



20101124 Series

HDMI Optical Transceiver

User Manual

FEATURES

- Supports HDMI Video up to 4Kx2K@30Hz Resolution with no compression
- HDMI 1.4a with HDCP2.0&1.4 Support
- DVI 1.0 (DDC2B) over single fiber
- DDC CEC HPD Signal Support
- No Settings or Adjustments Necessary, Automatically Recognizes HDCP, EDID & CEC
- Supports up to 300m Transmission Distance with OM3 multimode fiber
- Standard HDMI Connector
- Integrated USB Connector for Power
- Double Power Supply (HDMI 5V&USB) If HDMI connector can give 290mA on pin 18 no need for USB power on transmitter, HDMI require min 55mA so not all graphic cards will work.
- Typical Power Dissipation 1420 mW (Source), 1220 mW (Sink)
- Hot-Pluggable
- EMI/RFI Resistant
- 850nm VCSEL and PIN Photodetector
- Uses Small, Reliable LC Optical Connector
- Operating Environment temp: 0°C to + 50°C
- Max Operating Case Temperature: ~74°C

DESCRIPTION

The **20101124** HDMI optical transmitter and receiver are designed to send 1 channel of 1.4a compliant HDMI Video with embedded audio over two optical fibers.

HDCP is automatically supported for the transmission of content-protected video.

The link can operate over single fiber in DVI mode when the HDCP compliance is not required.

The 4K HDMI optical transceiver supports transmission of an uncompressed lossless HDMI 1.4a signal over multimode optical fiber at 850nm, for distances up to 300 meters, at a resolution of 4Kx2K.

Transmitter converts an HDMI signal to a single 10Gb/s serial data stream for transmission over two optical fibers. **Receiver** converts the serial data back to an HDMI signal.

This product is ideal for large-screen displays, conferencing systems and home entertainment.

This fiber link meets all of the standards of interference immunity, to ensure the stability of the signal.

The transceivers are RoHS compliant and lead-free. These small modules utilize one multimode fiber with a standard locking LC optical connector.

Operating on 5V DC power over a standard micro-USB connector, these modules are ready for easy installation and operation.

Package Includes

- 20101124-T TX (Transmitter, To Video Source)
- 20101124-R RX (Receiver, To TV)
- Micro-USB cable (50 cm) (2 pcs.)
- User's Manual

Please verify all items are included in the box. If anything is missing, please contact Direktronik AB.

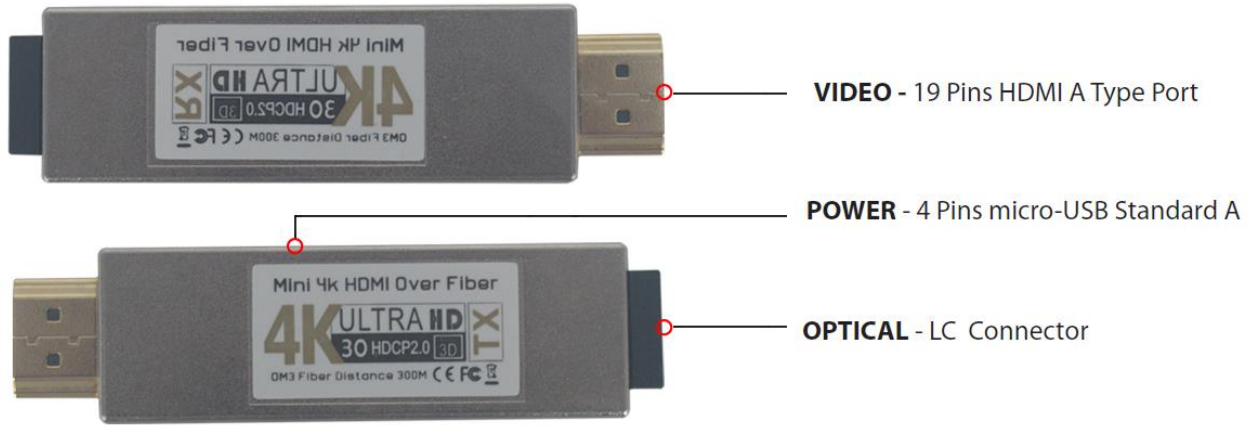


Figure 1: 20101124 Optical HDMI transmitter and receiver

CONNECTING AND OPERATING 20101124

20101124 System Connections

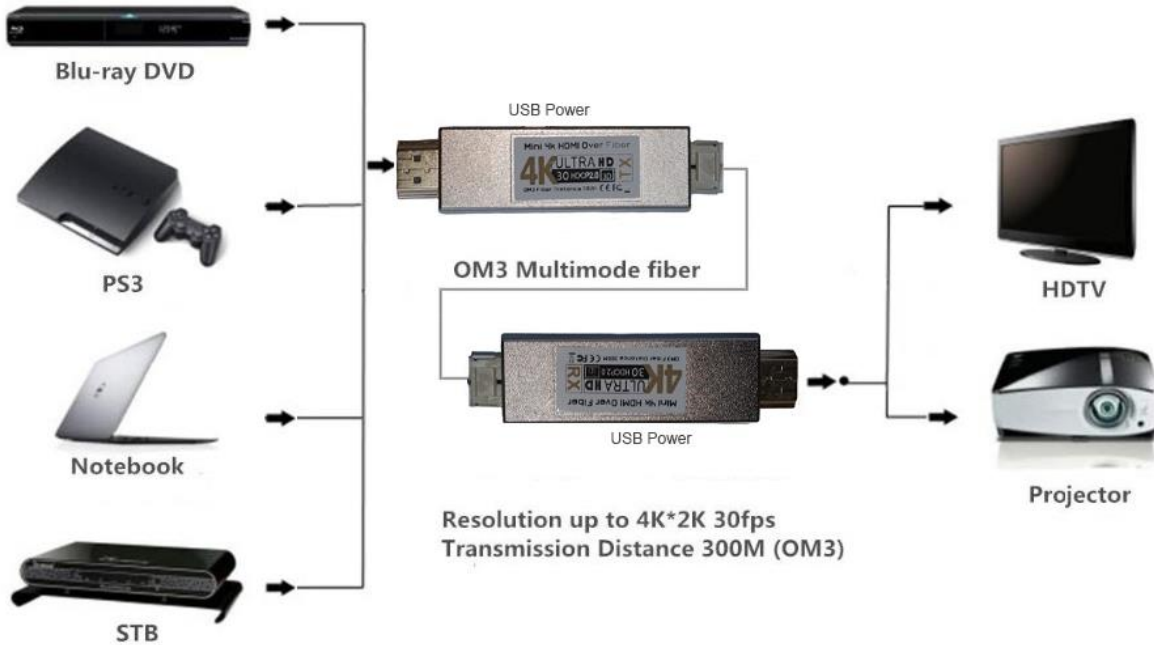


Figure 2: Connection of 20101124 HDMI Optical Transceiver

1. Connect HDMI port of 20101124-T (Transmitter) on the rear of the video source device.
2. Connect the Fiber Optic Cable to LC Optical Port of 20101124-T (Transmitter).
3. Connect power to the 5V DC port of 20101124-T (Transmitter) using provided USB cable.
4. Connect HDMI port of 20101124-R (Receiver) on the rear of the HDTV (HD monitor).
5. Connect the Fiber Optic Cable to LC Optical Port of 20101124-R (Receiver).
6. Connect power to the 5V DC port of 20101124-R (Receiver) using provided USB cable.

TROUBLE SHOOTING

Q1: Where do the 20101124 TX and RX go?

A1: 20101124-T is the transmitter, and it is connected to video source devices

(PC, DVD, Broadcast Camera etc.).

20101124-R is the receiver, and it is connected to HD display

(TV, monitor, projector, etc.).

Q2: What is the maximum distance between source device and HD monitor?

A2: 20101124 can support:

- Multimode fiber (OM2/3/4) – in excess of 300 meters (1000 feet) at 4Kx2K video resolution

Q3: Can I use the HD monitor's USB power for 20101124-R RX?

A3: Yes, if the HD monitor's USB power output can provide +5V and 0.5A current.

Note that 20101124-R RX may not work during HD monitor's power-saving mode.

Q4: I can't see the video image?

A4: 1) Check the HDMI connections to display and to source are securely connected.

2) Check both source and display support HDCP.

If one side does not support HDCP, then there will be no picture.

3) If there is no power to the Receiver, the HDMI port will not get any EDID signal and will not show any image.

Q5: Does 20101124 supports HDCP (High-bandwidth Digital Content Protection)?

A5: Yes, 20101124 supports HDCP 2.0 and 1.4.

LIMITED WARRANTY

Direktronik AB warrants this product to be in good working order for a period of one year from the date of purchase.

If this product is not in good working order as warranted above, or should this product fail to be in good working order at any time during the warranty period, Direktronik AB shall provide repair or replacement.

This warranty does not cover incidental or consequential damages incurred by consumer misuse, or modification of said product. For limited warranty service during the warranty period, please contact Direktronik AB by calling (+46) 8 524 00 700 or e-mail support@direktronik.se to obtain an RMA number and instructions for returning the product.

The information contained herein is provided to the user as a convenience. While every effort has been made to ensure accuracy, Direktronik AB is not responsible for damages that might occur because of errors or omissions, including any loss of profit or other commercial damage. The specifications described herein were current at the time of publication but are subject to change at any time without prior notice.