

US Power Supply

LMC250A
LMC250-LH
LMC250A-ST
LMC250A-ST-LH
LMC250A-SC-LH
LMC251A-ST
LMC251A-ST-LH
LMC251A-SC-LH
LMC252A-ST
LMC252A-SC
LMC253A-ST
LMC253A-SC

Int'l Power Supply

LMC250AE
LMC250AE-LH
LMC250AE-ST
LMC250AE-ST-LH
LMC250AE-SC-LH
LMC251AE-ST
LMC251AE-ST-LH
LMC251AE-SC-LH
LMC252AE-ST
LMC252AE-SC
LMC253AE-ST
LMC253AE-SC

FlexPoint™ 100FF

CUSTOMER SUPPORT INFORMATION
Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call 724-746-5500)
FREE technical support 24 hours a day, 7 days a week; Call 724-746-5500 or fax 724-746-0746
Mailing address: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018
Web site: www.blackbox.com
E-mail: info@blackbox.com

LED Indicators:

LED	Color	Description
Power:	Yellow	Power applied
Link/Receive:	Green	Link / data received

Supported Distances:

Ethernet & Token Ring

Multimode:	5km/16,400ft.	
Single-mode:	20km/66,000ft.	
Fast Ethernet	Half-Duplex	Full-Duplex
Multimode 850nm:	412m/1,350ft.	500m/1640ft.
Multimode 1300nm:	412m/1,350ft.	5Km/3.1mi.
Single-mode:	412m/1,350ft.	28Km/16.8mi.
Single-mode LH:	412m/1,350ft.	58Km/36mi.

Dimensions / Weight: W:3.0"xD:4.0"xH:1.0" / 6oz.

Power: 9VDC/500mA or 5VDC/750mA

Temperature: 0 to 40 degrees C

Humidity: 0-90% (non-condensing)

Overview and Description:

The FlexPoint™ Fiber to Fiber Converter converts between single-mode and multimode fiber cable. It operates in half duplex (HD) or full duplex (FD). The following models are described here:

Model #	Fiber Type	Port 1 Dist	Port 2 Dist
LMC250A	SM/MM,SC	5km/16404ft.	28km/17.4mi.
LMC250A-LH	SM/MM,SC	5km/16404ft.	58km/36mi.
LMC250A-ST	SM/MM,ST	5km/16404ft.	28km/17.4mi.
LMC250A-ST-LH	SM/MM,ST	5km/16404ft.	58km/36mi.
LMC250A-SC-LH	SM/MM,SC	5km/16404ft.	58km/36mi.
LMC251A-ST	SM/MM,ST	500m/1640ft.	28km/17.4mi.
LMC251A-ST-LH	SM/MM,ST	500m/1640ft.	58km/36mi.
LMC251A-SC-LH	SM/MM,SC	500m/1640ft.	58km/36mi.
LMC252A-ST	MM/MM,ST	500m/1640ft.	28km/17.4mi.
LMC252A-SC	MM/MM,SC	500m/1640ft.	28km/17.4mi.
LMC253A-ST	MM/MM,ST	500m/1640ft.	5km/16404ft.
LMC253A-SC	MM/MM,SC	500m/1640ft.	5km/16404ft.
LMC250AE	SM/MM,SC	5km/16404ft.	28km/17.4mi.
LMC250AE-LH	SM/MM,SC	5km/16404ft.	58km/36mi.
LMC250AE-ST	SM/MM,ST	5km/16404ft.	28km/17.4mi.
LMC250AE-ST-LH	SM/MM,ST	5km/16404ft.	58km/36mi.
LMC250AE-SC-LH	SM/MM,SC	5km/16404ft.	58km/36mi.
LMC251AE-ST	SM/MM,ST	500m/1640ft.	28km/17.4mi.
LMC251AE-ST-LH	SM/MM,ST	500m/1640ft.	58km/36mi.
LMC251AE-SC-LH	SM/MM,SC	500m/1640ft.	58km/36mi.
LMC252AE-ST	MM/MM,ST	500m/1640ft.	28km/17.4mi.
LMC252AE-SC	MM/MM,SC	500m/1640ft.	28km/17.4mi.
LMC253AE-ST	MM/MM,ST	500m/1640ft.	5km/16404ft.
LMC253AE-SC	MM/MM,SC	500m/1640ft.	5km/16404ft.

Note: Distances shown are maximum and will vary depending on your specific model number.

TRADEMARKS

All applied-for and registered trademarks are the property of their respective owners.

FEDERAL COMMUNICATIONS COMMISSION AND CANADIAN DEPARTMENT OF COMMUNICATIONS RADIO FREQUENCY INTERFERENCE STATEMENTS

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to be cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation 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 classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par le ministère des Communications du Canada.

Installation and Configuration:

Power Adapter Notice:

- When used with an external power adapter, this product is intended to be and must be used only with a Listed Direct Plug-In Power Unit marked "Class 2" and rated at 9VDC, 1 Amp.
- This product should only be used with the supplied power unit.
- Models shipped with international power supplies are capable of auto switching from 100-230V, and are supplied with a U.S. type NEMA 5-15 power cable.
- For products being shipped outside of the U.S., the user is required to install a properly grounded IEC 320-appliance cable with a minimum rating of 10 AMPs.
- User-supplied cables must meet the required safety agency approvals, applicable international standards and electrical ratings for the region.

WARNING!
Before inserting the Power Adapter, verify that the power on the unit is appropriate for your AC line voltage source.

Mounting instructions:

The FlexPoint Fiber Converter can be solo-mounted using a wall-mounting kit, or rack-mounted using a 5-Unit shelf, or a high-density FlexPoint 14-Unit Power-Redundant Chassis.

Cable Attachment for SM to MM Converters:

Attach the FlexPoint Fiber Converter via a multimode cable to a multimode device. Ensure that the fiber cable is attached to the connector labeled "MM Fiber" on the converter. The FlexPoint transmit (Tx) must

attach to the receive side on other device; the receive (Rx) must attach to the transmit.

Attach the FlexPoint Fiber Converter via single-mode cable to a single-mode device. Ensure that the fiber cable is attached to the connector labeled "SM Fiber" on the converter. The FlexPoint transmit (Tx) must attach to the receive side on other device; the receive (Rx) must attach to the transmit.

Cable Attachment for MM to MM Converters:

MM Connector

Attach the FlexPoint Fiber Converter via a 850 nm multimode cable to a multimode device. *Ensure that the 850 nm fiber cable is attached to the Connector labeled "MM Fiber" on the converter.* The FlexPoint transmit (Tx) must attach to the receive side on other device; the receive (Rx) must attach to the transmit.

SM Connector

Attach the FlexPoint Fiber Converter via a 1300 nm multimode cable to a multimode device. *Ensure that the 1300 nm fiber cable is attached to the connector labeled "SM Fiber" on the converter.* The FlexPoint transmit (Tx) must attach to the receive side on other device; the receive (Rx) must attach to the transmit.

100FF Auto-Negotiation:

The FlexPoint 100FF automatically selects full or half-duplex operation depending on the features of the device connected to the media converter.

NORMAS OFICIALES MEXICANAS (NOM)

ELECTRICAL SAFETY STATEMENT

- Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
- Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
- Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
- Todas las instrucciones de operación y uso deben ser seguidas.
- El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
- El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
- El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
- Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
- El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
- El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
- El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

- Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
- Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
- El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
- En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
- El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
- Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
- Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

LED Indicators:

LED	Color	Description
Power:	Yellow	Power applied
Link/Receive:	Green	Link / data received

Supported Distances:

Ethernet & Token Ring

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Temperature: 0 to 40 degrees C

Humidity: 0-90% (non-condensing)

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FEDERAL COMMUNICATIONS COMMISSION AND CANADIAN DEPARTMENT OF COMMUNICATIONS RADIO FREQUENCY INTERFERENCE STATEMENTS

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to be cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation 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 classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par le ministère des Communications du Canada.

NORMAS OFICIALES MEXICANAS (NOM)

ELECTRICAL SAFETY STATEMENT

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedelstales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precación debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparto ha sido tirado o su cubierta ha sido dañada.

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Black Box Corporation
The World's Source for Cabling and Network Connectivity™

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Overview and Description:

The FlexPoint™ Fiber to Fiber Converter converts between single-mode and multimode fiber cable. It operates in half duplex (HD) or full duplex (FD). The following models are described here:

Model #	Fiber Type	Port 1 Dist	Port 2 Dist
LMC250A	SM/MM,SC	5km/16404ft.	28km/17.4mi.
LMC250A-LH	SM/MM,SC	5km/16404ft.	58km/36mi.
LMC250A-ST	SM/MM,ST	5km/16404ft.	28km/17.4mi.
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LMC252A-ST	MM/MM,ST	500m/1640ft.	28km/17.4mi.
LMC252A-SC	MM/MM,SC	500m/1640ft.	28km/17.4mi.
LMC253A-ST	MM/MM,ST	500m/1640ft.	5km/16404ft.
LMC253A-SC	MM/MM,SC	500m/1640ft.	5km/16404ft.
LMC250AE	SM/MM,SC	5km/16404ft.	28km/17.4mi.
LMC250AE-LH	SM/MM,SC	5km/16404ft.	58km/36mi.
LMC250AE-ST	SM/MM,ST	5km/16404ft.	28km/17.4mi.
LMC250AE-ST-LH	SM/MM,ST	5km/16404ft.	58km/36mi.
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LMC252AE-ST	MM/MM,ST	500m/1640ft.	28km/17.4mi.
LMC252AE-SC	MM/MM,SC	500m/1640ft.	28km/17.4mi.
LMC253AE-ST	MM/MM,ST	500m/1640ft.	5km/16404ft.
LMC253AE-SC	MM/MM,SC	500m/1640ft.	5km/16404ft.

Note: Distances shown are maximum and will vary depending on your specific model number.

Installation and Configuration:

Power Adapter Notice:

1. When used with an external power adapter, this product is intended to be and must be used only with a Listed Direct Plug-In Power Unit marked "Class 2" and rated at 9VDC, 1 Amp.
2. This product should only be used with the supplied power unit.
3. Models shipped with international power supplies are capable of auto switching from 100-230V, and are supplied with a U.S. type NEMA 5-15 power cable.
4. For products being shipped outside of the U.S., the user is required to install a properly grounded IEC 320-appliance cable with a minimum rating of 10 AMPs.
5. User-supplied cables must meet the required safety agency approvals, applicable international standards and electrical ratings for the region.

WARNING!

Before inserting the Power Adapter, verify that the power on the unit is appropriate for your AC line voltage source.

Mounting instructions:

The FlexPoint Fiber Converter can be solo-mounted using a wall-mounting kit, or rack-mounted using a 5-Unit shelf, or a high-density FlexPoint 14-Unit Power-Redundant Chassis.

Cable Attachment for SM to MM Converters:

Attach the FlexPoint Fiber Converter via a multimode cable to a multimode device. Ensure that the fiber cable is attached to the connector labeled "MM Fiber" on the converter. The FlexPoint transmit (Tx) must

attach to the receive side on other device; the receive (Rx) must attach to the transmit.

Attach the FlexPoint Fiber Converter via single-mode cable to a single-mode device. Ensure that the fiber cable is attached to the connector labeled "SM Fiber" on the converter. The FlexPoint transmit (Tx) must attach to the receive side on other device; the receive (Rx) must attach to the transmit.

Cable Attachment for MM to MM Converters:

MM Connector

Attach the FlexPoint Fiber Converter via a 850 nm multimode cable to a multimode device. *Ensure that the 850 nm fiber cable is attached to the Connector labeled "MM Fiber" on the converter.* The FlexPoint transmit (Tx) must attach to the receive side on other device; the receive (Rx) must attach to the transmit.

SM Connector

Attach the FlexPoint Fiber Converter via a 1300 nm multimode cable to a multimode device. *Ensure that the 1300 nm fiber cable is attached to the connector labeled "SM Fiber" on the converter.* The FlexPoint transmit (Tx) must attach to the receive side on other device; the receive (Rx) must attach to the transmit.

100FF Auto-Negotiation:

The FlexPoint 100FF automatically selects full or half-duplex operation depending on the features of the device connected to the media converter.