



## PMC 4 E1/T1 Expansion Card

Teldat-Dm 617

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This publication is subject to change.

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## Chapter 1 About This Guide

This installation guide contains the step by step instructions that you need to follow in order to correctly install, un-install and replace the PMC-4E1T1 expansion card in the ATLAS router family.

### 1.1 Supported Devices

The information contained in this installation guide only applies to the PMC-4E1T1 expansion card.

### 1.2 Warning and notes

Observe the warnings and instructions given in this manual to avoid and prevent injuries or damage during installation and maintenance. Please follow the security procedures and guidelines when working near electrical equipment. The warnings and notes are provided in each chapter as appropriate.

### 1.3 Who should read this manual?

This manual should be read by installers and network administrators who need to install, configure or maintain networks. This guide assumes that the installer is familiar with network electronics and technologies.

### 1.4 What is in this manual?

This installation guide contains the following information:

- A description of the general characteristics of the PMC-4E1T1 expansion card.
- A description of the steps to carry out to install the PMC-4E1T1 card in the ATLAS routers.
- A description of the PMC-4E1T1 expansion card LEDs and the pinouts for their connectors.

### 1.5 How is the information organized?

This document aims to provide all the information necessary for installing the PMC-4E1T1 expansion card in the ATLAS router family.

- PMC-4E1T1 expansion card characteristics.
- PMC-4E1T1 expansion card connectors.
- Requirements prior to installation.
- Installing the PMC-4E1T1 expansion card.

### 1.6 Technical Support

Teldat SA offers a technical support service.

Contact information:

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

Tel.: +34 918 076 565

Fax: +34 918 076 566

Email: [support@teldat.com](mailto:support@teldat.com)

## 1.7 Related documentation

ATLAS router family installation manuals.

Teldat-Dm605-I *PMC Expansion Cards ATLAS 60 Installation*.

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

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

## Chapter 2 PMC-4E1T1 expansion card

The E1/T1 card format is a 2 slot Standard PMC (card with 4 interfaces). The card is inserted into one of the free PCI slots in the router.

Its specifications are based on the following ITU-T recommendations:

- G.703 (PMD)
- G.704

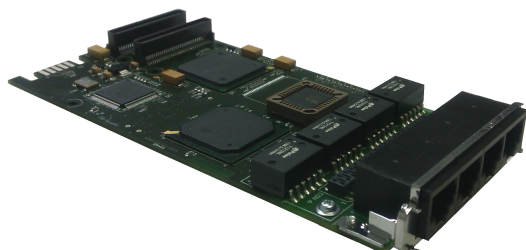


Fig. 1: PMC-4E1T1 Card

### 2.1 PMC-4E1T1 expansion card: Characteristics

The main characteristics of the PMC-4E1T1 expansion card are as follows:

#### PMC-4E1T1 Card: Characteristics

<b>Ports</b>	4 RJ-45 ports
<b>Standards</b>	ANSI <ul style="list-style-type: none"> <li>• T1. 403</li> </ul> ITU-T <ul style="list-style-type: none"> <li>• G.703 (2Mb unstructured)</li> <li>• G.704 (nx64Kb up to 2 Mb structured)</li> </ul>
<b>Speed</b>	<ul style="list-style-type: none"> <li>• 2 Mbps per E1 port</li> <li>• 1544 Kbps per T1 port</li> </ul>

### 2.2 PMC-4E1T1 expansion card: Connectors

Figure 2 shows the front board of the PMC-4E1T1 card:

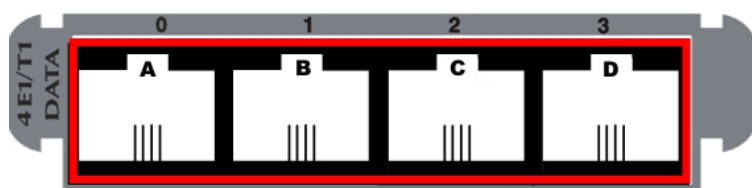


Fig. 2: Front of the PMC-4E1T1 Card

The front panel elements are as follows:

#### Elements Table for the Front of the PMC-4E1T1 Card

Item	Description
A, B, C, D	4 E1/T1 DATA. RJ-45 Connectors

## Chapter 3 Installing the PMC-4E1T1 expansion card

This chapter provides information on how to install and uninstall the PMC-4E1T1 expansion card in the ATLAS routers.

This information includes:

- Requirements prior to installation
- Installing or replacing a PMC-4E1T1 expansion card

### 3.1 Requirements prior to installation

In order to configure the card, you must have access to the ATLAS router through a console or a Telnet connection. For further information, please see the section on “Connecting for configuration” found in the ATLAS router family installation manuals.

### 3.2 Installing or replacing the PMC-4E1T1 expansion card

To install or replace a PMC-4E1T1 card, please see the PMC cards installation generic manual corresponding to the ATLAS router model where the installation is being carried out.



## Chapter 4 LEDs and connector Pinouts: Description

This chapter provides information on the PMC-4E1T1 expansion card LEDs and the connector pinouts.

### 4.1 PMC-4E1T1 expansion card: LEDs

The PMC-4E1T1 expansion card doesn't have any LEDs of its own.

### 4.2 Connector Pinouts

The following figure shows the RJ-45 connector pinouts, where the E1 port has an impedance of 120 Ohms and the T1 port one of 100 Ohms.

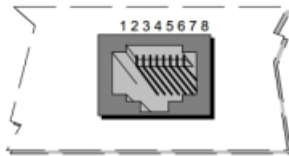


Fig. 3: RJ-45 connector Pinouts

Table 3 shows the information associated with each connector pinout:

#### RJ-45 Connector Pinouts

RJ-45 pinouts	Signal
1	Rx+
2	Rx-
3	--
4	Tx+
5	Tx-
6	--
7	--
8	--

The Tx signals are considered as outgoing and the Rx as incoming.

We recommend that you use a 26 AWG cable at the very least. This may be supplied with the card itself or described in the safety instructions.




#### Warning

To reduce the risk of fire, only use a 26 AWG cable or a cable with a larger diameter.

## Appendix A Regulatory compliance and safety information

### A.1 Translated Safety Warnings

	To reduce the risk of fire, only use a 26 AWG cable or a cable with a larger diameter.
	Чтобы снизить риск воспламенения, используйте только кабель 26 AWG или кабель большего диаметра.
	Pour réduire le risque d'incendie, utilisez uniquement un câble 26 AWG ou de diamètre plus grand.
	Para reducir el riesgo de incendio, utilice sólo un cable 26 AWG o de un diámetro mayor.

## A.2 Compliance

### A.2.1 FCC Statement

#### A.2.1.1 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 when the equipment is operated 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 interference, in which case the user will be required to correct the interference 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.

#### A.2.1.2 FCC Part 68 Notice

This equipment complies with Part 68 of the FCC rules and the requirements adopted by ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier of US: TLDDENANPMC-4E1T1. If requested, this number must be provided to the telephone company.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If you experience trouble with this equipment, you disconnect it from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning. Please follow instructions to repair your problem, if

there are any (e.g. battery replacement section); otherwise do not alternate or repair any parts of device except those specified.

If the telephone company requests information on what equipment is connected to their lines, inform them of:

- (a) The telephone number that this unit is connected to,
- (b) The ringer equivalence number [NAN]
- (c) The USOC jack required [RJ48C], and
- (d) The FCC Registration Number [TLD]

Items (b) and (d) are indicated on the label. The ringer equivalence number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the RENs of all devices on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

### A.2.1.3 Service Requirements

In the event of equipment malfunction, all repairs should be performed by our Company or an authorized agent. It is the responsibility of users requiring service to report the need for service to our Company or to one of our authorized agents. The contact information can be found at:

<http://www.part68.org/tteDetails.aspx?id=95553>

## A.2.2 IC Statement

### A.2.2.1 CAN ICES-3 (A)/NMB-3(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.*

### A.2.2.2 IC Notice

This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications.

Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

The Ringer Equivalence Number (REN) is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices does not exceed five.

L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'exécède pas cinq.