

TBC1-1POE

Installation Manual

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Legal Notice

Warranty

This publication is subject to change.

bintec elmeg offers no warranty whatsoever for information contained in this manual.

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Chapter 1 About This Manual

This installation guide contains step by step instructions on how to correctly install, uninstall and replace the **TBC1-1POE** expansion card in the bintec RM3000 router family.

1.1 Supported Devices

The information provided in this installation manual only applies to the **TBC1-1POE** 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 **TBC1-1POE** expansion card.
- A description of the steps to carry out in order to install the **TBC1-1POE** card in the bintec RM3000 routers.
- A description of the **TBC1-1POE** expansion card LEDs and connector pinouts.

1.5 How is the information organized?

This document aims to provide all the information necessary for installing the **TBC1-1POE** expansion card in the bintec RM3000 router family.

- **TBC1-1POE** expansion card characteristics.
- **TBC1-1POE** expansion card connector.
- Requirements prior to installation.
- Installing the **TBC1-1POE** 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 TBC1-1POE expansion card

This manual focuses on the **TBC1-1POE** expansion card.

The **TBC1-1POE** card (*GigabitEthernet PoE*) is designed to provide connectivity to a single Gigabit Ethernet device or to a network. This card also supplies up to 25W power to a bintec RM3000 router through its PoE (*Power over Ethernet*) capability.

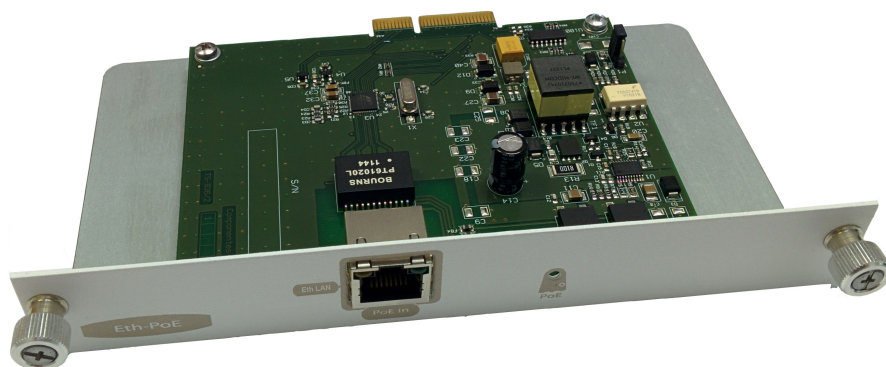


Fig. 1: TBC1-1POE card

2.1 TBC1-1POE expansion card: Characteristics

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

TBC1-1POE card: Characteristics

Ports	One RJ45 Gigabit Ethernet PoE port.
Standards	IEEE <ul style="list-style-type: none"> • 802.3at class 4 (PoE). • 802.1Q (VLAN). • 1000-BaseT.
Speed	10/100/1000 Mbps full duplex.

2.2 TBC1-1POE expansion card: Connector

Figure 2 shows the front board of the **TBC1-1POE** card:



Fig. 2: Front of the TBC1-1POE card

The front board elements are as follows:

Elements table for the front of the TBC1-1POE card

Item	Description
A	RJ-45 Connector.

Chapter 3 Installing the TBC1-1POE expansion card

This chapter provides information on how to install and uninstall the **TBC1-1POE** expansion card in the bintec RM3000 routers.

This information includes:

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

3.1 Requirements prior to installation

To configure the card, you must be able to access the bintec RM3000 router through a console or a Telnet connection. For further information, please see the *Connection for Configuration* section in the *bintec Dm569-I bintec RM3000 Installation* manual.

3.2 Installing or replacing the TBC1-1POE expansion card.

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

Chapter 4 LEDs and connector pinouts: Description

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

4.1 TBC1-1POE expansion card: LEDs

The **TBC1-1POE** expansion card for the bintec RM3000 routers has one LED in the front board and two LEDs in the RJ45 connector.

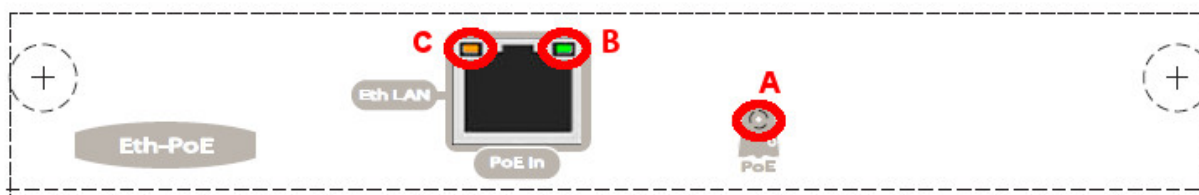


Fig. 3: TBC1-1POE card for bintec RM3000: LEDs

LEDs table of the TBC1-1POE card for bintec RM3000

LED	Description	Status
A	PoE status	Off: <ul style="list-style-type: none"> The device is not powered via PoE. On: <ul style="list-style-type: none"> The device is powered via PoE.
B and C	Ethernet connection speed	10Mbps: <ul style="list-style-type: none"> Green(B): Off Yellow(C): On 100Mbps: <ul style="list-style-type: none"> Green(B): On Yellow(C): On 1000Mbps: <ul style="list-style-type: none"> Green(B): On Yellow(C): Off

4.2 Connector pinouts

The **TBC1-1POE** expansion card has one RJ-45 connector.

4.2.1 RJ-45 Connector

The following figure shows the RJ-45 connector pinouts.

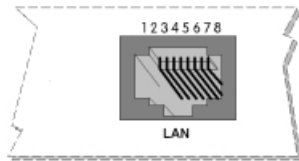


Fig. 4: RJ-45 Connector Pinouts

The following table displays the information associated to each connector pinout:

TBC1-1POE card Connector Pinouts

RJ-45 pinouts	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-

The following table displays the PoE features of the **TBC1-1POE** card.

TBC1-1POE card PoE features

Power management	802.3at class 4.
Pinout	The powered device can operate in modes: <ul style="list-style-type: none"> • Pinouts 1-2 and 3-6 (mode A). • Pinouts 4-5 and 7-8 (mode B).
Input voltage range at the TBC1-1POE card	42,5 - 57V



Note

For the device to operate properly, it is necessary to connect an 802.3 at PoE injector to the **TBC1-1POE** card.

Chapter 5 Compliance

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 WEEE Information



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

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.

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.

5.3 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.

5.4 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>

5.5 CE Marking

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

