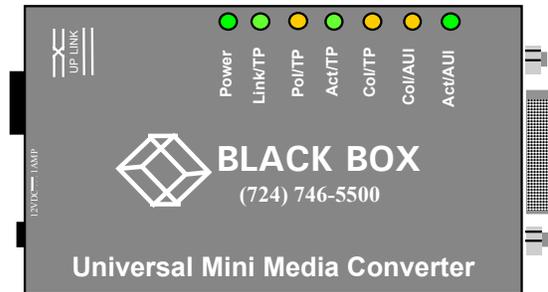# Black Box® Universal Mini Media Converter LE1510A-R2

Twisted Pair to AUI Ethernet Media Converter, with 1 RJ-45 and 1 female AUI connector.

Product Description: The Black Box LE1510A-R2 Universal Mini Media Converter provides a connection between a twisted pair segment and any female Attachment Unit Interface (AUI) with slide latch. An external power supply provides power for the converter and for any attached mini-transceivers. Therefore, any Ethernet coax transceiver (via AUI drop cable) or mini-transceiver with a standard male AUI interface can be connected to the LE1510A-R2 through the AUI connector—providing a connection from a twisted pair segment to a variety of other Ethernet media types. Media converters cost less than full Ethernet repeaters and can be used whenever media distance limitations will not be exceeded in the new structure.

The Black Box LE1510A-R2 is part of the family of Black Box Media Converters. For 10Mb, these include the models LE1500A-UTP (twisted pair to mm. fiber), LE1501A (twisted pair to single-mode fiber), LE1500A-BNC (ThinNet to mm. Fiber, and LE1502A (twisted pair to ThinNet).

Media Conversion Combinations: The Black Box LE1510A-R2 Universal Mini Media Converters typically are used with 10Mb twisted pair (RJ-45) and ThickNet (AUI) cables. It may also combine with various other coax transceivers and mini-transceivers to provide media flexibility.   These "Media Conversion Combinations" include twisted pair to fiber (single and multi-mode) and ThinNet to twisted pair, and are illustrated in the table near the end of this document.

Performance: Data Rate: 10 Mbits / second

Additional Features: Each LE1510A-R2 converter features a full set of LEDs that conveys essential diagnostic and status information on each port. There are 4 LEDs for TP (Link, Polarity, Activity, Collision), 2 for AUI (Activity, Collision), and 1 common (PWR). An Up-link switch on the TP port allows the LE1510A-R2 to be used in any application without the need for a cross-over cable. The case is rugged metal.

Network Standards: Ethernet V1.0 / V2.0 IEEE 802.3; 10BASE-T, 10BASE5

Operating Environment:
 Ambient Temperature: 32-120ºF; (0-50ºC); Storage: -20ºC to 60ºC;
 Ambient Relative Humidity: 10%-95% (non-condensing)

Packaging

Enclosure: High strength metal, designed for wall-mounting or closet shelf.
                Dimensions: [2.7x 1.65 x 0.75] in. [6.9x 4.2 x 1.9] cm.
Weight: 4 oz (115 g);   power supply: 10 oz (2285 g)

Power Supply
Power Input Voltage: 95-125 vac at 60 Hz for LE1510A-R2 Model, 200-250 vac at 50 Hz for LE1510AE-R2 Model which
        has universal IEC power cable connection. The power transformer units are rated 12VDC and 500ma to 1A.
Power Consumption: 6 watts max.

Agency Approvals
UL Listed (UL 1950), cUL, CE; Emissions meet FCC Part 15, Class A

Warranty   Three years   Made in USA

Media Distance Limitations

Media converters do not extend media distances (and do not add to the hop count) as repeaters do. The cable segment length on each side of a media converter is measured as a percentage of the maximum allowable standard media distance for the given media type, and the percentages when added together must not exceed 100%. See Black Box's "Media Converters Installation and User Guide" or call Technical Support for cable distance limitations and distance calculation examples.

Media Conversion Options

An AUI drop-cable may be connected to the AUI port. Alternatively, connecting a transceiver to the AUI port on the Black Box LE1510A-R2 will greatly expand the range of media converter options available. For example, combining a Black Box Fiberoptic Transceiver with the LE1510A-R2 will provide a conversion between twisted pair and multi-mode fiber. Similarly, combining a LE1510A-R2 with a Black Box BNC Transceiver will provide a conversion between twisted pair and ThinNet. The Chart below describes the range of combinations.

PRODUCT CONFIGURATIONS

Product Combination	*Media Conversion*
Black Box LE1510A-R2 + BNC Transceiver	10BASE-T-to-10BASE2
Black Box LE1510A-R2 + Fiberoptic Transceiver (multi-mode)	10BASE-T-to-10BASE-FL (multi-mode)
Black Box LE1510A-R2 + Fiberoptic Transceiver (single-mode)	10BASE-T-to-single-mode fiber

Figure 1: LE1510A-R2 / Transceiver Combination for Converting Twisted Pair to Fiber

LED	Description
Power	Indicates unit is receiving power
Link/TP	Steady ON when the connection is made on the twisted pair end
Pol/TP	Inoperative
Act/TP	Indicates receive activity has been detected on the TP port
Col/TP	Indicates unit is simultaneously transmitting and receiving on the TP port
Col/AUI	Indicates unit is simultaneously transmitting and receiving on the AUI port
Act/AUI	Indicates receive activity has been detected on the AUI port

ORDERING INFORMATION:

Black Box LE1510A-R2	Media Converter, twisted pair to AUI with external 95-125 vac at 60 Hz power supply
Black Box LE1510AE-R2	Same as LE1510A, but with external 200-250 vac at 50 Hz power supply rev. 11/02

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