

## How to Use This Guide

Use this guide to quickly set up your Enterasys® K-Series fabric card.

For complete installation instructions, information about the K-Series fabric cards, specifications, and safety warnings, see the *Enterasys K-Series Chassis Hardware Installation Guide* for your K-Series chassis at <https://extranet.enterasys.com/downloads>.

## Installing K-Series Fabric Cards

**Electrical Hazard:** Only qualified personnel should perform installation procedures.

You must install a fabric card for the K-Series chassis to be operational.

### Handling a K-Series Fabric Card

**Caution:** The K-Series fabric cards are easily damaged by electrostatic discharge.

To prevent electrostatic damage, observe the following guidelines:

- Remove the K-Series fabric card from its packaging only when ready to install it.
- Do not touch the fabric card's pins, connectors, or components.
- Hold the fabric card by its edges or front panel only.
- Wear a grounded, anti-static wrist strap when handling the fabric card.
- Store or transport the fabric card only in anti-static packaging.

### Required Tools

This installation requires the following tools:

- Anti-static wrist strap
- Phillips screwdriver

### Fabric Card Installation Procedure

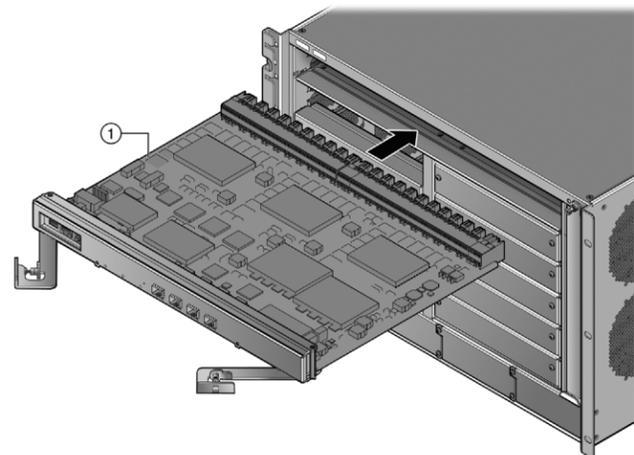
**Caution:** Before installing a K-Series fabric card, ensure that you are properly grounded to avoid electrostatic discharge. However, since you can hotswap the line card, the K-Series chassis will continue running.

To install a K-Series fabric card:

- Attach the anti-static wrist strap. Refer to the instructions on the anti-static wrist strap package.
- Open the ejector handles of the fabric card.
 

The open position is approximately a 45° angle away from the fabric card faceplate. The ejector handles must be open when inserting the fabric card to allow the fabric card to be installed properly.
- Gently slide the fabric card into the slot until the fabric card engages the connector on the backplane. See [Figure 1](#).

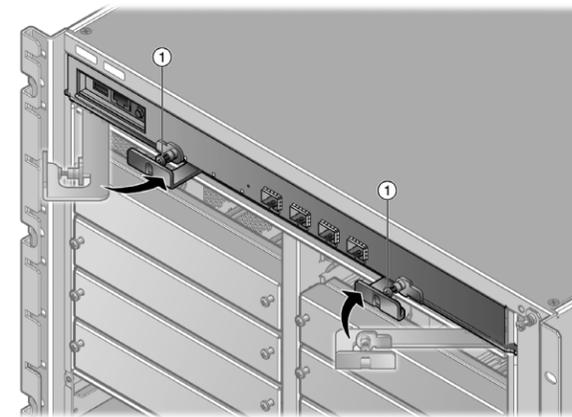
**Figure 1** Inserting a Fabric Card into the Chassis



1 Fabric card

- Push the ejector handles toward the center of the fabric card, as shown in [Figure 2](#), until the fabric card locks into place and is flush with the chassis.

**Figure 2** Engaging Ejector Handles



- Tighten the fabric card's captive screws.

You can now connect to the fabric card's COM port. For more information, see the *Hardware Installation Guide* for your K-Series chassis at <https://extranet.enterasys.com/downloads>.

### Initial and Port Configuration CLI Commands

For initial configuration and port configuration CLI commands, refer to the *Enterasys K-Series CLI Reference Guide* at <https://extranet.enterasys.com/downloads>.

### Using the USB Port

The USB port on the fabric card allows you to use a USB drive to upgrade the chassis and upload and download files, such as configuration files and firmware images.

### Installing SFP+ Pluggable Transceivers

**Warning:** Fiber-optic SFP+ ports use Class 1 lasers. Do not use optical instruments to view the laser output. The use of optical instruments to view laser output increases eye hazard. When viewing the output optical port, power must be removed from the network adapter.

This installation procedure applies to all SFP+ transceivers. To install an SFP+ transceiver in a K-Series fabric card:

- Attach the anti-static wrist strap. Refer to the instructions on the anti-static wrist strap package.
- Remove the SFP+ from the packaging.
 

If there is a protective dust cover in the SFP+ connector, DO NOT remove it at this time.
- Hold the SFP+ transceiver so that the connector will seat properly.
- Carefully align the SFP+ with the port slot.
- Push the SFP+ into the port slot until the transceiver clicks and locks into place.

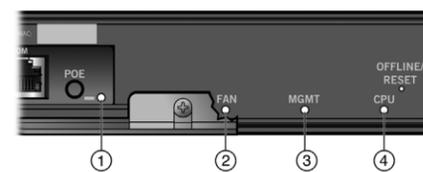
### SFP+ Fiber-Optic Specifications

For SFP+ transceiver specifications, refer to the datasheet at <http://www.enterasys.com/company/literature/transceivers-ds.pdf>.

### LEDs

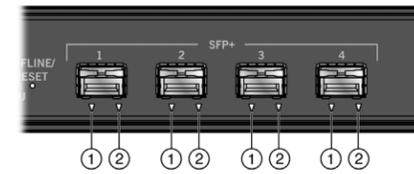
The K-Series fabric cards provide LEDs for the fabric card and SFP+ ports, as shown in [Figure 3](#) and [Figure 4](#).

**Figure 3** Fabric Card LEDs



1 POE LED 2 FAN LED 3 MGMT LED 4 CPU LED

**Figure 4** Fabric Card SFP+ Port LEDs



1 SFP+ RX LED

2 SFP+ TX LED

[Table 1](#) describes the fabric card LED indications. [Table 2](#) describes the SFP+ port LED indications.

**Table 1** Fabric Card LEDs

LED	Activity	Status
POE	Green	The RJ45 port LEDs are in PoE mode. You can switch to or from RX/TX mode by pressing the red POE button next to the POE LED.
	None	The RJ45 port LEDs are in RX/TX mode. You can switch to or from RX/TX mode by pressing the red POE button next to the POE LED.
FAN	None	Fan tray is off or booting up.
	Green	All fans in the fan tray are operating normally.
	Amber	One fan in the fan tray has failed. If a fan in the fan tray fails, you must replace the fan tray as soon as possible to ensure the proper and continued operation of the chassis.
	Red	One or more of the following conditions has occurred: <ul style="list-style-type: none"> <li>Temperature is out of range.</li> <li>The fan controller has failed.</li> <li>Two or more fans have failed.</li> </ul>
MGMT	Green	<b>Solid.</b> The fabric card is operating properly.
	Amber	<b>Blinking.</b> The fabric card is saving data.
CPU	Off	Power off.
	Amber	<b>Blinking.</b> Device in bootup process. <b>Solid.</b> Testing.
	Green	<b>Blinking.</b> Image starts running. <b>Solid.</b> Functional.
	Red	<b>Solid.</b> Processor in reset.
	Green and Amber	<b>Blinking.</b> The fabric card is shutting down.
	Amber and off	<b>Alternating (67% on, 33% off).</b> Shutdown is complete. The indication will hold for 60 seconds then automatically restart.

**Table 2** SFP+ Port LEDs

LED	Activity	Status
RX (Receive)	None	No link. No activity. Port enabled or disabled.
	Green	<b>Solid.</b> Link present, port enabled, no traffic is being received by the interface.
	Yellow	<b>Blinking.</b> Link present, port enabled, traffic is being received by the interface.
TX (Transmit)	None	Port enabled, but no activity.
	Green	<b>Blinking.</b> Indicates data transmission activity. Flashing frequency indicates the data rate.
	Yellow	<b>Solid.</b> Fault or error (collision).

### Fabric Card Specifications

Refer to the data sheet for the specifications of the currently available K-Series fabric cards:

<http://www.enterasys.com/company/literature/k-ds.pdf>

### Temperature and Humidity

Operating: 5° to 45°C (41° to 113°F)

Storage: -30° to 73°C (-22° to 164°F)

Operating relative humidity: 5% to 90% (non-condensing)

## Getting Help

For additional support related to K-Series fabric cards or this document, contact Enterasys Networks using one of the following methods:

<b>World Wide Web</b>	<a href="http://www.enterasys.com/support">http://www.enterasys.com/support</a>
<b>Phone</b>	1-800-872-8440 (toll-free in U.S. and Canada) or 1-978-684-1888 For the Enterasys Networks Support toll-free number in your country: <a href="http://www.enterasys.com/support">http://www.enterasys.com/support</a>
<b>Email</b>	<a href="mailto:support@enterasys.com">support@enterasys.com</a> To expedite your message, type <b>[K-Series]</b> in the subject field of your message.
<b>The latest image, release notes, and more documentation</b>	<a href="https://extranet.enterasys.com/downloads">https://extranet.enterasys.com/downloads</a>

**Before contacting Enterasys Networks for technical support, have the following information ready:**

- Your Enterasys Networks service contract number
- A description of the failure
- A description of any action(s) taken to resolve the problem (for example, changing mode switches, rebooting the unit)
- The serial and revision numbers of all involved Enterasys Networks products in the network
- A description of your network environment (layout, cable type, etc.)
- Network load and frame size at the time of trouble (if known)
- The device history (for example, have you returned the device before, is this a recurring problem?)
- Any previous Return Material Authorization (RMA) numbers

### Related Documents

Documentation URL: <https://extranet.enterasys.com/downloads>

### Warranty

Be sure to register your product for warranty support at:

[www.enterasys.com/support/register-your-product.aspx](http://www.enterasys.com/support/register-your-product.aspx)

Warranty information for the K-Series fabric cards is located online at:

[www.enterasys.com/support/warranty.aspx](http://www.enterasys.com/support/warranty.aspx)

[www.enterasys.com/company/literature/enterasys-lw-ds.pdf](http://www.enterasys.com/company/literature/enterasys-lw-ds.pdf)

## Notice

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The hardware, firmware, or software described in this manual is subject to change without notice.

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## Regulatory Compliance Information

### Federal Communications Commission (FCC) Notice

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.

**NOTE:** 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 uses, generates, and can radiate radio frequency energy and if not installed in accordance with the operator's manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.

**WARNING:** Changes or modifications made to this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### Industry Canada Notice

This digital apparatus does not exceed the class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

### Class A ITE Notice

**WARNING:** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### Clase A. Aviso de ITE

**ADVERTENCIA:** Este es un producto de Clase A. En un ambiente doméstico este producto puede causar interferencia de radio en cuyo caso puede ser requerido tomar medidas adecuadas.

### Product Safety

This product complies with the following: UL 60950, CSA C22.2 No. 60950, 2006/95/EC, EN 60950, IEC 60950, EN 60825, 21 CFR 1040.10.

### Seguridad del Producto

El producto de Enterasys cumple con lo siguiente: UL 60950, CSA C22.2 No. 60950, 2006/95/EC, EN 60950, IEC 60950, EN 60825, 21 CFR 1040.10.

### Produktsicherheit

Dieses Produkt entspricht den folgenden Richtlinien: UL 60950, CSA C22.2 No. 60950, 2006/95/EC, EN 60950, IEC 60950, EN 60825, 21 CFR 1040.10.

### Electromagnetic Compatibility (EMC)

This product complies with the following: 47 CFR Parts 2 and 15, CSA C108.8, 2004/108/EC, EN 55022, EN 61000-3-2, EN 61000-3-3, EN 55024, AS/NZS CISPR 22, and VCCI V-3.

### Compatibilidad Electromagnética (EMC)

Este producto de Enterasys cumple con lo siguiente: 47 CFR Partes 2 y 15, CSA C108.8, 2004/108/EC, EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3, AS/NZS CISPR 22, VCCI V-3.

### Elektro-magnetische Kompatibilität (EMC)

Dieses Produkt entspricht den folgenden Richtlinien: 47 CFR Parts 2 and 15, CSA C108.8, 2004/108/EC, EN 55022, EN 61000-3-2, EN 61000-3-3, EN 55024, AS/NZS CISPR 22, VCCI V-3.

### VCCI Notice

This is a class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

### BSMI EMC Statement — Taiwan

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

警告使用者：

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

### AS/NZS CISPR 22



### Hazardous Substances

This product complies with the requirements of European Directive, 2002/95/EC, Restriction of Hazardous Substances (RoHS) in Electrical and Electronic Equipment.

### European Waste Electrical and Electronic Equipment (WEEE) Notice



In accordance with Directive 2002/96/EC of the European Parliament on waste electrical and electronic equipment (WEEE):

- The symbol above indicates that separate collection of electrical and electronic equipment is required and that this product was placed on the European market after August 13, 2005, the date of enforcement for Directive 2002/96/EC.
- When this product has reached the end of its serviceable life, it cannot be disposed of as unsorted municipal waste. It must be collected and treated separately.
- It has been determined by the European Parliament that there are potential negative effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment.
- It is the users' responsibility to utilize the available collection system to ensure WEEE is properly treated. For information about the available collection system, please go to [www.enterasys.com/services/support/](http://www.enterasys.com/services/support/) or contact Enterasys Customer Support at 353 61 705586 (Ireland).

## 产品说明书附件

### Supplement to Product Instructions

部件名称 (Parts)	有毒有害物质或元素 (Hazardous Substance)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr <sup>VI</sup> )	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属部件 (Metal Parts)	×	○	○	×	○	○
电路模块 (Circuit Modules)	×	○	○	×	○	○
电缆及电缆组件 (Cables & Cable Assemblies)	×	○	○	×	○	○
塑料和聚合物部件 (Plastic and Polymeric parts)	○	○	○	○	○	×
电路开关 (Circuit Breakers)	○	○	×	×	○	○
○：表示该有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。 Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T 11363-2006 standard.						
×：表示该有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。 Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T 11363-2006 standard.						
对销售之目的所售产品，本表显示，凯创供应链的电子产品信息可能包含这些物质。注意：在所售产品中可能会也可能不会含有所有所列的部件。 This table shows where these substances may be found in the supply chain of Enterasys' electronic information products, as of the date of sale of the enclosed product. Note that some of the component types listed above may or may not be a part of the enclosed product.						

除非另外特别的标注，此标志为针对所涉及产品的环保使用期标志。某些零部件会有一个不同的环保使用期(例如，电池单元模块)贴在其产品上。  
此环保使用期限只适用于产品是在产品手册中所规定的条件下工作。  
The Environmentally Friendly Use Period (EFUP) for all enclosed products and their parts are per the symbol shown here, unless otherwise marked. Certain parts may have a different EFUP (for example, battery modules) and so are marked to reflect such. The Environmentally Friendly Use Period is valid only when the product is operated under the conditions defined in the product manual.



## Safety Information Class 1 Laser Transceivers

The single mode interface modules use Class 1 laser transceivers.

Read the following safety information before installing or operating these modules.

The Class 1 laser transceivers use an optical feedback loop to maintain Class 1 operation limits. This control loop eliminates the need for maintenance checks or adjustments. The output is factory set, and does not allow any user adjustment. Class 1 Laser transceivers comply with the following safety standards:

- 21 CFR 1040.10 and 1040.11 U.S. Department of Health and Human Services (FDA).
- IEC Publication 825 (International Electrotechnical Commission).
- CENELEC EN 60825 (European Committee for Electrotechnical Standardization).

When operating within their performance limitations, laser transceiver output meets the Class 1 accessible emission limit of all three standards. Class 1 levels of laser radiation are not considered hazardous.

When the connector is in place, all laser radiation remains within the fiber. The maximum amount of radiant power exiting the fiber (under normal conditions) is -12.6 dBm or 55 x 10<sup>-6</sup> watts.

Removing the optical connector from the transceiver allows laser radiation to emit directly from the optical port. The maximum radiance from the optical port (under worst case conditions) is 0.8 W cm<sup>-2</sup> or 8 x 10<sup>3</sup> W m<sup>2</sup> sr<sup>-1</sup>.

**Do not use optical instruments to view the laser output. The use of optical instruments to view laser output increases eye hazard. When viewing the output optical port, power must be removed from the network adapter.**

### Safety Compliance

Warning: Fiber Optic Port Safety



When using a fiber optic media expansion module, never look at the transmit laser while it is powered on. Also, never look directly at the fiber TX port and fiber cable ends when they are powered on.

Avertissement: Ports pour fibres optiques - sécurité sur le plan optique



Ne regardez jamais le laser tant qu'il est sous tension. Ne regardez jamais directement le port TX (Transmission) à fibres optiques et les embouts de câbles à fibres optiques tant qu'ils sont sous tension.

Warnhinweis: Faseroptikanschlüsse - Optische Sicherheit



Niemals ein Übertragungslaser betrachten, während dieses eingeschaltet ist. Niemals direkt auf den Faser-TX-Anschluß und auf die Faserkabelenden schauen, während diese eingeschaltet sind.

### Declaration of Conformity

Application of Council Directive(s): 2004/108/EC  
2006/95/EC  
Manufacturer's Name: Enterasys Networks, Inc.  
Manufacturer's Address: 50 Minuteman Road  
Andover, MA 01810  
USA  
European Representative Name: Enterasys Networks Limited  
European Representative Address: Nexus House, Newbury Business Park  
London Road, Newbury  
Berkshire RG14 2PZ, England  
Conformance to Directive(s)/Product Standards: EC Directive 2004/108/EC  
EN55022:2006  
EN 55024:1998  
A1:2001  
A2:2003  
EN 61000-3-2:2006  
EN 61000-3-3:1995  
A1:2001  
A2:2005  
EC Directive 2006/95/EC  
EN 60950-1:2006  
A11:2009  
A1:2010  
EN 60825-1:2007  
EN 60825-2:2004  
A1:2007  
Equipment Type/Environment: Information Technology Equipment,  
for use in a Commercial  
or Light Industrial Environment.

Enterasys Networks, Inc. declares that the equipment packaged with this notice conforms to the above directives.

