

TBC1-1SFP Expansion Card

bintec Dm620

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Warranty

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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 TBC1-1SFP expansion card in the bintec RM3000 / RM5000 / RM7000 routers.

1.1 Supported Devices

The information provided in this installation manual only applies to the TBC1-1SFP 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:

- Description of the general characteristics of the TBC1-1SFP expansion card.
- Description of the steps to carry out to install the TBC1-1SFP expansion card in the bintec RM3000 / RM5000 / RM7000 routers.
- Description of the TBC1-1SFP 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 TBC1-1SFP expansion card in the bintec RM3000 / RM5000 / RM7000 routers.

- TBC1-1SFP expansion card characteristics.
- TBC1-1SFP expansion card connectors.
- Requirements prior to installation.
- Installing the TBC1-1SFP expansion card.

1.6 Technical Support

bintec elmeg 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.bintec-elmeg.com>

Tel. No.: +49 - 911 - 9673 0

Fax: +49 - 911 - 688 0725

Email: support@bintec-elmeg.com

1.7 Related Documentation

bintec Dm569-I *bintec RM3000 Installation*.



Note

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 showing the front and back panels of the device are for information purposes only. Some small modifications may exist in the actual device.

Chapter 2 TBC1-1SFP expansion card

This manual focuses on the Gigabit Ethernet 1-port SFP card.

The TBC1-1SFP card (*Small Form-Factor Pluggable*) provides connectivity to a single Gigabit Ethernet device or to a network, permitting clients to use different SFPs for special requirements such as distance, cost, existing infrastructure or future expansions.



Fig. 1: TBC1-1SFP Card

2.1 TBC1-1SFP expansion card: Characteristics

The main characteristics of the TBC1-1SFP expansion card are as follows:

TBC1-1SFP Card: Characteristics

Port	1 SFP Gigabit Ethernet port
Standards	IEEE <ul style="list-style-type: none"> • 802.1Q (VLAN) • 1000 BASE-X
Types	<ul style="list-style-type: none"> • LX/LH (single-mode 1310 nm) • SX (multi-mode 850 nm) • ZX (single-mode 1550 nm)
Speed	<ul style="list-style-type: none"> • 1000 Mbps full duplex

2.2 TBC1-1SFP expansion card: Connectors

Figure 2 shows the front of the TBC1-1SFP card:



Fig. 2: Front of the TBC1-1SFP Card

The front elements are as follows:

Elements Table for the Front of the TBC1-1SFP Card

Item	Description
A	SFP Port
B	LEDs

SFP modules to be installed in the card socket should be class 1 devices complying with standard IEC-60825-1.

Chapter 3 Installing the TBC1-1SFP expansion card

This chapter provides information on how to install and uninstall the TBC1-1SFP expansion card in bintec RM3000 / RM5000 / RM7000 routers.

This information includes:

- Requirements prior to installation.
- Installing or replacing a TBC1-1SFP expansion card.

3.1 Requirements prior to installation

To configure the card, you must be able to access the bintec RM3000 / RM5000 / RM7000 router through a console or a Telnet connection. For further information, please see the *Connecting for configuration* section under the *bintec Dm569-I bintec RM3000 Installation* manual.

3.2 Installing or replacing the TBC1-1SFP expansion card

To install or replace a TBC1-1SFP card, please see the *Expansion Slot* section in the *bintec Dm569-I bintec RM3000 Installation* manual.

Chapter 4 LEDs and connector pinouts: Description

This chapter provides information on the TBC1-1SFP expansion card LEDs and connector pinouts.

4.1 TBC1-1SFP expansion card: LEDs

The TBC1-1SFP expansion card has two LEDs:



Fig. 3: TBC1-1SFP Card: LEDs

LEDs Table of the TBC1-1SFP Card

LED	Description
Yellow	Lights up when the link is established
Blue	Lights up when there is activity

4.2 Connector Pinouts


N/A

Chapter 5 Regulatory compliance and safety information


5.1 Manufacturer Information

<i>Brand</i>	bintec
<i>Manufacturer</i>	bintec elmeg
<i>Country</i>	Germany
<i>Postal Address</i>	Suedwestpark 94 90449 Nuremberg Germany
<i>International Phone</i>	+49 - 911 - 9673 0

5.2 Translated Safety Warnings

	SFP modules to be installed in the card socket should be class 1 devices complying with standard IEC-60825-1.
	SFP-Module, die im Kartenschacht installiert werden sollen, sollten Klasse-1-Geräte in Übereinstimmung mit IEC/EN 60825-1:2007 sein.
	Los módulos SFP que se instalan en el socket de la tarjeta deberían ser dispositivos de clase 1 de acuerdo con la norma IEC-60825-1.

5.3 WEEE Information

	<p>The waste container symbol with the >X< indicates that the device must be disposed of separately from normal domestic waste at an appropriate waste disposal facility at the end of its useful service life.</p> <p>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.</p> <p>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.</p>
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5.4 REACH

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

5.5 EC Declaration of Conformity

English (EN)	<p>This equipment is in compliance with the essential requirements and other relevant provisions of:</p> <p>Directive 2014/30/EU (EMC)</p> <p>Directive 2014/35/EU (LVD)</p> <p>Directive 2011/65/EU (RoHS)</p> <p>of the European Parliament</p>
Spanish (ES) Español	<p>Este dispositivo cumple con los requisitos esenciales y con las normas correspondientes de las siguientes directivas:</p> <p>Directiva 2014/30/UE (EMC)</p> <p>Directiva 2014/35/UE (LVD)</p> <p>Directiva 2011/65/UE (RoHS)</p> <p>del Parlamento Europeo</p>
German (DE) Deutsch	<p>Dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der</p> <p>Richtlinie 2014/30/UE (EMC)</p> <p>Richtlinie 2014/35/UE (LVD)</p> <p>Richtlinie 2011/65/UE (RoHS)</p> <p>des Europäischen Parlaments.</p>



Note

Directive 2014/30/EU (EMC) replaces Directive 2004/108/EC (EMC) on 20th April 2016

Directive 2014/35/EU (LVD) replaces Directive 2006/95/EC (LVD) on 20th April 2016

The EC declaration of conformity and additional product documentation can be accessed here: <http://www.bintec-elmeg.com>

5.6 CE Marking

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



5.7 FCC Statement

5.7.1 Federal Communications Commission Interference

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

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference through one of the following means:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

This device 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.

5.8 IC Statement

5.8.1 CAN ICES-3 (B)/NMB-3(B)

This digital apparatus does not exceed the Class B 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 B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par le ministère des Communications.