging the top panel's flap screws**

(8) Connect and switch on the device, as described in section *Connecting* on page 19. 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

(9) Connect a terminal to the console and check that the device detects the MiniPoE card.

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

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

BIOS menu address: 0x4BD78
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
ADSL CARD 0x08
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
```

Once the MiniPoE card has been installed, we can connect the PoE source to the device:

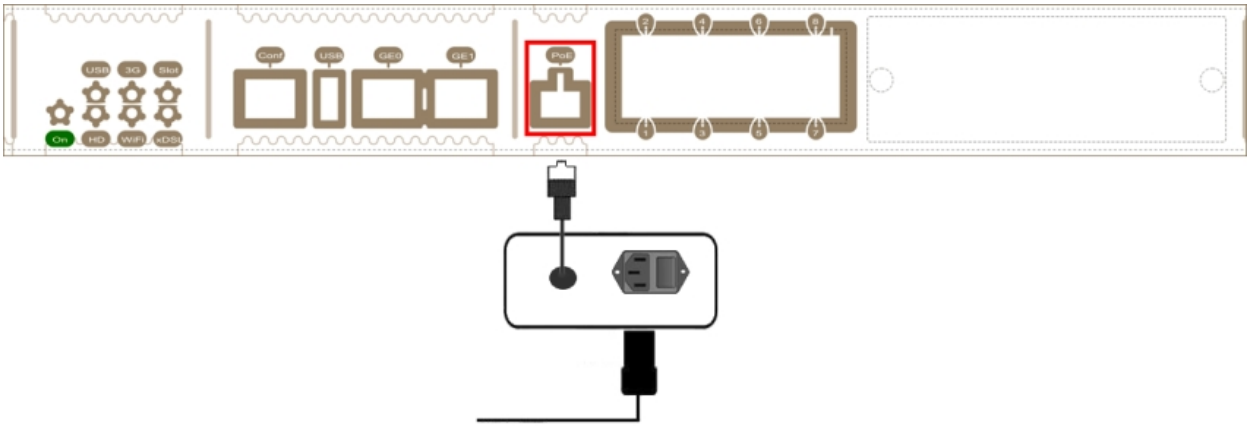


Fig. 32: **Connecting the PoE source to the device: Schema**

3.5 Microswitches

The **ATLAS 60** router has a block of 8 available micro-switches (located on the underside of the device) that are used for maintenance and test tasks.

In this case, they are only used to load the default configuration. These switches should not be handled by the user other than to establish the default configurations.

Note

For the device to operate correctly, all micro-switches must be in the OFF position.

The default configuration for the router establishes the access IP and mask address as follows:

- IP address: 192.168.1.1
- IP mask: 255.255.255.0

Note

Some devices leave the factory with customized settings. This personalization can mean that the default configuration is different from the one shown above.

3.5.1 Procedure to ignore the configuration

Follow these steps if you have to discard the whole configuration of the device (for instance, if you cannot remember the password).

- Turn off the device through the ON/OFF switch.
- Using a screwdriver, move micro-switch **'5'** to the ON position.
- Turn the device on with the ON/OFF switch.

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

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

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 ...
Empty configuration used
Initializing

Press any key to get started
```

- On reaching this point, put micro-switch **'5'** in the OFF position (it's not necessary to turn off the device). This way, the saved configuration will run the next time you restart the device.

3.6 Data Connection

The **ATLAS 60** router has the following data connections:

3.6.1 8-port Ethernet Switch

The **ATLAS 60** router incorporates an 8-port 10/100BaseT Switch with automatic MDI/MDIX to connect to a local area network (LAN).

Please pay careful attention to the labeling so you do not mix this switch with other types of ports:

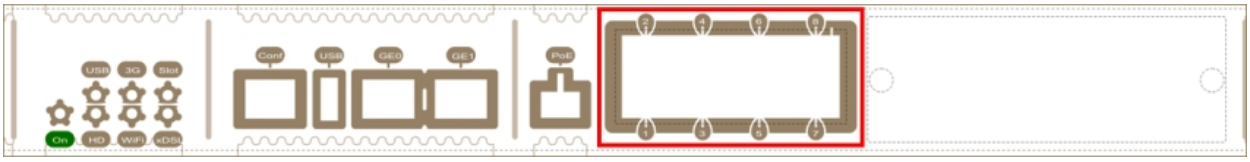


Fig. 33: **LAN Switch ports**

3.6.2 GE0/GE1Connections

The **ATLAS 60** router has two interfaces to connect to Ethernet networks. Each interface has a metallic connector (10/100/1000 Base-T). The GE0/GE1ports are independent from the Switch.

Please pay careful attention to the labeling so you do not mix this switch with other types of ports:

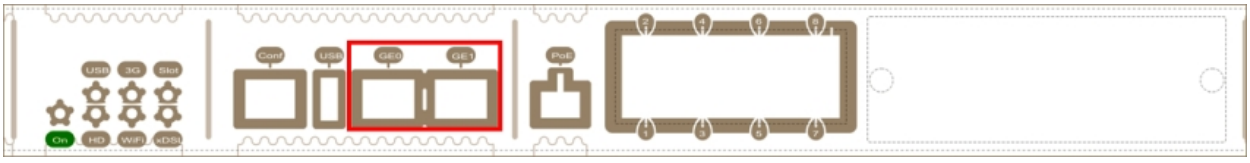


Fig. 34: **Giga Ethernet connectors**

3.6.3 Connecting an USB 3G device (USB connector)

The **ATLAS 60** router has an USB HOST 2.0 interface with a type A connector that allows USB 3G modems to be connected. The interface is activated through the corresponding software license.

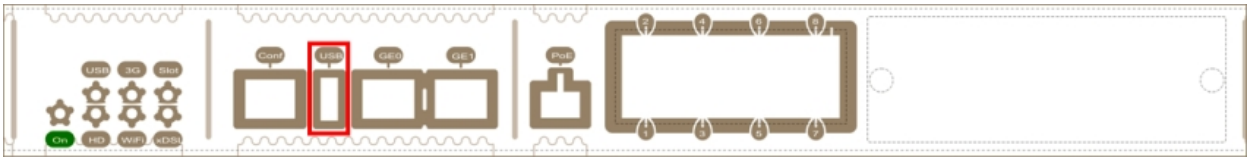


Fig. 35: **USB 3G Connector**

3.6.4 Connecting for Configuration

The **ATLAS 60** router has a RJ45 female connector on the front panel known as "**Conf.**", which provides access to the device local console.

For further information, please see section *Connecting to the device* on page 39.

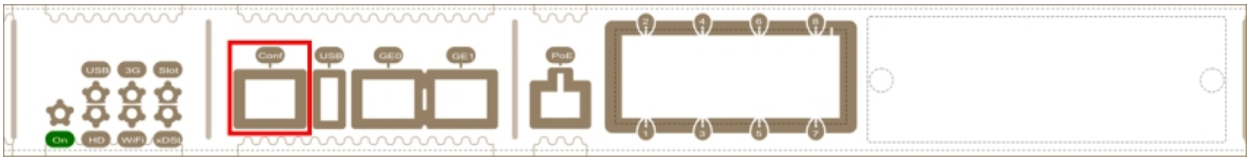


Fig. 36: **Conf Connector**

3.6.5 Connecting the Wireless WAN Antenna

The **ATLAS 60** router has two connectors to connect the Wireless WAN antennas. These two antennas are used by the Wireless WAN module. This module is optional, so your device may not have 3G or antennas.

To assemble and dismantle the antennas, simply screw them into the connectors labeled WWAN (located at the rear of the device).

For the WWAN interfaces to work, the device must have a plug-in 3G card. Depending on the model, the antennas are installed as a factory setting. If your device does not have this module, you can add it later on. The manual provided will indicate how to install the module and its corresponding antenna cables.

Installing antennas in the **ATLAS 60** routers is necessary to improve the quality of the signal received and transmitted by the Wireless WAN module (GPRS, UMTS, HSDPA, HSUPA, etc.).

Note

The router should always have the WWAN antennas installed for optimum performance.

For the *Wireless WAN* interface to work, the device must have the corresponding software license installed.

Some cellular telephony technologies use the antenna diversity mechanism to improve the quality of the signal received (HSUPA, HSPA+, LTE, CDMA EV-DO, etc.). Consequently, the **ATLAS 60** routers have two WWAN connectors.

Fig. 37: **WWAN Antenna Connectors**

To achieve optimum performance, the radio frequency accessories (antennas and cables) installed should be those recommended by Teldat.

3.6.5.1 Positioning the antenna

The antenna orientation and its location with respect to other wireless devices and radiation devices (such as communication devices, personal computers, etc.) can influence significantly the device performance.

The antennas transmit and receive radio signals. Performance is also affected by environmental factors (such as the distance between the device and the base station), physical obstacles and other interferences due to radio frequencies (RF).

To achieve the best coverage, follow these steps:

- Whenever possible, place the antenna where there are no physical obstacles. Obstacles between the antenna and the base station degrade the wireless signal. Place the antenna above ground level and steer it towards the nearest base station.
- Density of materials also affects the antennas. Place them away from any type of wall, metal screens, mirrors, etc.
- Do not place the antenna near columns that can produce shadow areas and reduce the coverage zone.
- Keep the antenna away from metal pipes such as canals, air-conditioning.
- Please bear in mind that other wireless devices (such as telephones, microwaves, etc.) can temporarily interfere with the quality of the wireless signal.
- We do not recommend that you install the antennas near or between racks containing communication devices, computers, etc. Use an extension cable and place the antenna outside.

The following recommendations are applicable to all wireless devices:

- Do not touch or move the antenna while the device is transmitting or receiving.
- When the antenna is transmitting, do not touch any equipment that contains devices that radiate very close to, or touching, any exposed part of the body (particularly the face and eyes).
- Do not install the device in areas where the atmosphere is potentially explosive.
- Wireless devices can cause interference with other devices. Do not use the device in areas where medical equipment is installed.
- In order to ensure that you are complying with the R&TTE 1999/5/EC norm, the device must be at least 15 cm away from any person when operating.

3.6.6 Connecting the Wireless LAN Antenna

The **ATLAS 60** router has two connectors for the Wireless LAN antennas. These two antennas are used by the Wireless LAN module. This module is optional, so your device may not have WLAN or antennas.

To assemble and dismantle the antennas, simply screw them into the connectors labeled WLAN (located at the rear of the device).

For the Wireless LAN interfaces to work, the device must have a plug-in WLAN card. Depending on the model, the antennas are installed as a factory setting. If your device does not have the module, you can add it later on. The manual provided will indicate how to install the module and its antenna cables.

Fig. 38: **Wireless LAN Antenna Connectors**

3.7 Installing the SIM card

The **ATLAS 60** router may optionally include a Wireless WAN interface that requires one SIM card to be inserted into the device. There are certain services (CDMA) provided by several carriers in some countries that do not require SIM cards.

The **ATLAS 60** router has an internal SIM tray.

Warning

This device is compatible with 1.8 V and 3 V SIMs. Do not install SIMs that do not support these voltages.

Warning

Never install the SIM card when the device is switched on.

Always disconnect the device from the main power supply before inserting the internal SIM.

Always disconnect the device before removing the casing to get to the internal SIM.

When inserting the SIM card, please protect yourself against electrostatic discharges (ESD).

Do not touch the SIM card connectors.

3.7.1 Procedure to install the internal SIM

To access the internal SIM, you need to open the device. To do this, you need to remove the device's top panel, which is held on through screws on the rear and side panels of the device.

Fig. 39: **Screws on the rear panel**

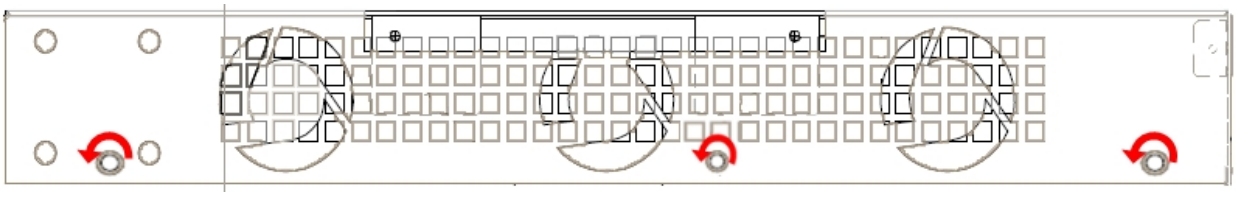


Fig. 40: **Screws on the side panel**

The internal SIM tray is located towards the rear panel of the device's main printed circuit board.

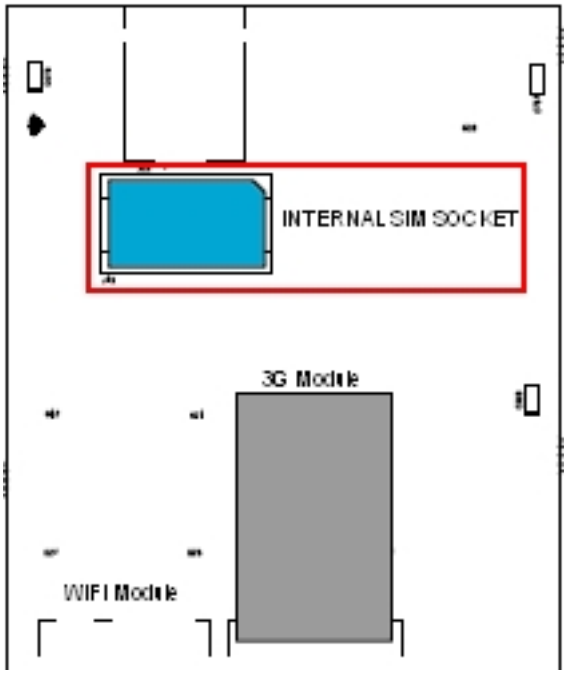


Fig. 41: **Internal SIM tray**

In order to insert a SIM card in the internal tray, locate the retaining flange (metal fastening with OPEN and LOCK on it) so you can open the tray and place the SIM card on it. Then:

(1) Push the fastening in the direction indicated by the arrow with the word OPEN.

(2) Open the upper part of the tray.

(3) Fully insert the SIM card using the guides.

(4) Return the tray to its original position.

(5) Gently press on the insertion slot while pushing the fastener in the direction indicated by the word LOCK. The card should be completely inserted in the tray.

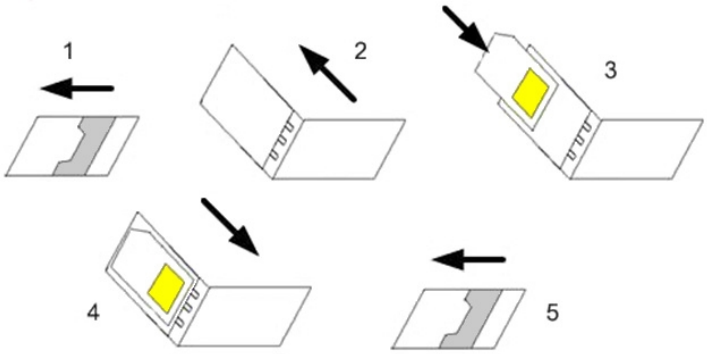


Fig. 42: **Inserting the SIM in the internal tray**

3.8 Optional Storage

The **ATLAS 60** allows you to increase its features by means of the applications it has stored in the second core of the device processor.

To make these features available, the device must have an internally-installed hard disk or a USB flash memory expansion.

3.8.1 Procedure to install a hard disk

To correctly insert a hard disk, please follow these steps:

(1) Switch off the device and remove the data cables, as described in section *Disconnecting* on page 19.

(2) Remove the device from the workplace and place it in a stable, safe location where it can be easily accessed and handled. Open up the device. To do this, you need to remove the top cover which is secured through screws located on the rear and side of the device.

(3) Once the screws have been removed, slide the flap towards the rear panel and lift it. Place it in a safe location.

(4) Locate the hard disk area and the SATA connector.

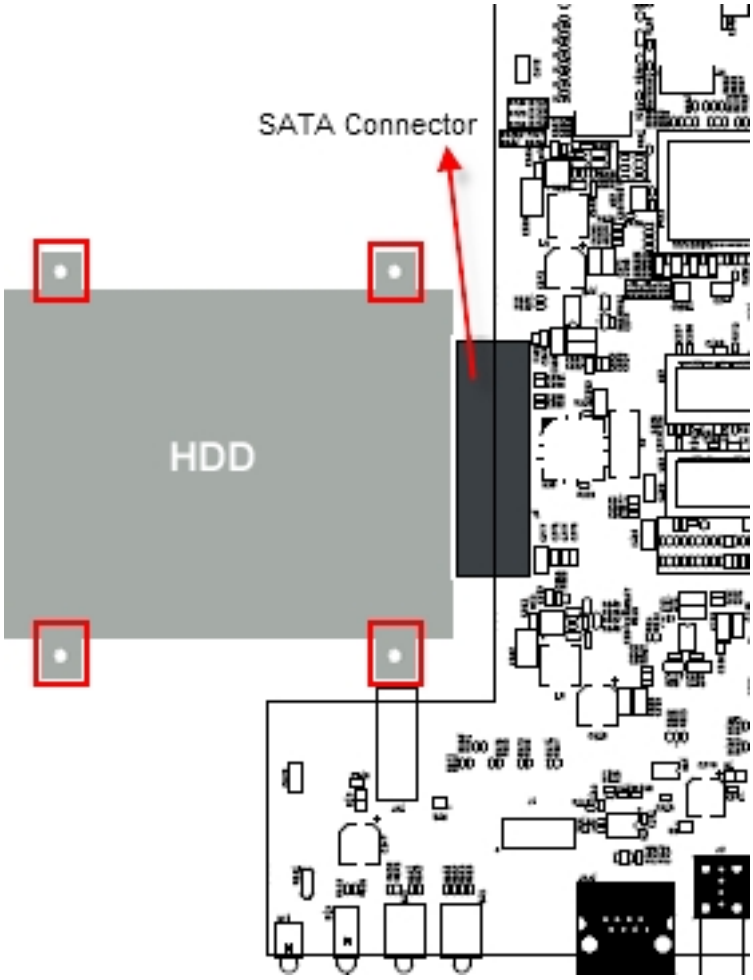


Fig. 43: **SATA connector and standoffs for the hard disk**

(5) Screw the hard disk supplied to the auxiliary metal plate.

(6) Connect the hard disk and place the metallic flange carefully over the standoff posts located in the device chassis. This operation must be carried out carefully, without forcing any piece or part of the device.

(7) Screw the plate to the posts using four screws. Tighten them firmly.

(8) Close the device with the cover. Secure the cover with the screws.

(9) Connect and switch on the device, as described in section *Connecting* on page 19. 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.

(10) Check that, during startup, the HD LED located on the device's front panel is flashing.

3.8.2 Procedure to install a flash memory expansion USB

To install a USB, please follow these steps:

(1) Switch off the device and remove the data cables, as described in section on *Disconnecting* on page 19.

(2) Remove the device from the workplace and place it in a stable, safe location where it can be easily accessed and handled. Open up the device. To do this, you need to remove the top cover which is secured through screws located on the rear and side of the device.

(3) Once the screws have been removed, slide the cover towards the rear panel and then remove it by lifting it. Place it in a safe location.

(4) Locate the USB connector and connect the memory stick supplied.

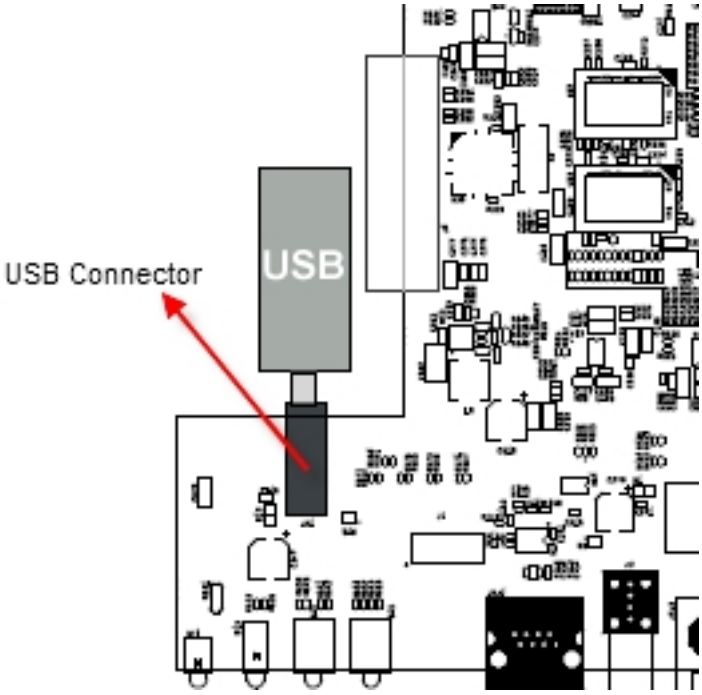


Fig. 44: **USB connector for flash memory expansion**

(5) Close the device with the cover. Secure the cover with the screws.

(6) Connect and switch on the device, as described in section *Connecting* on page 19. 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.

Chapter 4 Compliance

4.1 Manufacturer Information

Brand	Teldat
Manufacturer	Teldat S.A.
Country	Spain
Postal Address	Isaac Newton, 10 Parque Tecnológico de Madrid, 28760 Tres Cantos, Madrid, Spain
International Phone	+34 91 807 65 65

4.2 Safety Warnings

	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 *Connecting* on page 19 and *Disconnecting* on page 19.
	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 câble 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 el orden que se detalla en los apartados “Conectar” y “Desconectar”.
	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). 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.
	Убедитесь в том, что все связанные устройства связи подключены к ОДНОЙ И ТУ ЖЕ ЗАЗЕМЛЕННОЙ ШТЕПСЕЛЬНОЙ РОЗЕТКЕ высокого качества (сопротивление не превышает 10 Ом). Проверьте, оборудовано ли рабочее место источником бесперебойного питания (ИБП), источником регулируемого питания, или оно является независимым от других систем (таким как освещение и т.п.); строго рекомендуется подключать все информационные устройства к одному источнику питания. Это поможет предотвратить эксплуатационные проблемы и преждевременное старение приводов и других деталей.
	Tous les dispositifs de communications interconnectés doivent être branchés sur la même prise correctement mise à la terre, qui doit être de bonne qualité (moins de 10 ohms). Soit le lieu de travail équipé d'un système d'alimentation sans interruption (ASI), alimentation régulée ou indépendante du reste (comme l'éclairage, etc), il est fortement recommandé que tous les dispositifs de données soient reliés à la même source d'alimentation. Cela permettra d'éviter des problèmes de fonctionnement et de vieillissement prématuré de drivers et d'autres composants.
	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). 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 prob-

	lemas de funcionamiento y envejecimiento prematuro de drivers y demás componentes.
	Never install the SIM cards when the device is switched on. Always disconnect the device from the main power supply before installing the SIM cards. Always disconnect the device before removing the casing to access the trays. When inserting the SIM cards, please protect yourself against electrostatic discharges (ESD). Do not touch the SIM card connectors.
	Никогда не устанавливайте SIM-карты, когда устройство включено. Перед установкой SIM-карт отключите устройство от источника питания. Всегда отключайте устройство перед тем, как снять корпус и извлечь лотки. При установке SIM-карты, пожалуйста, защитите себя от электростатических разрядов (ESD). Не прикасайтесь к контактам SIM-карты.
	N'installez jamais la carte SIM lorsque l'appareil est allumé. Débranchez toujours l'appareil de l'alimentation électrique principale avant d'insérer les cartes SIM. Débranchez toujours l'appareil avant de retirer le boîtier pour accéder aux baies. Lors de l'insertion de la carte SIM, protégez-vous contre les décharges électrostatiques (ESD). Ne touchez pas les connecteurs des cartes SIM.
	No instale nunca las tarjetas SIM con el equipo encendido. Desconecte siempre el equipo de la red antes de instalar las tarjetas SIM. Desconecte siempre el equipo antes de desmontar la carcasa para acceder a las bandejas. Al insertar las tarjetas SIM, protéjase contra descargas electroestáticas (ESD). No toque los conectores de las tarjetas SIM.
	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.
	Оборудование должно эксплуатироваться квалифицированным персоналом; в противном случае устройство может быть повреждено и впоследствии работать неисправно.
	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.
	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.

	The screws must go into a wall stud (wood) or a wall anchor of the appropriate type for the wall. Screws into drywall are not strong enough to mount the router.
	Болты должны входить в стойки каркаса в стенах (деревянные) или стеновые анкеры соответствующего типа. Завинчивание болтов в гипсокартон не является достаточно надежным для монтажа маршрутизатора.
	Les vis doivent aller dans un poteau mural (bois) ou un ancrage murau du type approprié. Vis en plaques de plâtre ne sont pas assez forts pour monter le routeur.
	Los tornillos deben ir atornillados en un taco de pared (de madera) o del tipo adecuado según la clase de pared. Los tornillos que se montan directamente en los paneles de yeso no son lo bastante resistentes para soportar el router.
	If you install the screws in drywall, use hollow-wall anchors (8 mm – 5/16 inch) to secure the screws. If the screws are not properly anchored, the strain of the cables connected to the router back panel could pull the router from the wall.
	Если вы установите винты в гипсокартона , используйте полым дюбели (8мм - 5/16 дюйма) , чтобы обеспечить винты. Если винты крепления закручены недостаточно плотно, маршрутизатор может упасть со стены из-за натяжения подключенных к нему кабелей.
	Si vous installez les vis dans des cloisons sèches, utilisez des ancres creuses-murales (8 mm - 5/16 po) pour fixer les vis. Si les vis ne sont pas fixées correctement, la tension des câbles raccordés au panneau arrière du routeur pourrait tirer le routeur de la paroi.
	Si instala los tornillos en paneles de yeso, utilice tacos de pared hueca (8 mm - 5/16 pulgadas) para fijar los tornillos. Si los tornillos no están bien anclados, la tensión de los cables conectados al panel posterior del router podría hacer que el router se cayera de la pared.
	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.
	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.
	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.
	Este equipo contiene componentes sensibles a las sobrecargas y descargas electroestáticas. Por tanto, 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, pulseras, anillos, corbatas, etc.con cualquier componente del equipo.
	This device is compatible with 1.8 V and 3 V SIMs. Do not install SIMs that do not support these voltages.
	Данное устройство совместимо только с SIM-картами 1,8 и 3 В. Не устанавливайте карты, не поддерживающие такое напряжение.
	Cet appareil est compatible avec des cartes SIM 1,8 V et 3 V. Ne pas installer de cartes SIM qui ne supporte pas ces tensions.
	Este equipo es compatible con SIMs de 1,8 V y 3 V. No instale SIMs que no soporten estas tensiones.
	The equipment is required to be connected to a socket-outlet with a protective earthing connection.
	Оборудование необходимо для подключения к розетке с защитным заземлением.
	L'équipement doit être relié à une prise de courant correctement mise à la terre.
	Se recomienda que el equipo se conecte a una toma de corriente con conexión a tierra.

4.3 WEEE Information

	The waste container symbol with the >X< indicates that the device must be disposed of separately from normal domestic waste at an appropriate waste disposal facility at the end of its useful service life. El símbolo del contenedor con la cruz, que se encuentra en el aparato, significa que cuando el equipo haya llegado al final de su vida útil, deberá ser llevado a los centros de recogida previstos, y que su tratamiento debe estar separado del de los residuos urbanos.

4.4 REACH

In compliance with the REACH Candidate List, the delivered product and product packaging do not contain chemicalsubstances above a concentration limit of 0.1% weight by weight (w/w). This declaration will be updated whenever-any changes occur or other chemical substances are added to the REACH Candidate List. Information is currentlyprovided to consumers upon request.

4.5 China RoHS

	Teldat products also comply with the requirements set forth in China's Environmental Declaration and carry the "EFUP 10" label shown on the left.

Declaration of Product Toxic or Hazardous Substances
产品有毒有害物质宣告書

部件名称	有害物质					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI)	多溴联苯(PBB)	多溴二苯醚(PBDE)
外壳	×	○	○	○	○	○
印刷电路板组件	×	○	○	○	○	○
电线 & 电缆 & 接头	×	○	○	○	○	○
天线	○	○	○	○	○	○
电源适配器	×	○	○	○	○	○
其它配件	○	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。
○：表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。
×：表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。
部件仍符合欧盟指令 2011/65/EU 及排外條款的规范。
此产品所标示之环保使用期限，系指在一般正常使用状况下。
（企业可在此处，根据实际情况对上表中打"×"的技术原因进行进一步说明。）

4.6 EC Declaration of Conformity

English (EN)	This equipment is in compliance with the essential requirements and other relevant provisions of: Directive 2014/53/EU (RED) or Directive 2014/30/EU (EMC) Directive 2014/35/EU (LVD) Directive 2009/125/EC (ErP) Directive 2011/65/EU (RoHS) of the European Parliament
Spanish (ES) Español	Este dispositivo cumple con los requisitos esenciales y con las normas correspondientes de las siguientesdirectivas: Directiva 2014/53/UE (RED) o Directiva 2014/30/UE (EMC) Directiva 2014/35/UE (LVD) Directiva 2009/125/CE (ErP) Directiva 2011/65/UE (RoHS) del Parlamento Europeo

Note

—Directive 2014/53/EU (RED) replaces Directive 1999/5/EC (R&TTE) on 13th June 2016

The EC declaration of conformity and additional product documentation can be accessed here:

http://www.teldat.com

4.7 CE Marking

This equipment is in conformity with the CE procedures and marking.

4.8 National Restrictions

In accordance to article 10 of 2014/53/EU, we inform you that national restrictions and requirements may apply when it comes to authorization. These can evolve with time. Teldat S.A. recommends that you check with local authorities what the latest status of national regulation is.

This product is supplied with antennas to fulfill local regulations. Do not choose other antennas. To comply with power limits and RF exposure requirements, the antennas used for this transmitter must be installed so that people keep a separation distance of, at least, 20 cm.

4.9 Operating Frequency

To check the operating frequencies working in the device, see *WIFI Specifications* on page 44

4.10 FCC Statement

4.10.1 Federal Communications Commission Interference

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interferences that users will be required to correct at their own expense.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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

4.10.2 FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. Keep a minimum distance of 20 cm between the radiator and your body when installing and operating the equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

4.10.3 Radio Frequency Interference Requirements

This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range.

The FCC requires this product to be used indoors to reduce the potential for harmful interference to co-channel Mobile Satellite systems.

High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and/or damage this device.

When operating in 802.11n, 40MHz mode, the operating frequency segment is limited from 2422 to 2452MHz and 5755 to 5795MHz, also from 5190 to 5230MHZ, 5270 to 5310MHZ and 5510 to 5550MHZ and 5670MHZ respectively.

4.11 IC Statement

4.11.1 Industry Canada – Class A

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled “Digital Apparatus,” ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: “Appareils Numériques,” NMB-003 édictée par le ministère des Communications.

Appendix A Technical Information

A.1 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
None of the LEDs lights up on the device.	Check the power supply to the device (power source, ON/OFF switch, main power outlet). Check that all micro-switches are in the OFF position.
The local console does not respond.	Check that you are using the correct console cable and that this is connected to the device and the asynchronous terminal. Check that the terminal has the correct port configured. Check that the terminal configuration is 9600 8N1. Check that the console is not in an events process. Check that the device is not being remotely accessed via telnet.
The local console is only displaying garbage.	Check that the terminal has the correct port configured. Check that the terminal configuration is 9600 8N1
The device does not initialize and the console displays the WARM-UP text.	Check that micro-switch '1' is in the OFF position. In this case, you may have to reload the device BIOS and the routing application.
The device is very slow in displaying the application prompt.	Check that micro-switch '3' is in the OFF position.
You have forgotten the password to access the device.	Ignore the configuration by means of micro-switch **'5'** (as explained in the relevant section).
The LEDs show that the GE interfaces are established but there is no connectivity at the data layer.	Check the configuration (routes, IP addresses, etc).

A.2 Updating the software

The **ATLAS 60** router can be updated to new releases. Please contact your distributor for further details on new releases.

There are various ways to update a Teldat router. For further information, please see manual " *Teldat-Dm748-I Software Updating*".

The software required to update Teldat routers is supplied in a format known as **distribution**. This consists of a single file that contains all the files needed to update your device, as well as in-depth information on the contents of the files.

Furthermore, the **ATLAS 60** router may incorporate an independent module for the wireless WAN interface. Generally, the firmware for the modules is independent from the router software. There is an UPGRADE file for each Wireless WAN module model. Ask your distributor about the correct UPGRADE file (according to the module of your device). The Cellular Interface manual (Teldat-Dm781-I) shows you how to UPGRADE the module.

A.3 Connecting to the device

A.3.1 Connecting using the local console (Conf connector)

The **ATLAS 60** router has a RJ45 female connector on the front panel known as "**Conf .**," which provides access to the device local console.

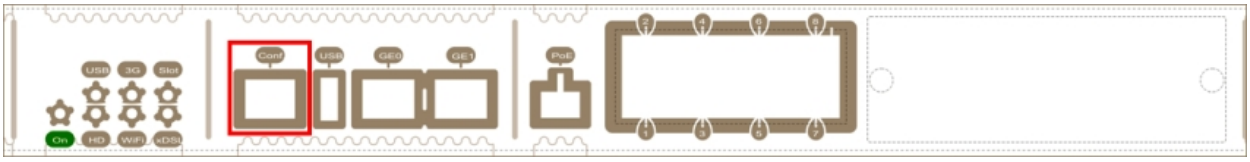


Fig. 47: **Conf connector**

In order to configure this, you must connect the "**Conf.**" port to an asynchronous terminal (or to a PC with terminal emulation).

Note

The configuration for the terminal must be:

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

Connection to the configuration port can be carried out using the RJ45 connectors cable, supplied together with the device, and the RJ45 Female-DB9 Female adapter (also provided).

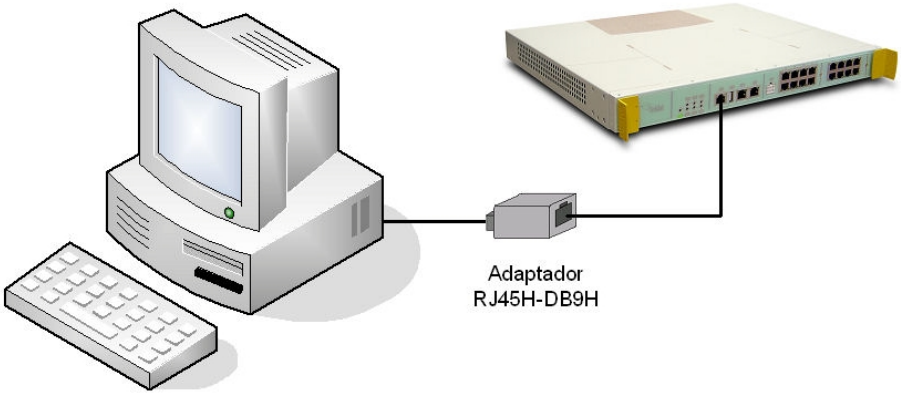
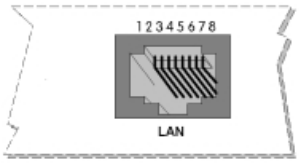


Fig. 48: **Connecting for Configuration**

A.4 Connectors

A.4.1 LAN (GE x) Connector

RJ45 LAN	RJ45 PIN	FE Signals	GE Signals
	1	BI-DA+	BI-DA+
	2	BI-DA-	BI-DA-
	3	BI-DB+	BI-DB+
	4	--	BI-DC+
	5	--	BI-DC-
	6	BI-DB-	BI-DB-
	7	--	BI-DD+
	8	--	BI-DD-

Note

The Ethernet connectors have a MDI-X and auto-polarity auto-detection feature that acts bidirectionally. You do not need a null HUB cable to connect it to another Ethernet interface.

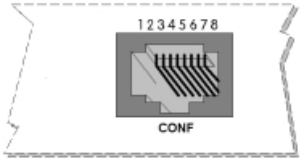
A.4.2 WWAN Connectors

	PIN	ANT
	**Internal**	RF in/out
	External	GND

A.4.3 WLAN Connectors

	PIN	ANT
	**Internal**	RF in/out
	External	GND

A.4.4 Configuration Connector

RJ45 CONFIGURATION	PIN	CONF
	**1**	--
	2	RxD
	3	GND
	4	--
	5	--
	6	GND
	7	TxD
	8	--

A.5 Technical Specifications

A.5.1 Hardware Architecture

PROCESSOR	FreeScale QorIQ P1020E
MEMORY	512 Mbytes in DDR3
STORAGE UNIT	FLASH NOR Memory (64 Mbytes) EEPROM 2Kbytes, NVRAM 128Kbytes

A.5.2 LAN Interfaces*[1]

PROTOCOLS	Ethernet (802.3)
Nº OF PORTS	3 (logical interfaces)
SPEED	2x 10/100/1000 Mbps (BaseT) GEx 8x 10/100 Mbps (BaseT) Switch
CONNECTORS	RJ45 female
CABLE	UTP, Cat 5

[1] * Depending on the model

A.5.3 Wireless WAN Interface

STANDARDS/ SPEED	• HSPA: Triband Version: 850, 1900 & 2100 MHz Dualband Version: 900 & 2100 MHz Forward link up to 7.2 Mbps; reverse link up to 5.76 Mbps • UMTS: Triband Version: 850, 1900 & 2100 MHz Dualband Version: 900 & 2100 MHz Forward link up to 2.0 Mbps; reverse link up to 384 kbps • EDGE: Quadband; 850, 900, 1800 y 1900 MHz Forward link up to 236 kbps; reverse link up to 124 kbps • GPRS: Quadband; 850, 900, 1800 & 1900 MHz Forward link up to 80 kbps; reverse link up to 42 kbps
SIM	Internal & External. 1.8V & 3V Compatible
CONNECTOR	RF SMA Female
ANTENNA	Depends on the type of Wireless WAN module. Please see the catalog on antennas for cellular interfaces.

A.5.4 Wireless LAN Interface*[2]

STANDARDS	Read the manual on Wireless LAN
SPEED	Read the manual on Wireless LAN
CONNECTOR	2 RF (RP-SMA)

A.5.5 Configuration Interface

LOCAL TERMINAL	V.24 9600-8-N-1 without flow control
CONECTOR	RJ45 female on the device's front panel

A.5.6 Power Supply

INPUT VOLTAGE	100-240 V AC
INPUT CURRENT	1.8 A
INPUT FREQUENCY	50/60 Hz
MAXIMUM POWER	100 VA

[2] * Depending on the model

A.5.7 Dimensions and weight

TYPE	Box to assemble in a Rack 1U high
LENGTH x WIDTH x HEIGHT	440 x 378.71 x 43.2 mm
WEIGHT	4.0 kg

A.5.8 Environmental Specifications

ENVIRONMENTAL TEMPERATURE	On: 5º to 50 ºC. Off: -20º to 70 ºC.
RELATIVE HUMIDITY	On: 8 % to 95 % (non-condensing). Off: 5 % to 95 % (non-condensing).

Appendix B Radio Information

B.1 WIFI Specifications

The Wifi Radio communications are provided by WMCND03TD module in conformity with the standards 802.11a/b/g/n

This product is supplied with antennas EDA-8709-25GR2-A9 model number. Do not choose another antennas for fulfilling the regulations.

Frequency Range	**802.11b/g/n @ 2.4 GHz** 2400-2483.5 MHz **802.11a/n (HT40) @ 5 GHz** 5150-5250 MHz 2550-5350 MHz 5470-5725 MHz
Operating	**802.11b/g/n (HT20) @ 2.4 GHz** 13 Channels **802.11n (HT40) @ 2.4 GHz** 9 Channels **802.11a @ 5 GHz** 16 Channels **802.11n (HT40) @ 5 GHz** 8 Channels
Average EIRP Power @ 2.4 GHz (tolerance ± 1 dBm) EIRP - Output Power @ 5 GHz (tolerance ± 1 dBm)	**2.4 GHz** 802.11b @ 1 Mbps 2412 ~ 2472 MHz: +19 dBm 802.11g @ 6Mbps 2412 ~ 2472 MHz: +19 dBm 802.11n (HT20) MCS0 2412 ~ 2472 Mhz: +19 dBm 802.11n (HT40) MCS0 2422 ~ 2462Mhz: +19 dBm **5 GHz** 802.11a @ 6 Mbps 5150 ~ 5725: +22 dBm

	802.11n (HT40) at MCS0 5150 ~ 5725: +22 dBm