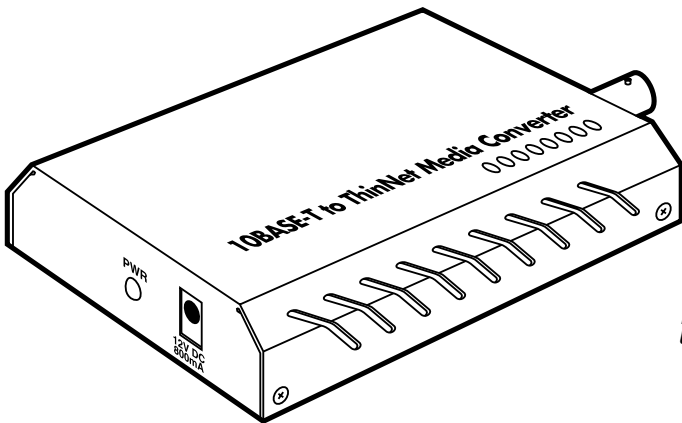


BLACK BOX[®]

NETWORK SERVICES

PURE NETWORKING MEDIA CONVERTERS



Media converters for every twisted-pair to fiberoptic connection you can imagine—at an incredibly affordable price!

Key Features

- ▶ **Extremely affordable media conversion!**
- ▶ **Wide variety of interfaces available for half- or full-duplex operation.**
- ▶ **Compatible power supplies available for the United States, Europe, the United Kingdom, Australia, and Japan.**
- ▶ **Most models don't need to be used in pairs.**
- ▶ **FREE 24/7/365 Technical Support.**

No tech's tool kit is complete without a handful of Pure Networking Media Converters from Black Box. At prices this low, there's no reason not to have a stockpile of them on hand.

These basic media converters feature a sturdy, solid construction. And their dependability makes them one of Tech Support's favorite products.

The Pure Networking Media Converters cover a wide range of interfaces. The guide on pages 2 and 3 will help you select the media converter that's right for your application. Available models include:

10-Mbps Twisted Pair to ThinNet

- 10BASE-T to ThinNet Media Converter (LE1604A)

10-Mbps Twisted Pair to 10-Mbps Fiberoptic

- 10BASE-T to FL Media Converter (LE1605A-ST, LE1606A-SC)

100-Mbps Twisted Pair to 100-Mbps Fiberoptic

- 100BASE-TX to 100BASE-FX Media Converter (LH1700A-SC or LH1700A-ST, LH1701A-SC, LH1702A-SC)

10/100-Mbps Twisted Pair to 100-Mbps Fiberoptic

- 10/100 to 100BASE-FX Media Converter (LH1706A-SC or LH1706A-ST, LH1707A-SC, LH1708A-SC)

100-Mbps Twisted Pair to 100-Mbps Single-Fiber Fiberoptic

- 100BASE-TX to FX Media Converter Transmitters and Receivers (LH1709A-SCTS, LH1710A-SCRS, LH1711A-SCTS, LH1712A-SCRS)

Each model comes with the correct power supply for your country. Choose from models compatible for the United States, Europe, the United Kingdom, Australia, and Japan.

If you have any additional questions about the converters, Tech Support is only a phone call away.

Pure Networking Media Converter Models

Choose the media converter that's right for your application. The following chart compares the features of the available models. Each model listed is available in a version for your country (United States, Europe, United Kingdom, Australia, or Japan). See pages 6–7 for specific codes.

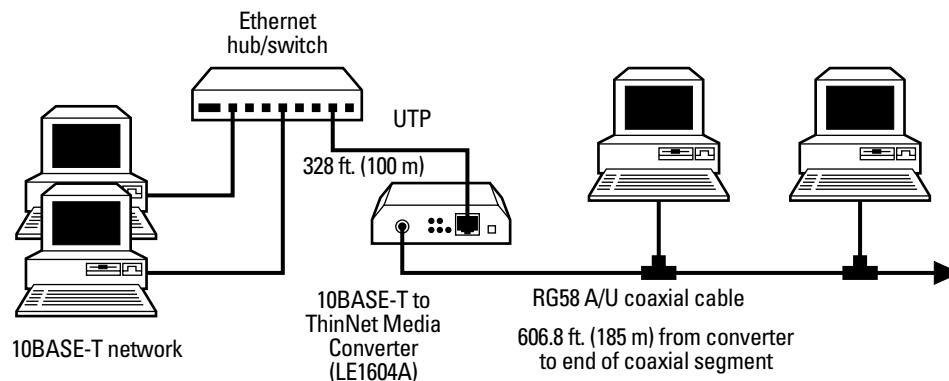
Part Number	Media Converted	Maximum Distance (Coax or Fiber Segment)	MDI/MDI-X	N-Way Auto-negotiation	Indicators	Operation	Link Fault Signaling/ Loopback	Must Use in Pairs?
LE1604A	10BASE-T to ThinNet	606.8 ft. (185 m) coaxial	Pushbutton	No	(1) PWR, (1) PART, (2) LNK, (2) RCV	Half duplex	No	No
LE1605A-ST	10BASE-T to MM 10BASE-FL 820 nm	1.2 mi. (2 km)	Pushbutton	No	(1) PWR, (2) LNK, (2) RCV	Half duplex	No	No
LE1606A-SC	10BASE-T to SM 10BASE-FL 1300 nm	9.3 mi. (15 km)	Pushbutton	No	(1) PWR, (2) LNK, (2) RCV	Half duplex	No	No
LH1700A-SC	100BASE-TX to MM 100BASE-FX SC	1.2 mi. (2 km)	Pushbutton	Switch	(1) PWR, (2) LNK, (1) RCV, (1) FD	Half or full duplex	No	No
LH1700A-ST	100BASE-TX to MM 100BASE-FX ST	1.2 mi. (2 km)	Pushbutton	Switch	(1) PWR, (2) LNK, (2) RCV, (1) FD	Half or full duplex	No	No
LH1701A-SC	100BASE-TX to SM 100BASE-FX SC	9.3 mi. (15 km)	Pushbutton	Switch	(1) PWR, (2) LNK, (2) RCV, (1) FD	Half or full duplex	No	No
LH1702A-SC	100BASE-TX to SM 100BASE-FX SC	18.6 mi. (30 km)	Pushbutton	Switch	(1) PWR, (2) LNK, (2) RCV, (1) FD	Half or full duplex	No	No
LH1706A-SC	10/100BASE-TX to MM 100BASE-FX SC	1.2 mi. (2 km)	Auto MDI via RJ-45 connector	Auto 10/100 via RJ-45 connector	(1) PWR, (2) LNK/ACT, (2) FDX/COL, (1) 100	Half or full duplex via switch	No	No
LH1706A-ST	10/100BASE-TX to MM 100BASE-FX ST	1.2 mi. (2 km)	Auto MDI via RJ-45 connector	Auto 10/100 via RJ-45 connector	(1) PWR, (2) LNK/ACT, (2) FDX/COL, (1) 100	Half or full duplex via switch	No	No
LH1707A-SC	10/100BASE-TX to SM 100BASE-FX SC	9.3 mi. (15 km)	Auto MDI via RJ-45 connector	Auto 10/100 via RJ-45 connector	(1) PWR, (2) LNK/ACT, (2) FDX/COL, (1) 100	Half or full duplex via switch	No	No
LH1708A-SC	10/100BASE-TX to SM 100BASE-FX SC	18.6 mi. (30 km)	Auto MDI via RJ-45 connector	Auto 10/100 via RJ-45 connector	(1) PWR, (2) LNK/ACT, (2) FDX/COL, (1) 100	Half or full duplex via switch	No	No
LH1709A-SCTS	100BASE-TX to 100BASE-FX Single-Fiber (SC) 1310/1550-nm Transmitter	12.4 mi. (20 km)	Pushbutton	Switch	(1) PWR, (2) LNK, (2) RCV, (1) FD	Half or full duplex	No	Yes, with the LH1710A-SCRS Receiver
LH1710A-SCRS	100BASE-TX to 100BASE-FX Single-Fiber (SC) 1310/1550-nm Receiver	12.4 mi. (20 km)	Pushbutton	Switch	PWR, LNK, RCV, FD	Half or full duplex	No	Yes, with the LH1709A-SCTS Transmitter

Pure Networking Media Converter Models (continued)

Part Number	Media Converted	Maximum Distance (Coax or Fiber Segment)	MDI/MDI-X	N-Way Auto-negotiation	Indicators	Operation	Link Fault Signaling/ Loopback	Must Use in Pairs?
LH1711A-SCTS	100BASE-TX to 100BASE-FX Single-Fiber (SC) 1310/1550-nm Transmitter	24.9 mi. (40 km)	Pushbutton	Switch	PWR, LNK, RCV, FD	Half or full duplex	No	Yes, with the LH1712A-SCRS Receiver
LH1712A-SCRS	100BASE-TX to 100BASE-FX Single-Fiber (SC) 1310/1550-nm Receiver	24.9 mi. (40 km)	Pushbutton	Switch	PWR, LNK, RCV, FD	Half or full duplex	No	Yes, with the LH1711A-SCTS Transmitter

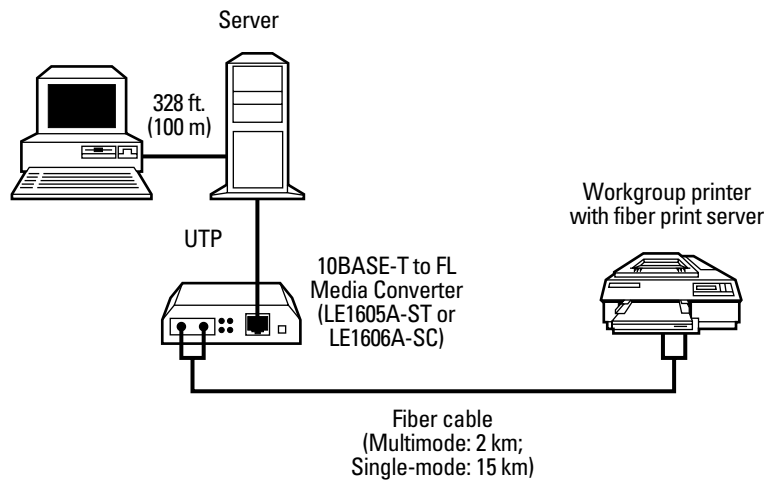
Typical Applications

Use the 10BASE-T to ThinNet Media Converter to add a 10BASE2 segment to a 10-Mbps twisted-pair network.

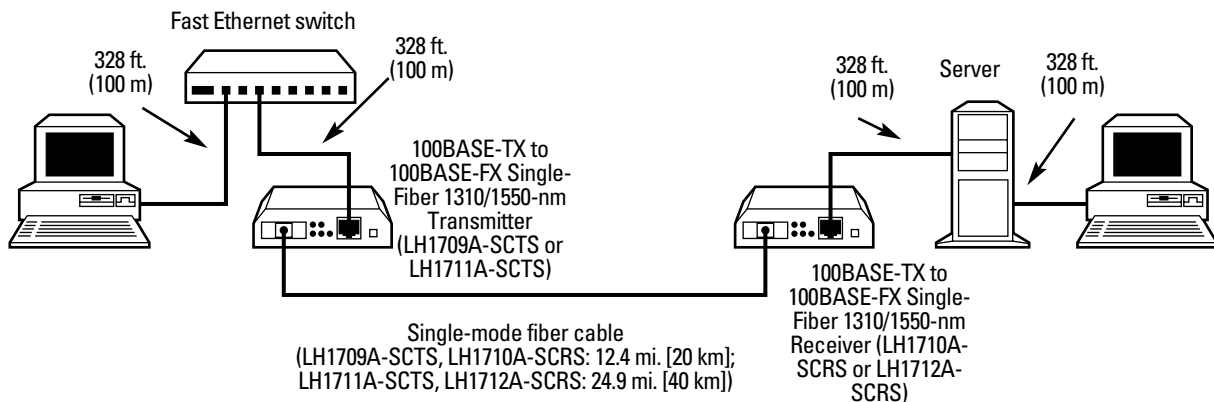


Typical Applications (continued)

Connect a 10BASE-T network and a 10BASE-FL device via a 10BASE-T to 10BASE-FL Converter.



Use a 100BASE-TX to 100BASE-FX Media Converter Transmitter and Receiver to connect a LAN switch and a network server over one strand of single-mode fiberoptic cable.



Specifications

All models

Temperature Tolerance:

Operating: 32 to 158°F (0 to 70°C);
Storage: -4 to +158°F (-20 to +70°C)

Relative Humidity: Operating: Up to 80%, noncondensing;
Storage: Up to 90%, noncondensing

Weight: 0.3 lb. (0.1 kg)

LE1604A

Standards: IEEE 802.3 10BASE-T/10BASE2

Operation: Half duplex

Maximum Distance: UTP: 328 ft. (100 m) Category 3;
Coaxial: 606.8 ft. (185 m);
Total segment length (UTP plus coaxial): 934.8 ft. (285 m)

User Controls: (1) Pushbutton for MDI/MDI-X connection

Connectors: (1) RJ-45, (1) BNC F, (1) barrel connector for Power

Indicators: (6) LEDs: (1) PWR, (1) PART, (2) LNK, (2) RCV

Power: External power supply:
Output: 12 VDC @ 0.8 A;
LE1604A-US: Input: 120 VAC, 60 Hz (2-prong);
LE1604A-EU: Input: 230 VAC, 50 Hz (2-prong);
LE1604A-UK: Input: 230 VAC, 50 Hz (3-prong);
LE1604A-AU: Input: 240 VAC, 50 Hz (3-prong);
LE1604A-JP: Input: 100 VAC, 50/60 Hz (2-prong)

Size: 0.9"H x 2.9"W x 5"D
(2.3 x 7.4 x 12.7 cm)

LE1605A-ST, LE1606A-SC

Standards: IEEE 802.3

Operation: Half duplex

Maximum Distance:
UTP: 328 ft. (100 m);
Fiber: LE1605A-ST: 1.2 mi. (2 km) 820-nm multimode;
LE1606A-SC: 9.3 mi. (15 km) 1310-nm single mode

User Controls: (1) Pushbutton for MDI/MDI-X connection

Connectors: LE1605A-ST: (1) RJ-45, (2) ST®, (1) barrel connector for Power;
LE1606A-SC: (1) RJ-45, (2) SC, (1) barrel connector for Power

Indicators: (5) LEDs: (2) LNK, (2) RCV, (1) PWR

Power: External power supply:
Output: 12 VDC @ 0.8 A;
LE1605A-ST-US, LE1606A-SC-US: Input: 120 VAC, 60 Hz (2-prong);
LE1605A-ST-EU, LE1606A-SC-EU: Input: 230 VAC, 50 Hz (2-prong);
LE1605A-ST-UK, LE1606A-SC-UK: Input: 230 VAC, 50 Hz (3-prong);
LE1605A-ST-AU, LE1606A-SC-AU: Input: 240 VAC, 50 Hz (3-prong);
LE1605A-ST-JP, LE1606A-SC-JP: Input: 100 VAC, 50/60 Hz (2-prong)

Size: 0.9"H x 2.9"W x 4.9"D
(2.3 x 7.4 x 12.4 cm)

LH1700A-SC, LH1700A-ST, LH1701A-SC, LH1702A-SC

Standards: IEEE 802.3u 100BASE-TX/100BASE-FX

Operation: Half or full duplex

Maximum Distance:
UTP: 328 ft. (100 m);
Fiber: LH1700A-SC, LH1700A-ST: 1.2 mi. (2 km) over multimode fiberoptic cable;
LH1701A-SC: 9.3 mi. (15 km) over single-mode fiberoptic cable;
LH1702A-SC: 18.6 mi. (30 km) over single-mode fiberoptic cable

User Controls: (1) Pushbutton for MDI/MDI-X connection;
(1) ON/OFF N-Way switch for autonegotiating speed and duplex operation

Indicators: (6) LEDs: (2) LNK, (2) RCV, (1) FD, (1) PWR

Connectors: LH1700A-ST: (1) RJ-45, (2) ST, (1) barrel connector for Power;
LH1700A-SC, LH1701A-SC, LH1702A-SC: (1) RJ-45, (2) SC, (1) barrel connector for Power

Power: External power supply:
Output: 12 VDC @ 0.8 A;
LH1700A-SC-US, LH1700A-ST-US, LH1701A-SC-US, LH1702A-SC-US: Input: 120 VAC, 60 Hz (2-prong);
LH1700A-SC-EU, LH1700A-ST-EU, LH1701A-SC-EU, LH1702A-SC-EU: Input: 230 VAC, 50 Hz (2-prong);
LH1700A-SC-UK, LH1700A-ST-UK, LH1701A-SC-UK, LH1702A-SC-UK: Input: 230 VAC, 50 Hz (3-prong);

LH1700A-SC-AU, LH1700A-ST-AU, LH1701A-SC-AU, LH1702A-SC-AU: Input: 240 VAC, 50 Hz (3-prong);
LH1700A-SC-JP, LH1700A-ST-JP, LH1701A-SC-JP, LH1702A-SC-JP: Input: 100 VAC, 50/60 Hz (2-prong)

Size: 0.9"H x 2.9"W x 4.3"D
(2.3 x 7.4 x 10.9 cm)

LH1706A-SC, LH1706A-ST, LH1707A-SC, LH1708A-SC

Standards: IEEE 802.3 10BASE-T and IEEE 802.3u 100BASE-TX/100BASE-FX

Operation: Half or full duplex

Maximum Distance:
UTP: 328 ft. (100 m);
Fiber: LH1706A-SC, LH1706A-ST: 1.2 mi. (2 km) over multimode fiberoptic cable;
LH1707A-SC: 9.3 mi. (15 km) over single-mode fiberoptic cable;
LH1708A-SC: 18.6 mi. (30 km) over single-mode fiberoptic cable

User Controls: (1) DIP switch for half- or full duplex operation

Indicators: (6) LEDs: (2) LNK/ACT, (2) FDX/COL, (1) 100, (1) PWR

Connectors: LH1706A-ST: (1) RJ-45, (2) ST, (1) barrel connector for Power;
LH1706A-SC, LH1707A-SC, LH1708A-SC: (1) RJ-45, (2) SC, (1) barrel connector for Power

Power: External power supply:
Output: 12 VDC @ 0.8 A;
LH1706A-SC-US, LH1706A-ST-US, LH1707A-SC-US, LH1708A-SC-US: Input: 120 VAC, 60 Hz (2-prong);
LH1706A-SC-EU, LH1706A-ST-EU, LH1707A-SC-EU, LH1708A-SC-EU: Input: 230 VAC, 50 Hz (2-prong);
LH1706A-SC-UK, LH1706A-ST-UK, LH1707A-SC-UK, LH1708A-SC-UK: Input: 230 VAC, 50 Hz (3-prong);
LH1706A-SC-AU, LH1706A-ST-AU, LH1707A-SC-AU, LH1708A-SC-AU: Input: 240 VAC, 50 Hz (3-prong);
LH1706A-SC-JP, LH1706A-ST-JP, LH1707A-SC-JP, LH1708A-SC-JP: Input: 100 VAC, 50/60 Hz (2-prong)

Size: LH1706A-ST: 0.9"H x 2.9"W x 4.9"D (2.3 x 7.4 x 12.4 cm);
LH1706A-SC, LH1707A-SC, LH1708A-SC: 0.9"H x 2.9"W x 4.8"D (2.3 x 7.4 x 12.2 cm)

LH1709A-SCTS, LH1710A-SCRS, LH1711A-SCTS, LH1712A-SCRS

Standards: IEEE 802.3u 100BASE-TX/100BASE-FX

Operation: Half or full duplex

Maximum Distance:
UTP: 328 ft. (100 m);
Fiber: LH1709A-SCTS, LH1710A-SCRS: 12.4 mi. (20 km) over a single strand of single-mode fiberoptic cable;
LH1711A-SCTS, LH1712A-SCRS: 24.9 mi. (40 km) over a single strand of single-mode fiberoptic cable

User Controls: (1) Pushbutton for MDI/MDI-X connection;
(1) ON/OFF N-Way switch for autonegotiating speed and duplex operation

Indicators: (6) LEDs: (2) LNK, (2) RCV, (1) FD, (1) PWR

Connectors: (1) RJ-45, (1) SC, (1) barrel connector for Power

Power: External power supply:
Output: 12 VDC @ 0.8 A;
LH1709A-SCTS-US, LH1710A-SCRS-US, LH1711A-SCTS-US, LH1712A-SCRS-US: Input: 120 VAC, 60 Hz (2-prong);
LH1709A-SCTS-EU, LH1710A-SCRS-EU, LH1711A-SCTS-EU, LH1712A-SCRS-EU: Input: 230 VAC, 50 Hz (2-prong);
LH1709A-SCTS-UK, LH1710A-SCRS-UK, LH1711A-SCTS-UK, LH1712A-SCRS-UK: Input: 230 VAC, 50 Hz (3-prong);
LH1709A-SCTS-AU, LH1710A-SCRS-AU, LH1711A-SCTS-AU, LH1712A-SCRS-AU: Input: 240 VAC, 50 Hz (3-prong);
LH1709A-SCTS-JP, LH1710A-SCRS-JP, LH1711A-SCTS-JP, LH1712A-SCRS-JP: Input: 100 VAC, 50/60 Hz (2-prong)

Size: 0.9"H x 2.9"W x 4.8"D
(2.3 x 7.4 x 12.2 cm)

Ordering Information

ITEM	CODE
10BASE-T to ThinNet Media Converter	
United States	LE1604A-US
Europe.....	LE1604A-EU
United Kingdom.....	LE1604A-UK
Australia.....	LE1604A-AU
Japan	LE1604A-JP
10BASE-T to FL Media Converter	
United States	LE1605A-ST-US
Europe	LE1605A-ST-EU
United Kingdom	LE1605A-ST-UK
Australia	LE1605A-ST-AU
Japan	LE1605A-ST-JP
10BASE-T to FL Media Converter (SM 15 km)	
United States	LE1606A-SC-US
Europe.....	LE1606A-SC-EU
United Kingdom.....	LE1606A-SC-UK
Australia.....	LE1606A-SC-AU
Japan.....	LE1606A-SC-JP
100BASE-TX to 100BASE-FX Media Converter	
United States.....	LH1700A-SC-US
Europe	LH1700A-SC-EU
United Kingdom	LH1700A-SC-UK
Australia	LH1700A-SC-AU
Japan.....	LH1700A-SC-JP
100BASE-TX to 100BASE-FX Media Converter	
United States.....	LH1700A-ST-US
Europe.....	LH1700A-ST-EU
United Kingdom.....	LH1700A-ST-UK
Australia.....	LH1700A-ST-AU
Japan.....	LH1700A-ST-JP
100BASE-TX to 100BASE-FX Media Converter (SM 15 km)	
United States.....	LH1701A-SC-US
Europe	LH1701A-SC-EU
United Kingdom	LH1701A-SC-UK
Australia	LH1701A-SC-AU
Japan.....	LH1701A-SC-JP
100BASE-TX to 100BASE-FX Media Converter (SM 30 km)	
United States.....	LH1702A-SC-US
Europe	LH1702A-SC-EU
United Kingdom	LH1702A-SC-UK
Australia	LH1702A-SC-AU
Japan.....	LH1702A-SC-JP
10/100 to 100BASE-FX Media Converter	
United States.....	LH1706A-SC-US
Europe	LH1706A-SC-EU
United Kingdom	LH1706A-SC-UK
Australia	LH1706A-SC-AU
Japan.....	LH1706A-SC-JP

Ordering Information (continued)

ITEM	CODE
10/100 to 100BASE-FX Media Converter	
United States.....	LH1706A-ST-US
Europe.....	LH1706A-ST-EU
United Kingdom.....	LH1706A-ST-UK
Australia.....	LH1706A-ST-AU
Japan.....	LH1706A-ST-JP
10/100 to 100BASE-FX Media Converter (SM 15 km)	
United States.....	LH1707A-SC-US
Europe.....	LH1707A-SC-EU
United Kingdom.....	LH1707A-SC-UK
Australia.....	LH1707A-SC-AU
Japan.....	LH1707A-SC-JP
10/100 to 100BASE-FX Media Converter (SM 30 km)	
United States.....	LH1708A-SC-US
Europe.....	LH1708A-SC-EU
United Kingdom.....	LH1708A-SC-UK
Australia.....	LH1708A-SC-AU
Japan.....	LH1708A-SC-JP
100BASE-TX to FX Media Converter Transmitter (Single Fiber 20 km)	
United States.....	LH1709A-SCTS-US
Europe.....	LH1709A-SCTS-EU
United Kingdom.....	LH1709A-SCTS-UK
Australia.....	LH1709A-SCTS-AU
Japan.....	LH1709A-SCTS-JP
100BASE-TX to FX Media Converter Receiver (Single Fiber 20 km)	
United States.....	LH1710A-SCRS-US
Europe.....	LH1710A-SCRS-EU
United Kingdom.....	LH1710A-SCRS-UK
Australia.....	LH1710A-SCRS-AU
Japan.....	LH1710A-SCRS-JP
100BASE-TX to FX Media Converter Transmitter (Single Fiber 40 km)	
United States.....	LH1711A-SCTS-US
Europe.....	LH1711A-SCTS-EU
United Kingdom.....	LH1711A-SCTS-UK
Australia.....	LH1711A-SCTS-AU
Japan.....	LH1711A-SCTS-JP
100BASE-TX to FX Media Converter Receiver (Single Fiber 40 km)	
United States.....	LH1712A-SCRS-US
Europe.....	LH1712A-SCRS-EU
United Kingdom.....	LH1712A-SCRS-UK
Australia.....	LH1712A-SCRS-AU
Japan.....	LH1712A-SCRS-JP