# Teldat Router Atlas-i70

## Installation Manual

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# Table of Contents

# I Related Documents

Teldat Dm748-I Software Updating

# Chapter 1  About this Guide

This installation guide for the **Teldat Atlas-i70** router 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 **Teldat Atlas-i70** router.

## 1.2  Who should read this manual?

This manual should be read by the support personnel who need to 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 features available in the **Teldat Atlas-i70** router.
- Technical specifications.
- Power supply requirements.
- Elements that can be connected when the router is operating.
- How to install and uninstall the modules and power sources.
- 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 protocol manuals found in 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 and 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 whenever new features are developed.

Contact information:

    Web: http://www.teldat.com - Email: support@teldat.com

    Tel.: +34 918 076 565 - Fax: +34 918 076 566

# Chapter 2   Teldat Atlas-i70

## 2.1  Characteristics

### 2.1.1  Power supply

For further information on the different **Teldat Atlas-i70** power supplies, please see *Components and Power Supply* on page 4, section *Power source* on page 11.

### 2.1.2  Hardware monitoring

The LEDs on the front panel are used to monitor the hardware in the **Teldat Atlas-i70** router. These LEDs provide visual information on the state of the device and reference the condition of the hardware components, indicating whether there is connectivity, data flow, etc.

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

# Chapter 3  Components and Power Supply

The following chapter provides detailed information on the chassis of the **Teldat Atlas-i70** and its components. This information includes:

- Components.
- Information on assembly.
- Installing and uninstalling modules.
- Power supply.
- RST button.
- Data connection.
- Expansion cards and hard disk installation.

## 3.1  Components

### 3.1.1  Front panel

The following figure shows the front panel.



*Fig. 1:* **Front Panel**

The front panel components are as follows:

**Front panel components**

| Item | Description |
|------|-------------|
| A | LED panel. |
| B | Slot 1 for expansion card. |
| C | Slot 2 for expansion card. |
| D | Slot for hard disk. |

The LED panel provides information on the status of the components (whether they are active or not) and on network activity.

**LEDs**

| LED | Definition | Status Indication |
|-----|-----------|-------------------|
| PSU | Power / Switch On-Off | Off -> No power through PSU.<br>On -> Powered through PSU. |
| S | General Status /<br>Default Configuration Process | Off -> System off.<br>Red -> Error, component operating incorrectly.<br>Green -> System initialized and operating.<br>Amber (blinking) -> Default configuration. |
| USB | USB Interface Status | Off -> System stopped. |

| | | |
|---|---|---|
| | | Red -> Interface unavailable because it is installing, disabled (shutdown) or due to auto-test failure.<br><br>Amber -> Idle.<br><br>• Rapid blinking. It has not registered in the network or the quality is insufficient.<br>• Slow blinking. GSM connection (GPRS).<br>• Steady. WCDMA (UMTS / HSDPA) connection.<br><br>Blinking (green/red) -> activity/maintenance. |
| Wi-Fi 1 | Wifi-1 Interface Status | Not supported. |
| Wi-Fi 2 | Wifi 2 Interface Status | Not supported. |
| LAN Switch | LAN Switch interface activity | Green -> Connected. Blinking: connection data activity.<br><br>Red -> Disconnected.<br><br>Off -> Interface off. |
| Eth WAN | Base-T | Green -> Connected. Blinking: connection data activity.<br><br>Off -> Not used. |
| | SFP | Green -> Connected. Blinking: connection data activity.<br><br>Off -> Not used. |
| Cell | Status | Not supported. |
| | Not supported. | Not supported. |
| | SIM | Not supported. |
| Storage (HD/SD) | HDD / SDD Status | Off -> Hard disk or SD card is not connected or is inactive.<br><br>Green -> Detected hard disk or SD card.<br><br>Amber -> Testing hard disk or SD card.<br><br>Red -> Error. |
| Apps | Apps Information | Off -> No applications detected.<br><br>Green -> Applications detected.<br><br>Amber -> Testing application.<br><br>Red -> Application error. |
| Slot 1 | Expansion Slot 1 Information | Off -> There is no card in the expansion slot.<br><br>Red -> Interface down.<br><br>Amber -> Auto-test.<br><br>Green -> Interface up (blinking, in some cards, when there is connection data activity). |
| Slot 2 | Expansion Slot 2 Information | Off -> There is no card in the expansion slot.<br><br>Red -> Interface down. |

| | | Amber -> Auto-test. |
|---|---|---|
| | | Green -> Interface up (blinking, in some cards, when there is connection data activity). |

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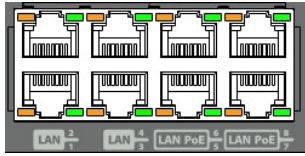


*Fig. 2:* **Ethernet interface LEDs**

The table below provides information on the LEDs associated with the Switch Ethernet interface:
**Switch Ethernet interface LED indicators**

| 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.<br><br>Green -> Link detected. Blinking: connection data activity. |

## 3.1.2  Rear panel

The following figure shows the rear panel. Here you will find the majority of the **Teldat Atlas-i70** router connectors.
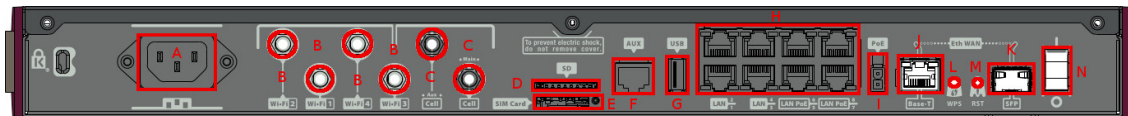


*Fig. 3:* **Rear panel**

The following table provides information on each connector, as well as a description:
**Rear panel components**

| Item | Description |
|---|---|
| A | Power source connection (PSU). |
| B | Wi-Fi Antenna connectors. Not supported. |
| C | 3G Antenna connectors. Not supported. |
| D | SD. Slot used to insert an SD card. |
| E | SIM Card. Not supported. |
| F | Aux. Provides access to the **Teldat Atlas-i70** local console for configuring and monitoring purposes. |
| G | USB. Slot used to insert a 3G USB modem. |
| H | 8-port Gigabit Ethernet Switch. |
| I | PoE. Connector for power supply through Ethernet (Power over Ethernet). |

| J | Eth WAN Base-T. WAN Gigabit Ethernet. |
| K | Eth WAN SFP. |
| L | WPS (Wireless Protected Setup). Not supported. |
| M | RST. Reset button. For further information on how the reset button works, please see *RST button* on page 14 |
| N | On/Off switch. |

## 3.2  Expansion slots

The **Teldat Atlas-i70** has two expansion slots. This allows you to increase the features and interfaces by inserting different cards or boards.

These slots are located on the router's front panel, as shown in the following figure:
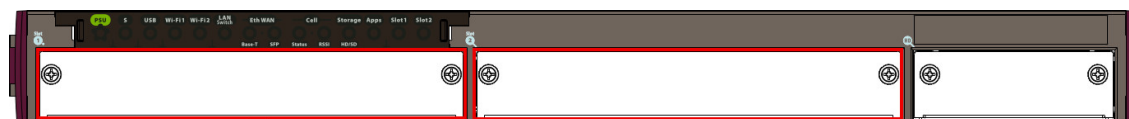


*Fig. 4:* **Expansion slots**

To correctly insert cards, please follow these steps:

(1)    Switch off the device and remove the data cables as described under section *Disconnecting* on page 11.

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

(3)    Unscrew the front panel screws to remove the expansion card tray.
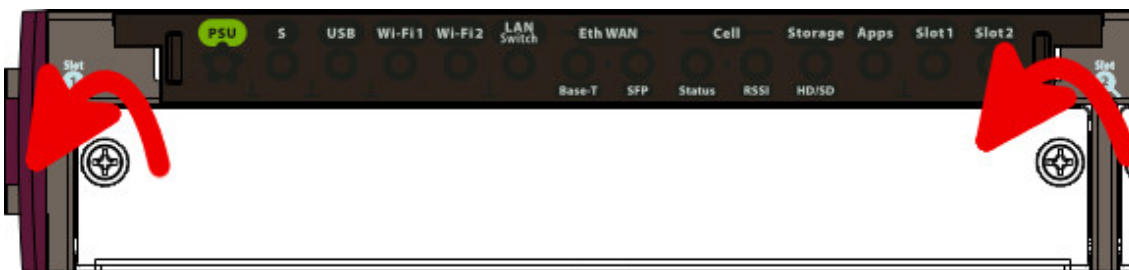


*Fig. 5:* **Unscrewing the front panel screws**

(4)    Once unscrewed, pull the tray out of the front panel slot.
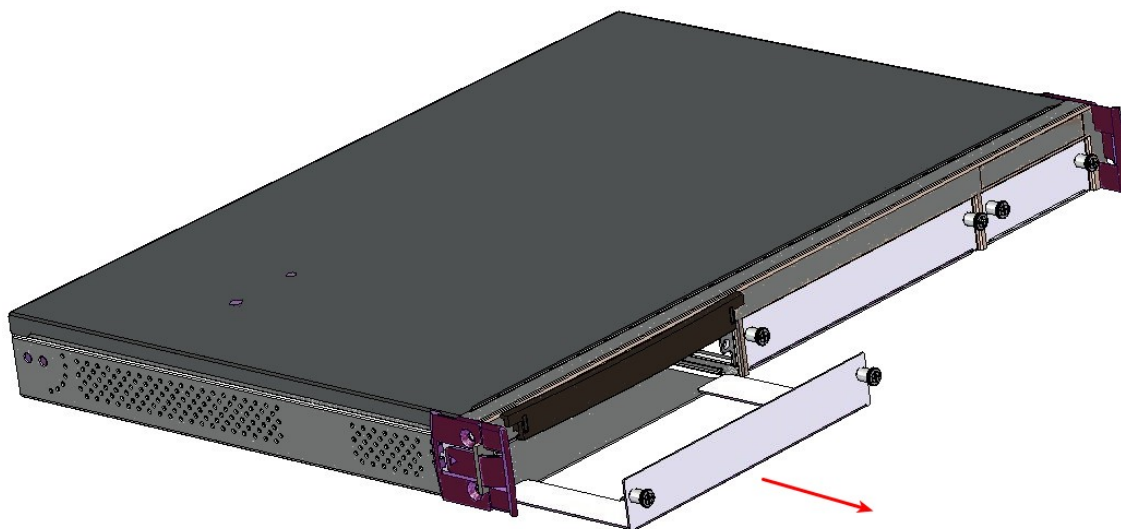


*Fig. 6:* **Extracting the tray from the front panel**

(5)    Finally, put the tray that holds the card back into the device.
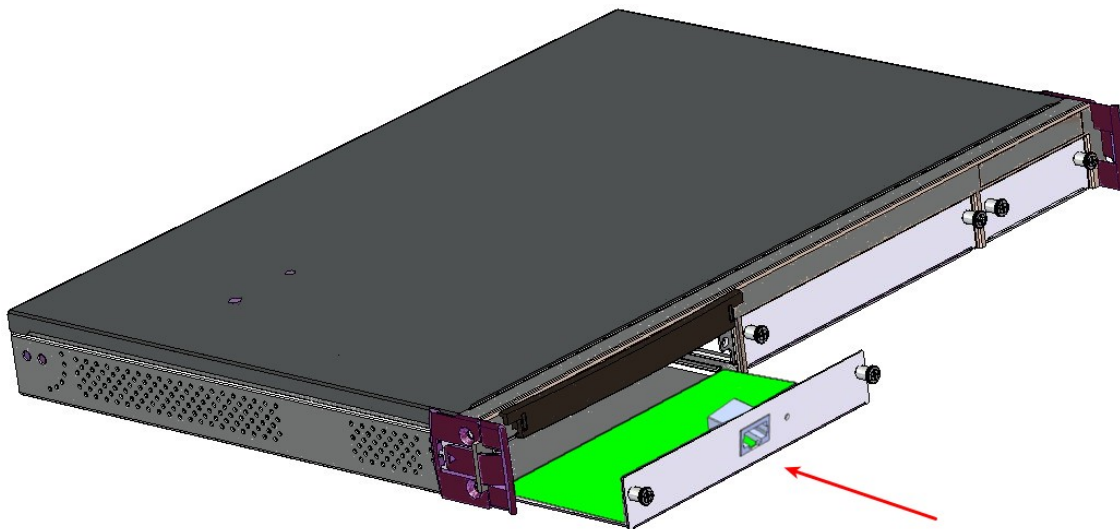


*Fig. 7:* **Inserting the expansion card**

(6)    Screw the tray to the device.



*Fig. 8:* **Screw the tray to the front panel**

(7)    Connect the equipment as indicated in section 3.5.1.1 "Connecting". Connect a terminal to the console and veri-
fy that the expansion card has been detected.

### 3.2.1  Compatible cards

**Teldat Atlas-i70** can be equipped with a wide variety of cards that expand the router features and interfaces.

> 👉 **Note**
>
> Please see the Teldat website http://www.teldat.com for a list of updated expansion cards.

Depending on the card type, it can be plugged in any expansion Slot, or only in the Slot#1

The following table lists the different models of cards that can be installed in Slot #1 or Slot #2 without restrictions:
**Teldat Atlas-i70 Slot#1 and Slot#2 compatible cards**

| Code | Description |
|---|---|
| RCTMATS1 | One serial port card (synchronous/asynchronous). |
| RCTMATS2 | Two serial ports card (synchronous/asynchronous). |
| RCTMATSFP | One port SFP card. |
| RCTMATE1T1 | One port E1/T1 card. CABLE INCLUDED (RJ45/RJ45, 2m.) |
| RCTMATE1T1COAX | One port E1/T1 card. COAXIAL CABLE INCLUDED (RJ45/Coax5, 2m.) |
| RCTMATVADSL-VA | One port VADSL Annex-A (Vectoring) |

| RCTMATVADSL-VBJ | One port VADSL Annex-B/J (Vectoring) |
| GWTMAT003 | Primary VoIP card. |
| GWTMAT004 | 4 FXS/FXO VoIP configurable daughter board. |
| RCTMATVADSL2 | One port VDSL/ADSL2+ card. |

The following table lists the different models of cards that can be installed only in slot #1.

**Teldat Atlas-i70 Slot#1 compatible cards**

| Code | Description |
| --- | --- |
| RCTMAT8GE | Eight ports Ethernet 10/100/1000 PoE-out. |
| | This card is delivered with an external PoE Power Supply Unit capable to feed 12 ports. |
| | • Manufacturer: Mean Well |
| | • Model: GST220A48-R7B |
| RCTMATG8W | One port G.SHDSL card (4 pairs). CABLE INCLUDED (1 x RJ11, 2m.) |
| RCTMATVADSL | One port VDSL/ADSL card. CABLE INCLUDED (1 x RJ11, 2m.) |
| RCTMATVASFP | One port VDSL/ADSL + one port SFP card. CABLE INCLUDED (1 x RJ11, 2m.) |
| RRCTMAT4GE1SFP | One port SFP + 4 GE ports |
| RCTMAT4GE | 4xGE card |

## 3.3  Installation in a rack

The **Teldat Atlas-i70** can be installed in a 19" rack. The necessary strips and screws are not provided by default and have to be acquired separately.

(1)    First, the maroon side tabs must be removed to free the screws holes:
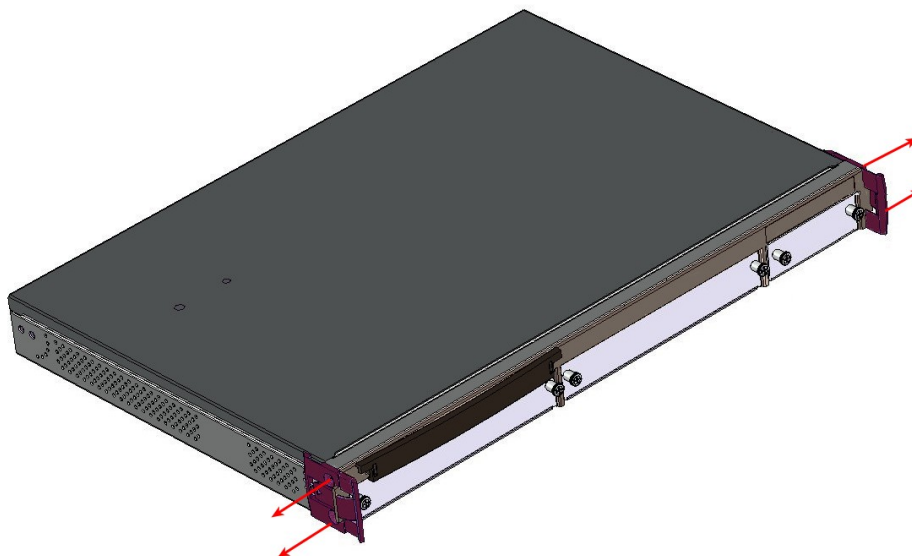


*Fig. 9:* **Side tabs have to be removed**

(2)    Both strips are attached to the device through 6 screws, as shown in the following figure:
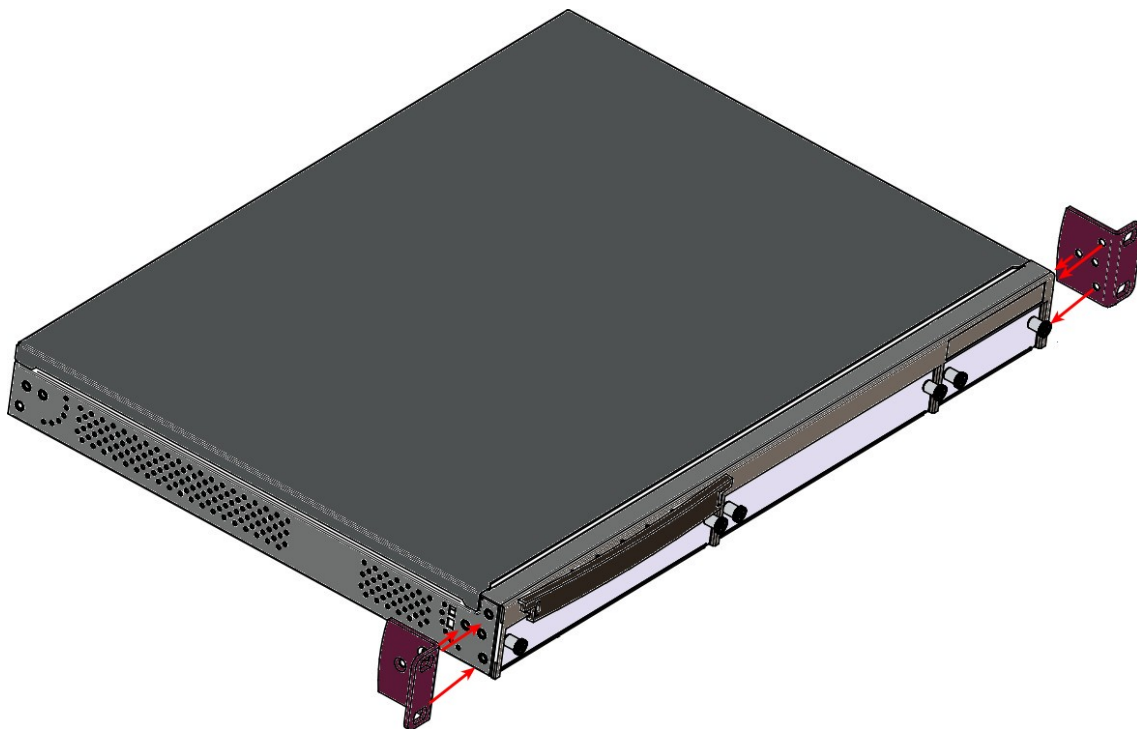
*Fig. 10:*  **Rack anchor bolts**

### 3.3.1  Standalone

**Teldat Atlas-i70** can be placed as standalones on a flat, stable surface. The adhesive rubber feet must be stuck to the underside panel to prevent the router from sliding.

Make sure there is enough space around the router (for ventilation purposes) and check that the power cord and data cables can reach it.

### 3.3.2  Wall mounting

The **Teldat Atlas-i70** cannot be mounted on the wall.

## 3.4  Plug-in modules

Currently, only a 3G USB modem can be inserted in the device. To view the list of supported 3G modems, please go to the following website: http://www.teldat.com.

### 3.4.1  Installation

Simply insert the USB in the appropriate slot on the rear panel, as shown in the following figure:



*Fig. 11:*  **USB modem insertion slot**

### 3.4.2  Uninstall

To remove the device, simply pull it out from the slot where it was inserted. We recommend switching off the equipment before removing the USB device.

## 3.5  Power source

The **Teldat Atlas-i70** is powered through an internal AC/DC source.

The **Teldat Atlas-i70** may also incorporate a card to inject PoE through the 4 ports of the 8-port Switch. In this case, an external adapter is needed to provide power to PoE module.

⚠️ **Warning**

The equipment must be used with the power supply provided by the manufacturer.

**Workplace Conditions. Main Characteristics**

• Avoid humid and/or dusty locations.

• Direct exposure to sunlight and other heat sources should be avoided. 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 11 and *Disconnecting* on page 11.

## 3.5.1  Internal power source

To connect the power supply to the device, please follow the steps under section *Connecting* on page 11.

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

⚠️ **Warning**

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).

We recommend connecting all data devices to the same power source regardless of whether the workplace is provided with an uninterrupted power supply (UPS), a regulated supply or is independent of the other power supplies (such as lighting, etc.). This will help to prevent malfunctions and premature aging of the drivers and other components.

### 3.5.1.1  Connecting

• Verify 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.

### 3.5.1.2  Disconnecting

• Set the on/off power supply switch in the OFF position.

• Disconnect the power supply from the device.

• Disconnect the data cables.

## 3.5.2  PoE source

The **Teldat Atlas-i70** can be powered through an Ethernet cable that complies with the PoE 802.3af standard (15.4 W per port). This feature needs an external adapter and internal card to work.

The following figure shows where to connect the PoE source to the device:



*Fig. 12:* **PoE source connection (blue) and PoE ports (red)**

### 3.5.2.1  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 11.

(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 three screws from the rear panel to dismantle the cover that protects the access to the MiniPoE card.



*Fig. 13:* **Removing the screws from rear panel**

(4)   Once the screws have been removed, slide the cover along and lift it up and off. Place it in a safe location.

(5)   Locate the area where the MiniPoE card must be placed.
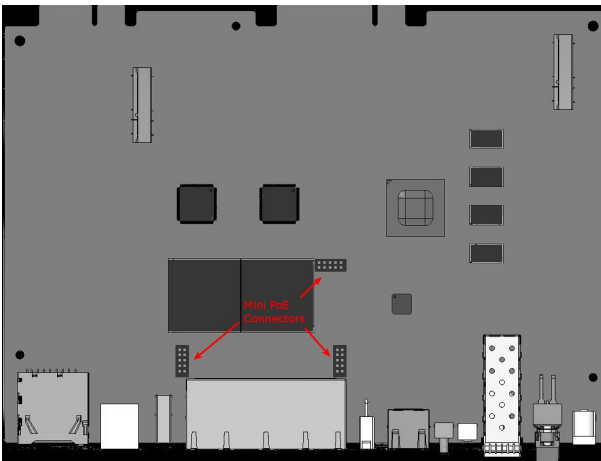


*Fig. 14:* **MiniPoE card***: Location*

(6)   Place the MiniPoE card so that it matches the three 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 cover and screw it into place using the screws.



*Fig. 15:* **Rearranging the top panel's cover screws**

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



FLASH BIOS CODE VERSION: 01.05  Jan 13 2017 12:28:31   L0
RTC stopped.


System Info:
PCB:0x14E PVR:0x80241021 SVR:0x85480010 T1024
CLKs: PLAT=400 CPU0/1/2/3=1400/1400/1400/1400 DDR(clk)=1584 LBUS=50 PCI0/1/2/3=0/0/0/0
Watchdog:Enabled
MMU Mode:Dynamic
ICache:ON DCache:ON Write-Back L2Cache:ON


Mem Info:
DRAM size: 1024 Megabytes
   BANK 0: 1024 Megabytes
FLASH: 32256 KB.
EEPROM: 16384 Bytes.


Devices:
SWITCH(8) 10/100/1000
USB 2
USB 1
NVRAM 128 KB
SECURITY ENGINE(0x0a120500)
POE CARD 0
GIGABIT ETHERNET 1
PCI device: PowerPC processor, RC
  (Bus: 0, Device: 0, Function: 0)
  (Vendor: 0x1957, Device: 0x0840)
  (Subs. Vendor: 0x0000, Subs. Device: 0x0000)
SLOT1 - PCI device: Ethernet controller
  (Bus: 1, Device: 0, Function: 0)
  (Vendor: 0x8086, Device: 0x1537)
  (Subs. Vendor: 0xFFFF, Subs. Device: 0x0000)
PCI device: PowerPC processor, RC
  (Bus: 10, Device: 0, Function: 0)
  (Vendor: 0x1957, Device: 0x0840)
  (Subs. Vendor: 0x0000, Subs. Device: 0x0000)
PCI device: PowerPC processor, RC
  (Bus: 20, Device: 0, Function: 0)
  (Vendor: 0x1957, Device: 0x0840)
  (Subs. Vendor: 0x0000, Subs. Device: 0x0000)


Current production date: 16 41
PCIe BUS_2x to SLOT2
Current PCBARef: 884/00149
S/N: 884/00149
BIOS MAC Add: 00-a0-26-be-02-4c
Num MACs: 12
>>


........
TRYING APP DUMP
    (CONFIGURED) APPCODE1.BIN ver.: 0.11.1.2 0.0.0.0
APP CODE DUMP.....................................................
...................................................................
...................................................................
```

```
..............................................................
..............................................................
..............................................................
..............................................................
APP DATA DUMP.................................................
Running application at: 0x00200140
Licence loaded successfully


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. 16:* **Connecting the PoE source to the device through the external PoE adaptor connector**

## 3.6  RST button

The different RST button features are described below.



*Fig. 17:* **RST button**

### 3.6.1  Rebooting the device

Once the device is operating normally, pressing the RST button will make it restart.

### 3.6.2  Default configuration

The RST button lets you boot the device with its default configuration through the following steps:

• With the device switched off, press and hold the RST button down while you turn the router on using the ON/OFF switch (1).
• The PSU LED (green) will light up and LED 'S' will begin to blink (amber). It will carry on blinking for 10 seconds.
• To boot the device with the default configuration, let go of the RST button while LED 'S' is still blinking (i.e., before the 10-second period expires).

The router's default configuration establishes the following access IP and mask address:

• IP address: 192.168.1.1
• IP mask: 255.255.255.0

> **Note**
>
> Some devices leave the factory with customized settings. This personalization may mean your router's default configuration is different from the one shown above.

## 3.7  Connecting the data

The **Teldat Atlas-i70** has the following data connections.

### 3.7.1  8-port Ethernet switch

The **Teldat Atlas-i70** incorporates an 8-port 10/100/1000 Base-T switch with automatic MDI/MDIX to connect to a local area network (LAN).

Please pay careful attention to the labeling to avoid confusing this switch with other types of port:



*Fig. 18:* **LAN switch PORTS**

> **Note**
>
> During booting and in BIOS mode, the LAN 1 connector is the only connector available.

### 3.7.2  WAN connection

The **Teldat Atlas-i70** has one Ethernet interface for WAN connection. This port has two connectors - SFP for optical link and RJ45 for 10/100/1000 Base-T link - but they cannot operate simultaneously. This interface is totally independent from the switch and is handled as just one more interface.

Please pay careful attention to the labeling to avoid confusing these ports with other types of port:



*Fig. 19:* **WAN connectors**

> **Note**
>
> During booting and in BIOS mode, the WAN connectors do not work.

### 3.7.3  Connecting a 3G USB device (USB connector)

The **Teldat Atlas-i70** router has a USB HOST 2.0 Type A connector interface. It allows 3G USB modems to be connected. The interface can be activated by purchasing the corresponding software license.



*Fig. 20:* **3G USB Connector**

### 3.7.4  Connecting for configuration

The **Teldat Atlas-i70** has a RJ45 female connector on the front panel (labeled **Aux**) that provides access to the device's local console.

For further information, please see *Connecting to the device* on page 23.



*Fig. 21:* **Aux. Connector**

## 3.8 Optional storage

The applications running in the second core of the device processor increase the features of the **Teldat Atlas-i70**.

To access said features, the device must have an internally-installed hard disk or an SD flash memory expansion.

> **Note**
>
> Please see the Teldat website http://www.teldat.com for a list of supported hard disks.

### 3.8.1 Procedure to install a hard disk

To correctly insert a hard disk, please carry out the following steps:

(1) Switch off the device and remove the data cables as described under section *Disconnecting* on page 11.

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

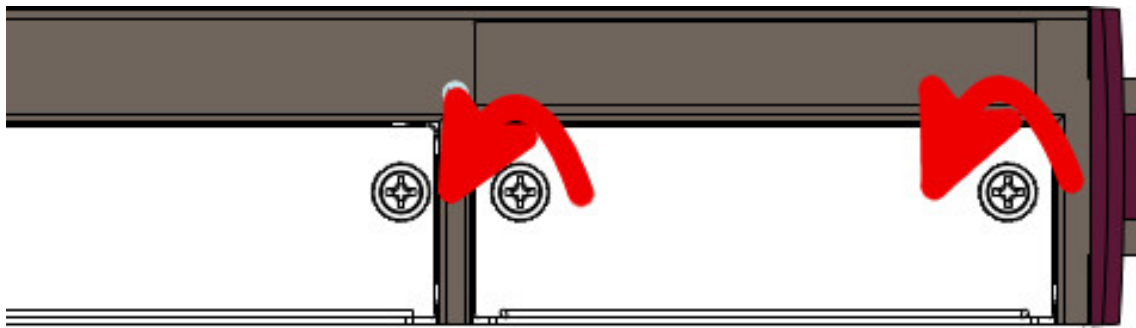(3) Unscrew the screws on the front panel to extract the tray for hard disk access.



*Fig. 22:* **Unscrewing the screws from the front panel tray**

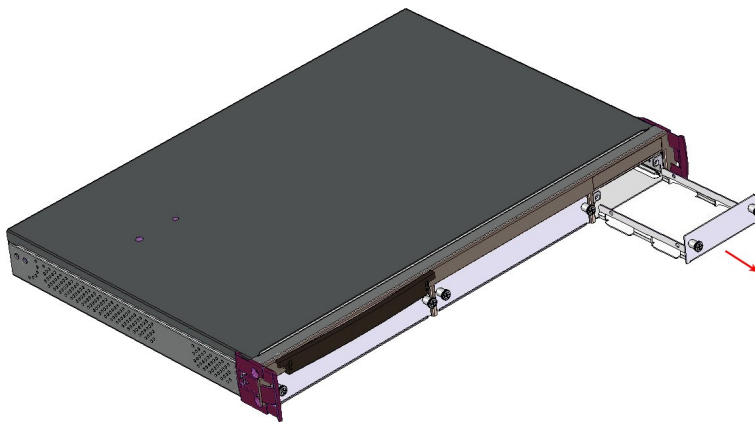(4) Once unscrewed, pull out the tray from the front panel slot.



*Fig. 23:* **Extracting the tray from the front panel**

(5) If the tray is attached, skip to the next step. Otherwise, once you have extracted the tray, place the hard disk in the correct position. Then fix the hard disk using the appropriate 4 screws, taking care not to damage it during the tightening process (red arrows).
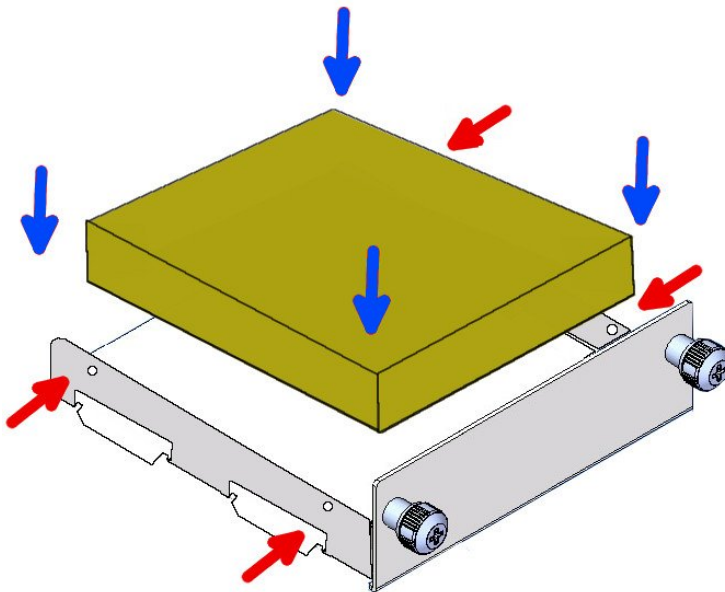
*Fig. 24:* **Placing the hard disk**

(6)   Finally, insert the tray into the device once again using the slot guides.
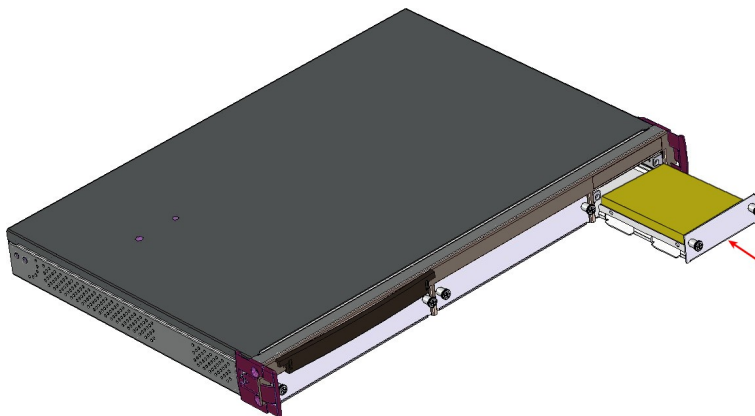


*Fig. 25:* **Inserting the hard disk**

(7)   Screw the tray to the device.



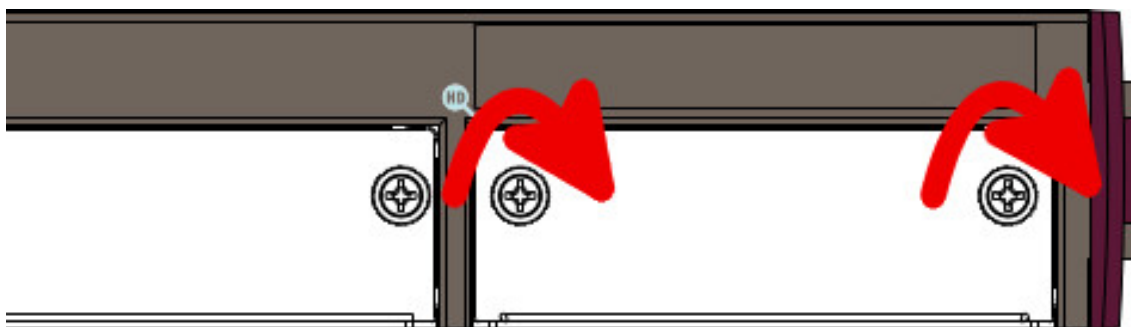*Fig. 26:* **Screw the tray to the front panel**

(8)   Connect the equipment as indicated in section 3.5.1.1 "Connecting". Connect the terminal to the console and check that the device detects the hard disk.

### 3.8.2  Procedure to install a flash memory expansion SD

To install an SD card, insert it into the SD tray as shown in the following figure:

*Fig. 27:* **Inserting SD card**

# Chapter 4  Compliance

## 4.1  Manufacturer information

| | |
| --- | --- |
| *Brand* | Teldat |
| *Manufacturer* | Teldat S.A. |
| *Country* | Spain |
| *Postal Address* | Isacc Newton, 10<br><br>Parque Tecnológico de Madrid, 28760<br><br>Tres Cantos, Madid, Spain |
| *International Phone* | +34 91 807 65 65 |

## 4.2  Safety warnings

| | |
| --- | --- |
| ⚠ | The electric current in power cables 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 11 and *Disconnecting* on page 11. |
| | Der elektrische Strom in Strom-, Telefon- und Datenkabeln ist gefährlich. Um Elektroschocks zu vermeiden, trennen Sie vor der Installation, der Bedienung oder dem Öffnen des Geräts die Kabel wie in den Abschnitten Verbinden und Trennen beschrieben. |
| | La tensión eléctrica de los cables de alimentación 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).<br><br>It is highly recommended that all data devices be connected to the same power source regardless of whether the workplace is provided with an uninterrupted power supply system (UPS), a regulated supply or is independent of other power supplies (such as lighting, etc.). This will help to avoid malfunctions and premature aging of the drivers and other components. |
| | Alle miteinander verbundenen Kommunikationsgeräte sollten mit der gleichen geerdeten Stromversorgung verbunden werden. Diese sollte von hoher Qualität sein (niedriger als 10 Ohm).<br><br>Unabhängig davon, ob der Arbeitsplatz über eine unterbrechungsfreie Stromversorgung (UPS) oder eine geregelte Versorgung verfügt oder unabhängig von der weitere Installation (z. B. Licht) ist – es wird dringend empfohlen, alle Geräte an die gleiche Spannungsversorgung anzuschließen. Dies beugt Problemen im Betrieb sowie Problemen der vorzeitigen Alterung von Komponenten vor. |
| | Todos los equipos de comunicaciones interconectados deberán estar unidos a UNA MISMA |

| | TOMA DE TIERRA 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. De esta forma se evitarán problemas de funcionamiento y envejecimiento prematuro de drivers y demás componentes. |
| ⚠️ | 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. |
| | Das Gerät ist für eine Montage durch Servicepersonal ausgelegt und darf nur von qualifiziertem Personal gehandhabt werden. Andernfalls kann es zur Beschädigung des Geräts und zu Fehlfunktionen kommen. |
| | 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. |
| ⚠️ | Laser Radiation. Do not view directly with optical instruments. CLASS 1 LASER PRODUCT<br><br>SFP modules to be installed in the card socket should be class 1 devices complying with standard IEC/EN 60950-1, IEC/EN 60825-1 and IEC/EN 60825-2, including any declared national differences. |
| | Laserstrahlung. Nicht direkt mit optischen Instrumenten hineinsehen. LASERPRODUKT DER KLASSE 1<br><br>SFP-Module, die im Kartenschacht installiert werden sollen, sollten Klasse-1-Geräte in Übereinstimmung mit IEC/EN 60825-1:2007 sein. |
| | Radiación laser. No mirar directamente con instrumentos ópticos. Producto LASER CLASE 1.<br><br>Los módulos SFP que se instalen en el socket de la tarjeta deben ser dispositivos de CLASE 1 que cumplan con las normas IEC/EN 60950-1, IEC/EN 60825-1 and IEC/EN 60825-2, incluidas las diferencias nacionales declaradas. |

## 4.3  WEEE information

| | The crossed-out wheelie bin symbol indicates that the device must be disposed of separately from normal domestic waste at the end of its useful service life. Please use an appropriate waste disposal facility.<br><br>Das auf dem Gerät befindliche Symbol mit dem durchgekreuzten Müllcontainer bedeutet, dass das Gerät am Ende der Nutzungsdauer bei den hierfür vorgesehenen Entsorgungsstellen getrennt vom normalen Hausmüll zu entsorgen ist.<br><br>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, this product and its delivered packaging do not contain chemical substances in concentration of more than 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 currently provided to consumers upon request.

## 4.5  EC declaration of conformity

| | |
|---|---|
| English (EN) | Hereby, Teldat S.A. declares that telecommunications equipment **Teldat Atlas-i70** complies with:<br><br>Directive 2014/30/EU (EMC)<br><br>Directive 2014/35/EU (LVD)<br><br>Directive 2009/125/EC (ErP)<br><br>Directive 2011/65/EU (RoHS)<br><br>of the European Parliament and of the Council. |
| German (DE) Deutsch | Hiermit erklärt Teldat S.A. die Übereinstimmung des Geräts **Teldat Atlas-i70** mit:<br><br>Richtlinie 2014/30/EU (EMC)<br><br>Richtlinie 2014/35/EU (LVD)<br><br>Richtlinie 2009/125/EG (ErP)<br><br>Richtlinie 2011/65/EU (RoHS)<br><br>des Europäischen Parlaments. |
| Spanish (ES) Español | Por la presente, Teldat S.A. declara que el tipo de equipo de telecomunicaciones **Teldat Atlas-i70** es conforme con:<br><br>Directiva 2014/30/UE (EMC)<br><br>Directiva 2014/35/UE (LVD)<br><br>Directiva 2009/125/CE (ErP)<br><br>Directiva 2011/65/UE (RoHS)<br><br>del Parlamento Europeo y del Consejo. |

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

http://www.teldat.com/conformity

## 4.6  CE marking

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

## 4.7  Laser product

Use only trained and qualified personnel to install or replace this device.

Chose SFP+ transceivers that meet the following regulations:

* Class 1
* Application of CE marking in accordance with the 2014/30/EU EMC and the 2014/35/EU Low Voltage Directives
* IEC/EN 60950-1, IEC/EN 60825-1 and IEC/EN 60825-2 European standard
* FCC 21 CFR Chapter 1, Subchapter J (in accordance with FDA and CDRH requirements)
* UL and/or CSA registered component for North America
* 47 CFR Part 15, Class A

# Appendix A  Technical Information

## A.1  Troubleshooting

The following table can help you resolve problems when installing the device. If you cannot resolve them, contact your dealer for further information.

| Symptom | Solution |
|---|---|
| None of the LEDs light up on the router. | Check the power supply to the router (power source, ON/OFF switch, main power outlet). |
| You have forgotten the router's access password. | Ignore the configuration through the RST button (as explained in the relevant section). |
| The *LAN Switch* LED never lights up in green. | Check the Ethernet cable and the connection to the network. Check that the appropriate license is available for use. |
| The *Eth WAN* LED never lights up in green. | Check the Ethernet cable and the connection to the network. |
| The *USB* LED never lights up in green. | Check that the device inserted in the USB connector is supported by the router. Please check the Teldat website http://www.teldat.com for a list of supported 3G USB modems. Check that the appropriate license is available for use. |

## A.2  Updating the software

The **Teldat Atlas-i70** router can be updated to new versions. Please contact your distributor for further details on new releases.

There are several 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 containing all the files needed to update your device, as well as in-depth information on the contents of the files.

## A.3  Connecting to the device

### A.3.1  Connecting using the local console (Aux connector)

The **Teldat Atlas-i70** router has a RJ45 female connector on the front panel (**Aux.**), which provides access to the device's local console.



*Fig. 30:* **Aux Connector**

To configure this, connect the  **Aux.** port to an asynchronous terminal (or to a PC with terminal emulation).

> **Note**
>
> The configuration for the terminal must be:
>
> - Speed: 9600 bps.
>
> - Eight data bits.
>
> - One stop bit.
>
> - No parity bit.
>
> - No type of flow control.

Connection to the configuration port is done through the the RJ45 connector cable, supplied with the device, and an RJ45 female-DB9 female adapter (also provided).
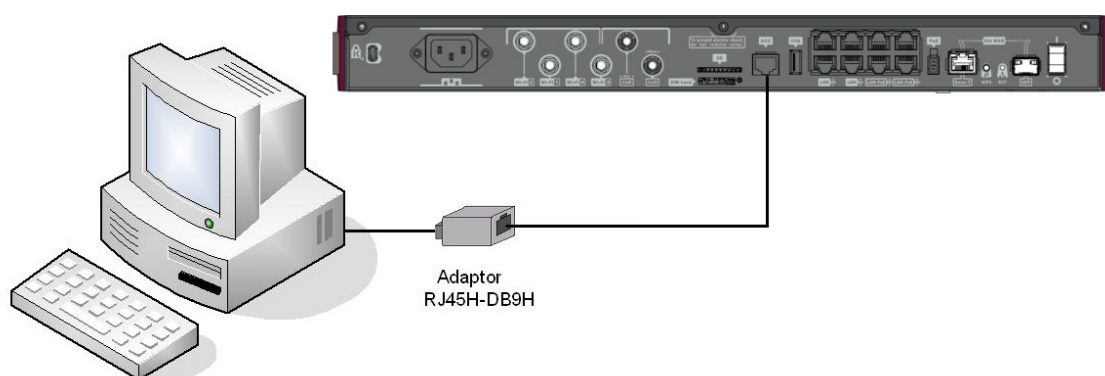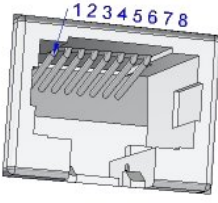


*Fig. 31:* **Connecting for Configuration**

## A.4  Connectors
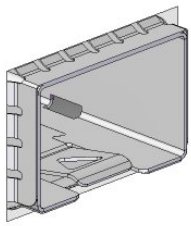
### A.4.1  LAN connector (switch)

| RJ45 LAN | RJ45 PIN | FE Signals | GE Signals |
|---|---|---|---|
|  | 1 | BI-DA+ [PoE+] | BI-DA+ |
| | 2 | BI-DA- [PoE+] | BI-DA- |
| | 3 | BI-DB+ [PoE-] | BI-DB+ |
| | 4 | -- | BI-DC+ |
| | 5 | -- | BI-DC- |
| | 6 | BI-DB- [PoE-] | BI-DB- |
| | 7 | -- | BI-DD+ |
| | 8 | -- | BI-DD- |
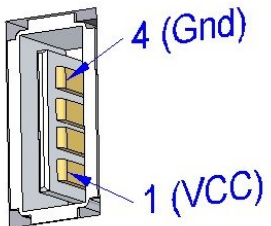
## A.4.2  WAN Base-T connector

| RJ45 WAN | 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- |
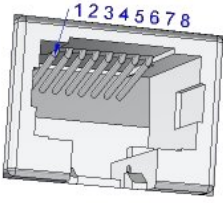
## A.4.3  WAN SFP connector

| SFP | |
|---|---|
| | Standard SFP connector |

## A.4.4  USB connector

| USB Type A | PIN | USB |
|---|---|---|
| | 1 | VCC |
| | 2 | DATA- |
| | 3 | DATA+ |
| | 4 | GND |
| | Shell | Shield |

### A.4.5  Configuration connector

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

## A.5  Technical specifications

### A.5.1  Hardware architecture

| PROCESSORS | Freescale QorIQ. |
|---|---|
| MEMORY | 1 Gbyte in SDRAM. |
| STORAGE UNIT | FLASH Memory (32 Mbytes). |

### A.5.2  LAN interface

| PROTOCOLS | Ethernet (802.3). |
|---|---|
| PORTS | 8-port switch managed with MDI/MDX auto-detection. |
| SPEED | 10/100/1000 Mbps (Base-T). |
| CONNECTOR | RJ45 female. |

### A.5.3  WAN Base-T interface

| STANDARDS | Ethernet (802.3). |
|---|---|
| SPEED | 10/100/1000 Mbps (Base-T). |
| CONNECTOR | RJ45 female. |

### A.5.4  WAN SFP interface

| | |
|---|---|
| STANDARDS | 802.1Q (VLAN).<br><br>1000-Base-X. |
| SPEED | 1000 Mbps full duplex. |
| TYPES | LX/LH (single-mode 1310 nm).<br><br>SX (multi-mode 850 nm).<br><br>ZX (single-mode 1550 nm). |
| CONNECTOR | Standard SFP connector. |

### A.5.5  USB interface

| | |
|---|---|
| 3G USB MODEMS | Please visit the Teldat website http://www.teldat.com for a list of supported 3G USB modems. |
| SPEED | The interface complies with the USB 2.0 (480 Mbps) standard; the end speed depends on the 3G USB modem used. |
| CONNECTOR | USB Type A. |

### A.5.6  Configuration interface

| | |
|---|---|
| LOCAL TERMINAL | RS-232 9600-8-N-1 without flow control. |
| CONNECTOR | RJ45 female on the device front panel. |

### A.5.7  Power supply

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

### A.5.8  Dimensions and weight

| | |
|---|---|
| TYPE | Desktop / chassis for a 1 U high Rack mount enclosure. |
| LENGTH x WIDTH x HEIGHT | 443 x 318 x 44 mm. |
| WEIGHT | 3.7 kg. |

## A.5.9  Environmental specifications

| | |
|---|---|
| TEMPERATURE | OPERATING NORMALLY: 0 ºC to 40 ºC.<br><br>STORED: -25 ºC to 70 ºC. |
| RELATIVE HUMIDITY | On: 5 % to 90 %. |