ATLAS 6x/i6x NW Router

Installation Manual

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Legal Notice

Warranty

This publication is subject to change.

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Table of Contents

Chapter 1 About This Guide

This is the installation guide for the **ATLAS 60 NW** 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 NW** 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 NW** family.

• Technical specifications.

• Power supply requirements.

• A description of the device LEDs and 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 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

1.8 Related documentation

Dm748-I *Software Updating*.

> **Note**
>
> The manufacturer reserves the right to make changes and improvements to either software or hardware of this product, modifying the specifications of this manual without prior notice.
>
> The images showing the front and back panels of the device are for information purposes only. Some slight modifications may exist in the actual device.

Chapter 2 ATLAS 60 NW Routers

2.1 Characteristics

The **ATLAS 60 NW** 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 NW** routers incorporate encryption hardware.

The **ATLAS 60 NW** executes the Teldat CIT (Teldat Internetworking Code - Código de Internetworking de Teldat), which runs in all 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 and 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 NW** 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 NW** power supplies, please see *Power Source* on page 16 in*Components and Power Supply* on page 4.

2.1.2 Hardware Monitoring

The only way to monitor the **ATLAS 60 NW** router family hardware is through the LEDs on the front panel. These indicate the state of the hardware components, if there is connectivity, data flow, etc.

For further information on the LED panel, please see *Components* on page 4 in the following chapter.

Chapter 3 Components and Power Supply

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

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

3.1 Components

3.1.1 Front Panel

The following figure shows the front panel.
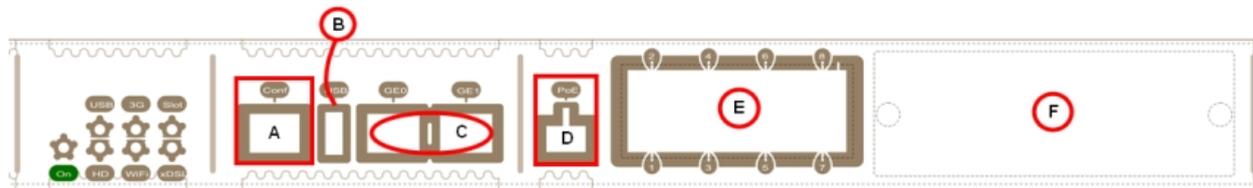
Fig. 1: **Front Panel**

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 connect a 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 8.

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:
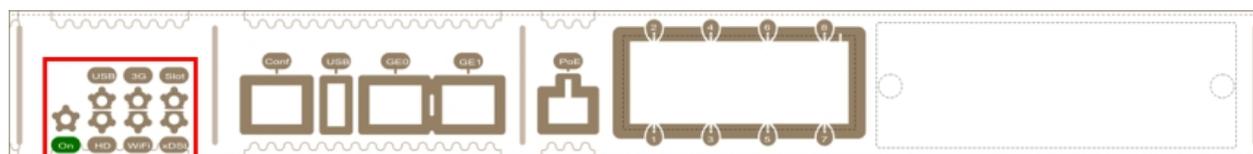
Fig. 2: **Front panel LEDs**

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 of the internal Hard Disk.	Off -> Hard disk is not connected or is inactive. Green -> If flashing, there is activity on the hard disk.
3G	Not supported	Not supported
WiFi	Not supported	Not supported
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 LEDs for the Gigabit and Switch Ethernet interfaces.

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

The following table offers 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.
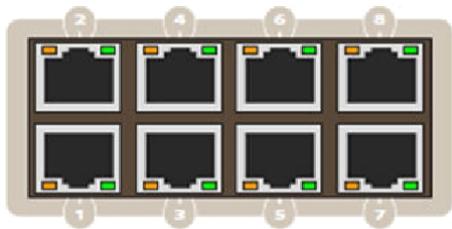
Fig. 4: **Switch Ethernet interface LEDs**

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

LED	Description	Status
Orange	Ethernet connection speed	Off -> Link has not been detected Orange -> 10 Mbps: Flashes depending on the activity.
Green	Ethernet (link) connection established	Off -> Link has not been detected Green -> 100M bps: Flashes depending on the 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	Not supported.
B	SLOT 2: expansion slot for PMC-PCI cards. For further information, please see section *SLOT 2 - Expansion Slot* on page 11 .
C	Not supported.
D	SLOT 3: Expansion slot for xDSL cards. For further information, please see section *SLOT 3 – Expansion Slot* on page 13.

E	WWAN Main: main antenna for the **ATLAS 60 NW** cellular module. This module is optional, so your device may not have any antennas.
F	Not supported.
G	ON/OFF switch.
H	Power cable connection.

3.1.3 Top Panel

The following figure shows the top panel.
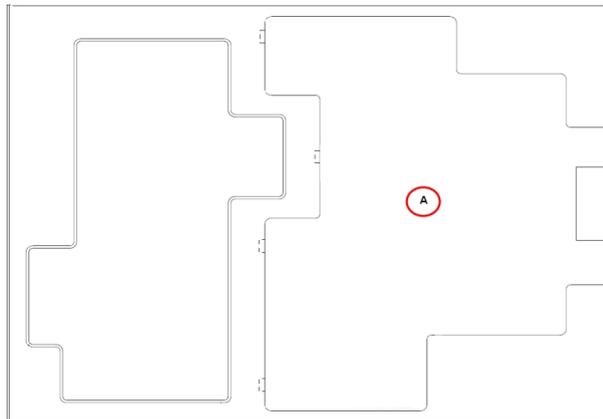
Fig. 6: **Top panel**

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**

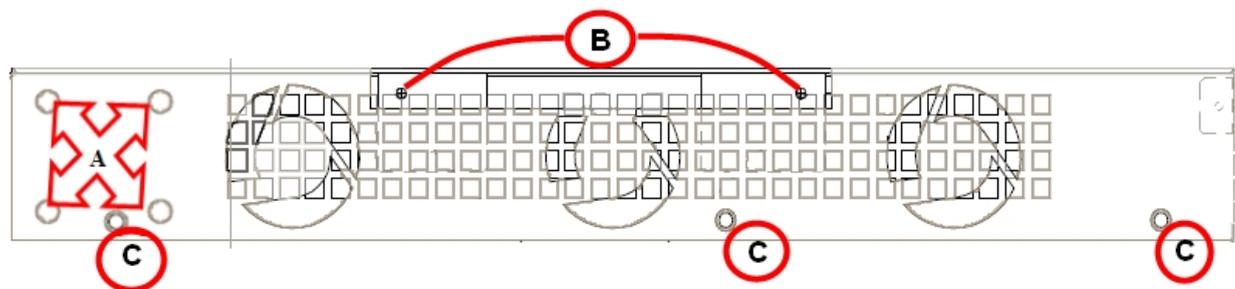The side panel elements are as follows:
Side panel elements table

Item	Description
A	Slots for the screws for rack mounting.
B	Securing screws for the flap on the top panel.
C	Securing screws for the top panel.

3.2 Expansion Slots

The **ATLAS 60 NW** has three expansion slots (SLOT 1, SLOT 2 and SLOT 3) that allow you to expand 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 4. Here, you may insert an eight-port Switch expansion card.
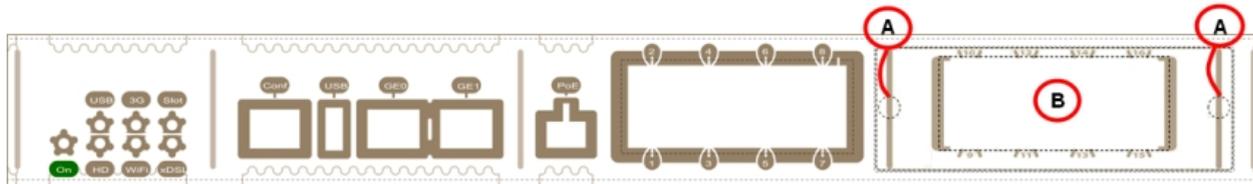
Fig. 8: **SLOT 1 Expansion Slot**
SLOT 1 elements table

Item	Description
A	Screws to hold the cover of the expansion module in SLOT 1.
B	8-port Switch Ethernet 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 17.

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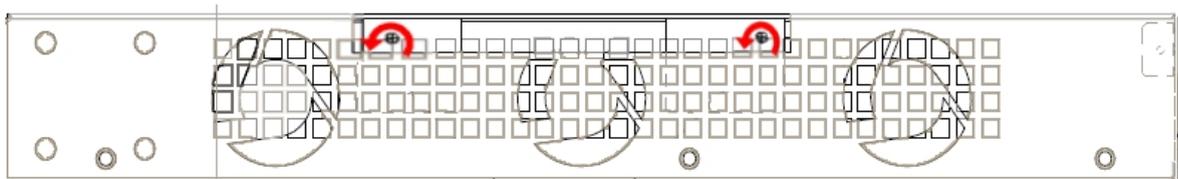
Fig. 9: **Remove the flap screws from the top panel**

(4) Once the screws have been removed, slide the flap and lift it (making sure no grooves attach the flap to the top panel). Place it in a safe location.
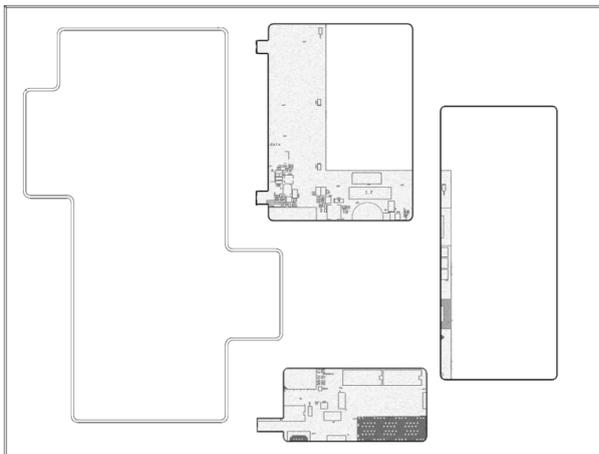
Fig. 10: **Top panel without flap**

(5) Find the place where the expansion board needs to be located. Look for the lateral connector of the card con-

nection and the card standoff posts to the chassis.
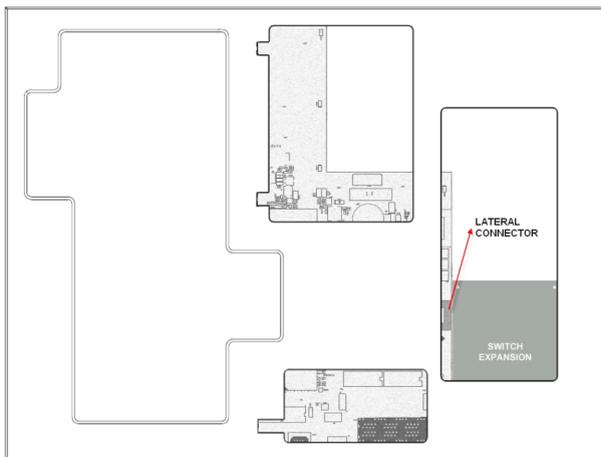
Fig. 11: **Location of the lateral connector for SLOT 1 expansion module**

(6) Using a screwdriver, remove the cover covering the expansion slot. This cover is located on the front panel.
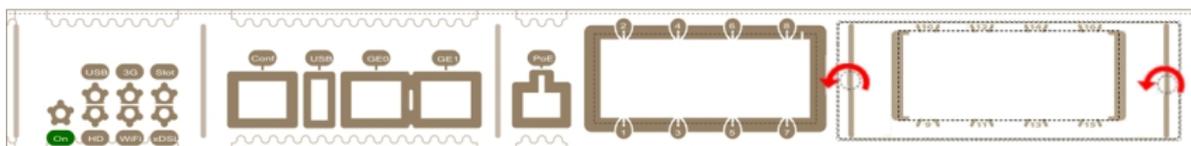
Fig. 12: **Remove the cover from SLOT 1**

(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) Put the cover back on the expansion slot and screw it down.
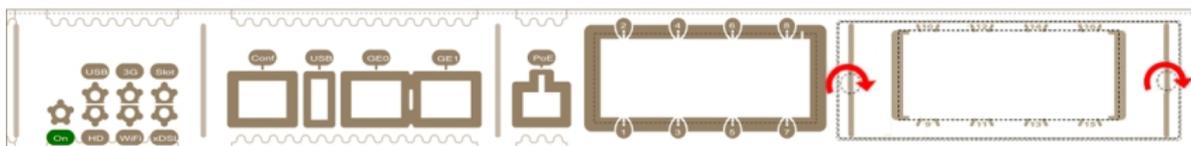

Fig. 13: **Replace the cover on SLOT 1**

(10) Reposition the top panel flap and screw it into place using the screws.
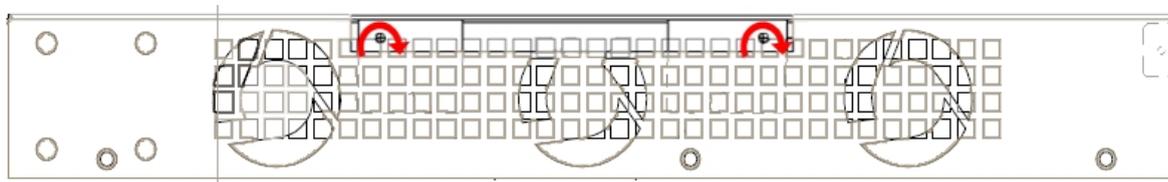
Fig. 14: **Replace the screws on the top panel flap**

(11) Connect and switch on the device, as explained in section *Connecting* on page 17. Should you encounter 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 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 6. In this case, we insert a PMC (PCI mezzanine card) into the SLOT.

Fig. 15: **SLOT 2 Expansion Slot**
SLOT 2 elements table

Item	Description.
A	Screws to hold the cover of the expansion module in SLOT 2.
B	PMC-PCIexpansion 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 17.

(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 8.

(4)   Once the screws have been removed, slide the flap and lift it (making sure no grooves attach the flap to the top panel). 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.
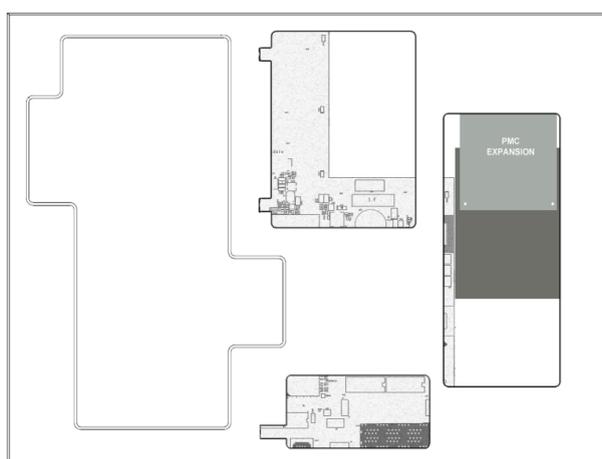
Fig. 16: **PMC Expansion board: Location**

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

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

(7)   Place 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 12.
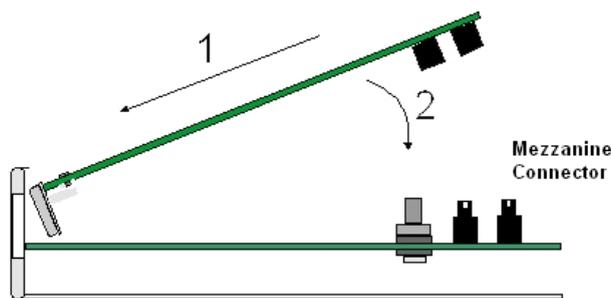
Fig. 18: **Inserting the PMC expansion card**

(9)   Screw the PMC board to the standoff posts using two screws and their corresponding washers. Firmly tighten the screws without damaging the board.
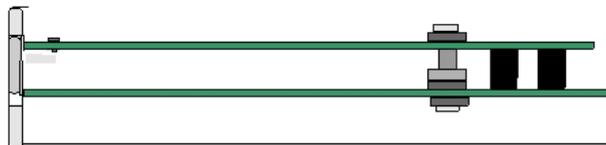
Fig. 19: **Screwing down the PMC expansion card**

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

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

(11) Replace the top panel flap and screw it into place using the screws. Please see *Fig. 14* on page 9.

(12) Connect and switch on the device, as explained in section *Connecting* on page 17. 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 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 (see *Rear Panel* on page 6). Insert an xDSL expansion board in this SLOT.

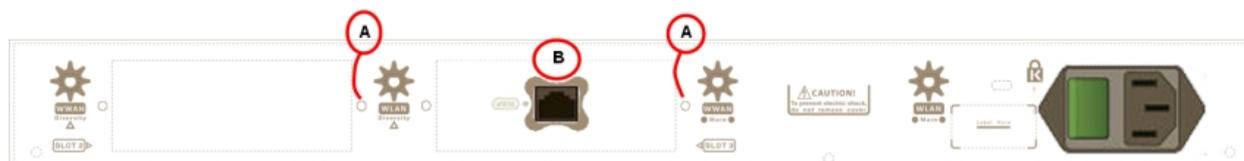
Fig. 21: **xDSL expansion card module**
SLOT 3 elements table

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 17.

(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 8.

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

(5) Find the place where the xDSL expansion board needs to be located.
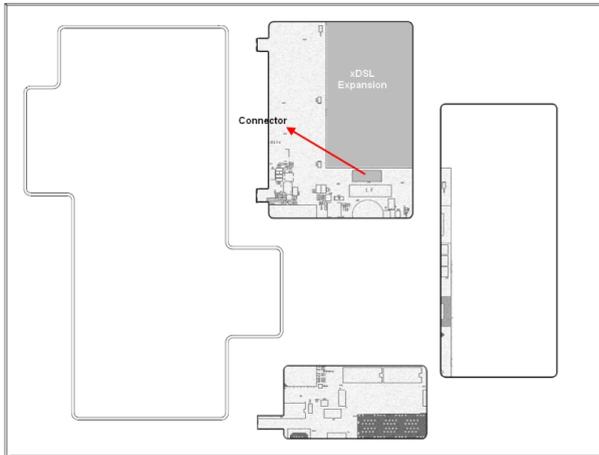
Fig. 22: **xDSL expansion board: Location**

(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 expansion slot cover.

Fig. 24: **Removing 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) Put the expansion slot cover back and screw it down.

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

(11) Rearrange the top panel flap and screw it into place using the screws. Please see *Fig. 14* on page 9.

(12) Connect and switch on the device as explained in section *Connecting* on page 17. 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 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 NW** can be installed in a 19" rack. To do this, you need two plastic brackets like the ones shown below. The brackets and screws are not included in the basic packet and have to be acquired separately.

Both brackets are attached to the device by means of 8 screws (4 on each side), as shown.
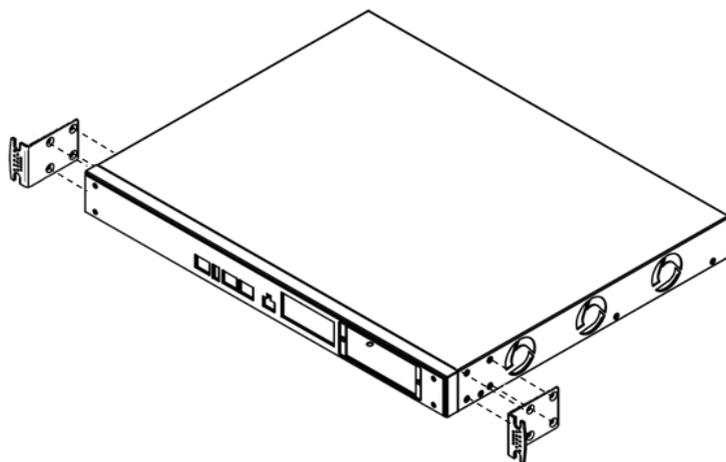
Fig. 26: **Attaching the brackets**

The spaces for the screws in the **ATLAS 60 NW** 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.
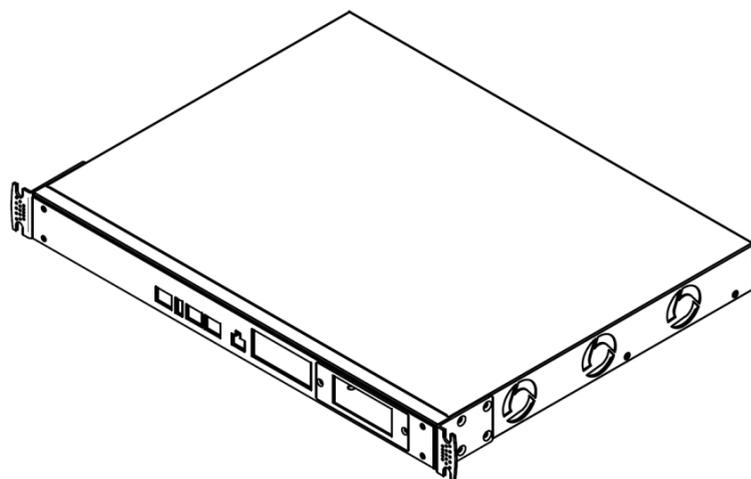
Fig. 27: **Device with the brackets**

3.4 Power Source

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

Additionally, the **ATLAS 60 NW** router can hold an optional card to inject PoE through the 8-port Switch. In this case, the device is served from an AC/DC external power source to power the PoE 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 block 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 17 and *Disconnecting* on page 17.

3.4.1 Internal Power Source

To connect the power cable to the device, carry out the steps set forth in section *Connecting* on page 17.

> ⚠ **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 whether 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 issues 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.
- Place the device's on/off power supply switch in the ON position.

3.4.1.2 Disconnecting

- Place 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 earlier 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 NW** 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 17.

(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 to be able to dismantle the flap that gives access to the MiniPoE card. Please see *Fig. 29* on page 18.
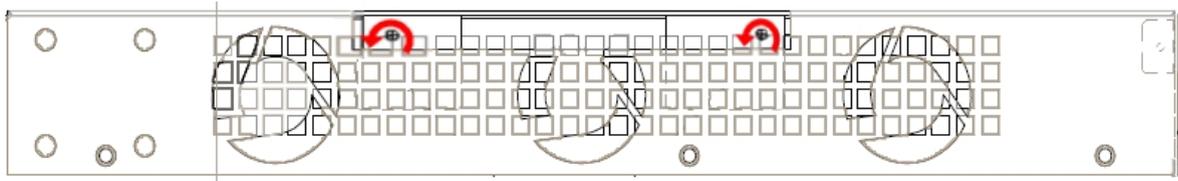
Fig. 29: **Removing the screws for the top panel flap**

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

(5)   Find the place where the MiniPoE card needs to be located.
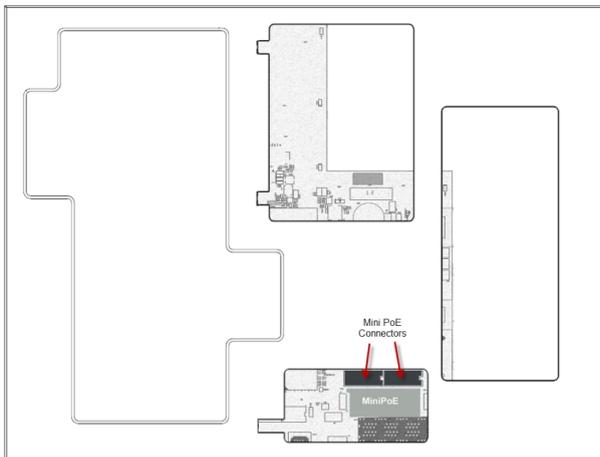
Fig. 30: **MiniPoE card location**

(6)   Place the PMC card so that this adjusts to 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. Please see *Fig. 31* on page 18.
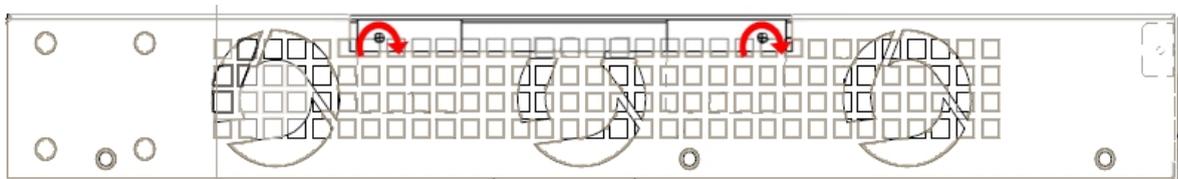
Fig. 31: **Rearranging the top panel's flap screws**

(8)   Connect and switch on the device, as described in section *Connecting* on page 17. 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 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
```

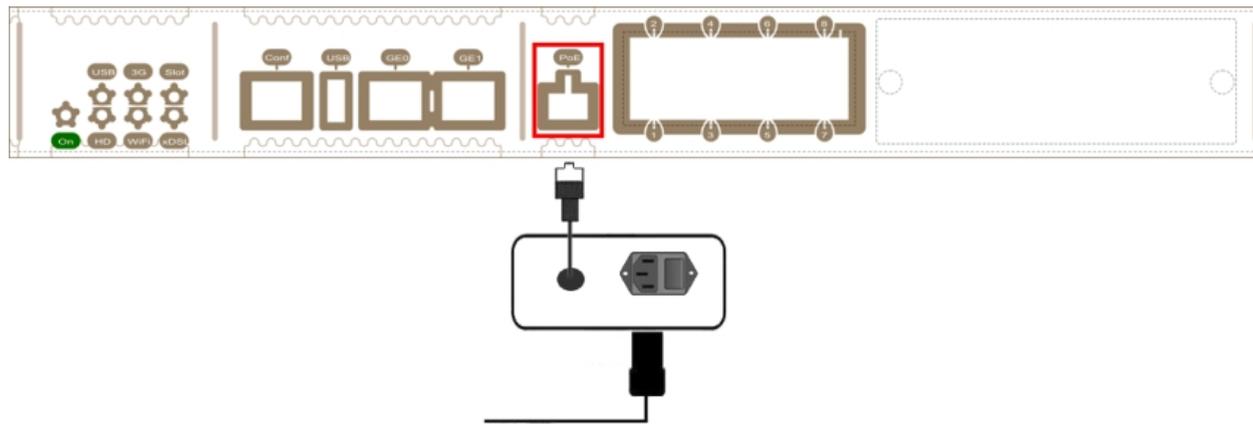Once the MiniPoE card has been installed, we can connect the PoE source to the device:

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

3.5 Microswitches

The **ATLAS 60 NW** router has a block of eight available micro-switches (located on the underside of the device) used for maintenance and test purposes.

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

> **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.
- Open the device.
- Using a screwdriver, move micro-switch **'5'** to the ON position.
- Close the device.
- 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.

- Lastly, close the device.

3.6 Data Connection

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

3.6.1 8-port Ethernet Switch

The **ATLAS 60 NW** 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:
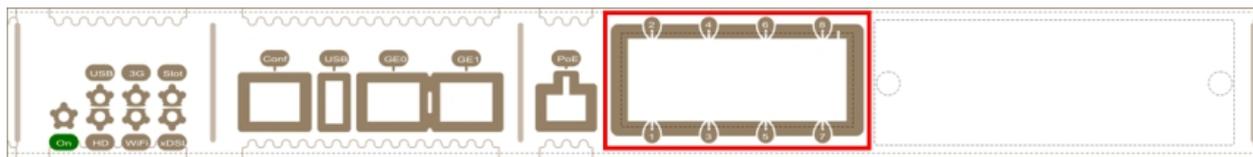

Fig. 33: **LAN Switch ports**

3.6.2 GE0/GE1Connections

The **ATLAS 60 NW** 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:
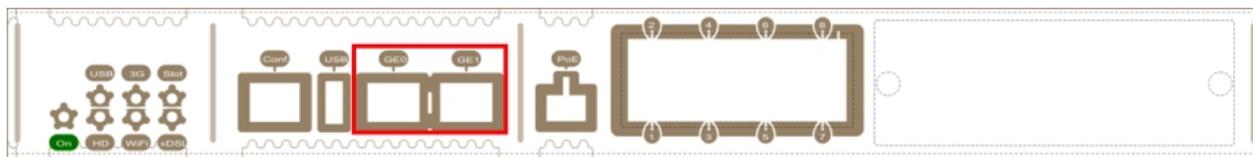

Fig. 34: **Giga Ethernet connectors**

3.6.3 Connecting a USB 3G device (USB connector)

The **ATLAS 60 NW** router has a 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.
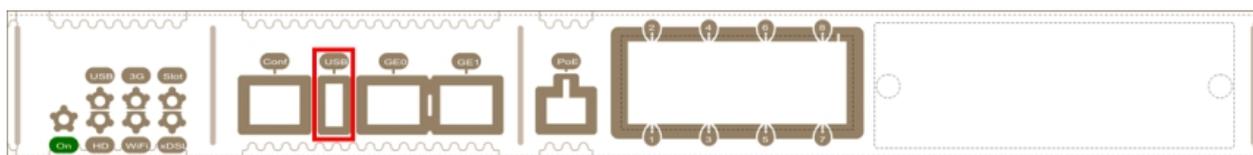

Fig. 35: **USB 3G Connector**

3.6.4 Connecting for Configuration

The **ATLAS 60 NW** router has a RJ45female connector on the front panel known as "**Conf.**", which provides access to the device's local console.

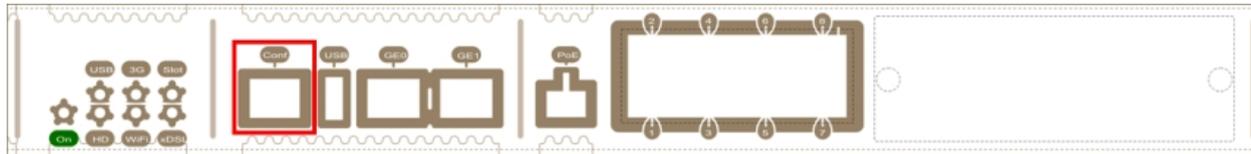For further information, please see section *Connecting to the device* on page 27.

Fig. 36: **Conf Connector**

3.7 Optional Storage

The **ATLAS 60 NW** allows you to expand its feature set through applications executed by the second CPU core.

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

3.7.1 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 17.

(2) Remove the device from the workplace and place it in a stable, safe place where it can be easily accessed and handled. Open up the device. To do this, you need to remove the top cover (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 lift it. Place it in a safe location.

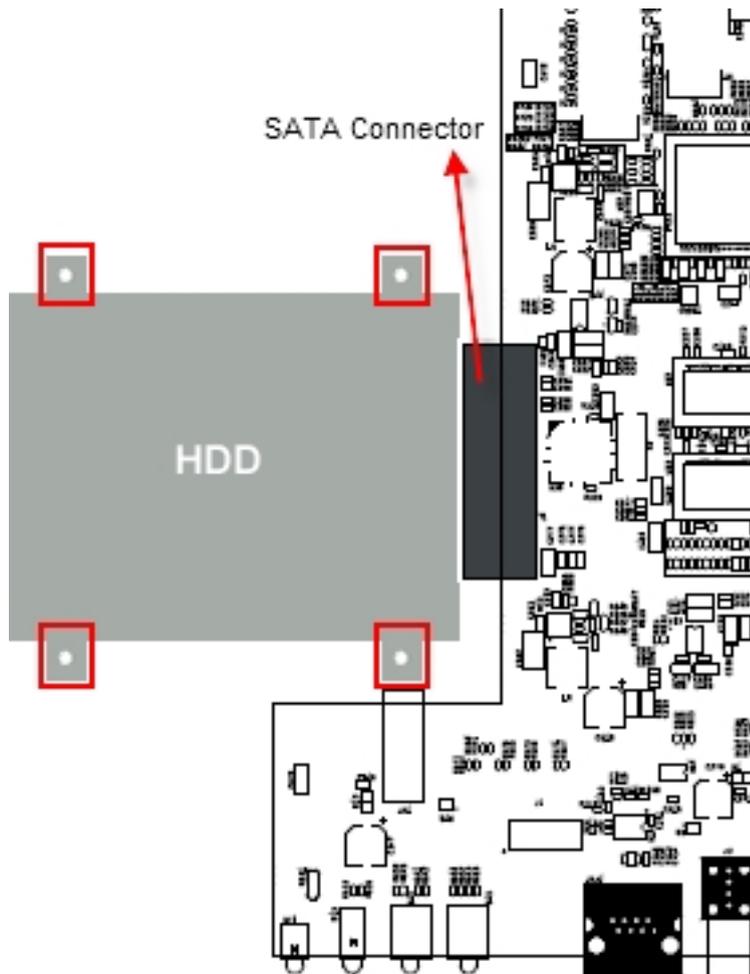(4) Locate the hard disk area and the SATA connector for this.

Fig. 37: **Location of the 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. Firmly tighten them.

(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 17. 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 supplier.

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

3.7.2 Procedure to install a flash memory expansion USB

To install a flash memory expansion USB, please follow these steps:

(1) Switch off the device and remove the data cables, as described in section *Disconnecting* on page 17.

(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 (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 lift it. Place it in a safe location.

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

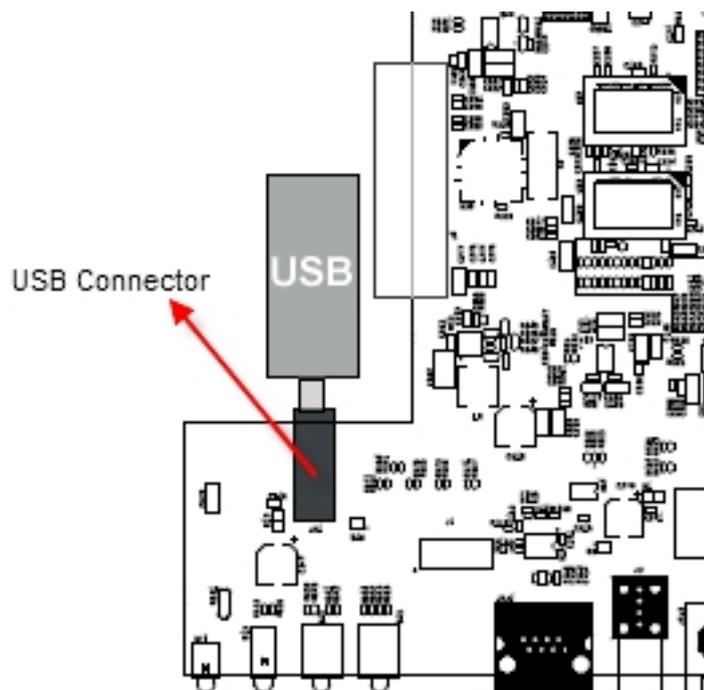*Fig. 38:* **Location of the USB connector for the flash memory expansion**

(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 17. 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 supplier.

Appendix A Technical Information

A.1 Troubleshooting

Below, you will find a table that will help you solve problems during the installation of the device. If you cannot solve the problem, please ask your distributor for additional information.

Symptom	Solution
None of the LEDs light up on the device.	Check the power supply to the device (power source, ON/OFF switch, main power outlet). Check that all the 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 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 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 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 NW** 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 " *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 NW** 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 (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 NW** router has a RJ45 female connector on the front panel known as "**Conf .**", which provides access to the device local console.
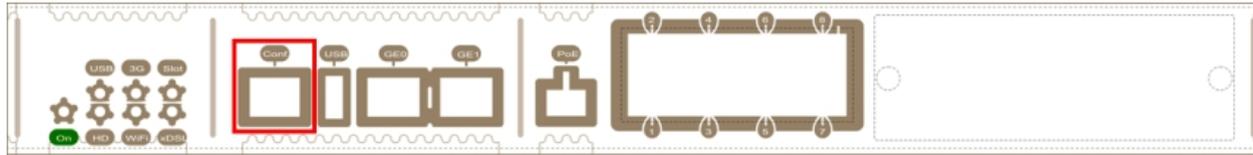
Fig. 39: **Conf connector**

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).

Adaptador
RJ45H-DB9H

Fig. 40: **Connecting for Configuration**

A.4 Connectors

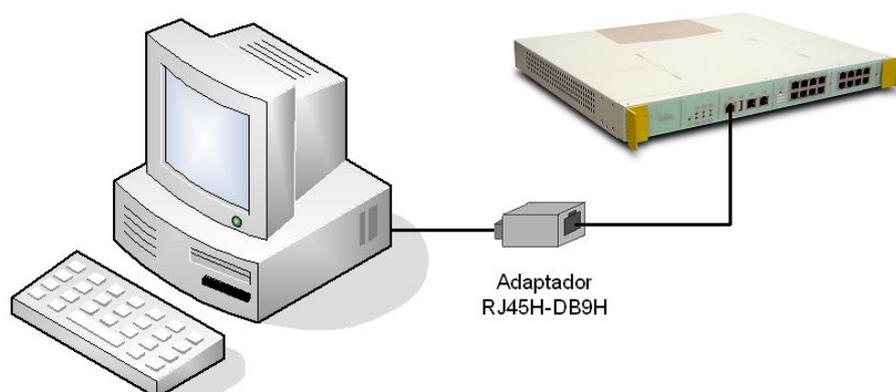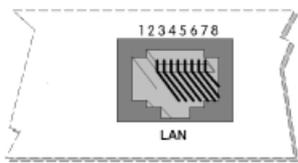### A.4.1 LAN (GE x) Connector

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
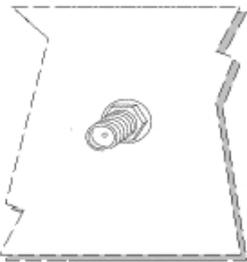
* Not available in all models

A.4.3 WLAN Connectors*

	PIN	ANT
	Internal	RF in/out
	External	GND
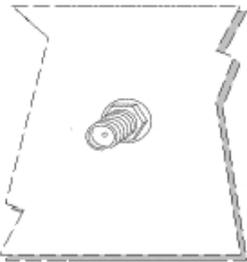
* Not available in all models

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*

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

*Depending on the model

A.5.3 Configuration Interface

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

A.5.4 Power Supply

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

A.5.5 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.5.6 Environmental Specifications

ENVIRONMENTAL TEMPER-ATURE	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 Regulatory compliance and safety information

B.1 Recycling and the Environment

Please do not, under any circumstances, throw away any **ATLAS 60 NW** with normal domestic waste. Ask your local town hall for information on how to correctly dispose of them in order to protect the environment against e-waste. Always respect the current laws regarding waste material. Anyone found violating the environmental laws will be subject to fines and any additional steps established by law.

All the packing materials i.e. the cardboard box, plastic and any other packaging, together with the pieces making up an **ATLAS 60 NW**, must be recycled complying with the current active laws regarding recycling materials.

The below symbol 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 the official recycling/disposal centers where it must be disposed of in an environmentally responsible manner and separately from normal domestic waste.

B.2 Translated Safety Warnings

⚠	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 предназначено для установки обслуживающим персоналом и обрабатываются только квалифицированным персоналом. Если нет, то устройство может быть повреждена и неисправности.
	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.
⚠	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.
⚠	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.

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 17 and *Disconnecting* on page 17.

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 problemas de funcionamiento y envejecimiento prematuro de drivers y demás componentes.

B.3 Compliance

B.3.1 FCC Statement

B.3.1.1 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.

B.3.2 IC Statement

B.3.2.1 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.