

## HOMT/HOMR-002

### Description:

- HOMT-002 and HOMR-002 are enclosed HDMI optical modules designed to support transmission of an uncompressed lossless.HDMI 1.4a signal over multimode optical fiber at 850nm,up to distances of 300m,at a resolution of 4Kx2K.

- HOMT-002 converts an HDMI signal to a single 10Gb/s serial data stream for transmission over two optical fibers.HOMR-002 converts the serial data back to an HDMI signal.The transceivers are ROHS compliant and lead-free per requirements in Europe and China.

### Picture:



### Features:

- HDMI 1.4a support
- HDCP support
- DDC CEC HPD signal support
- GWT transmitter optical subassembly technology
- Serialized data stream using GWT SD1502 and SD1512
- Support up to 300m transmission distance at up to 10.3Gb/s with OM3 multimode fiber
- Supports all modes up to 4Kx2Kx30 resolution
- Standard HDMI connector
- Integrated USB connector for power
- Double power supply(HDMI 5V&USB)
- Hot-Pluggable
- EMI/RFI resistant
- 850nm VCSEL and PIN photodetector
- 2-wire interface
- Typical power dissipation 1420mW(source),1220mW(sink)
- Operating case temperature: 0~70°C

\*Note: if the HDMI source and sink can provide the enough current through the HDMI 5V pin,the USB cable is not needed.

### ***Application:***

Optical HDMI for consumer and industrial applications

### ***Absolute maximum ratings(estimated)***

| Parameter                  | Symbol    | Unit | Min  | Typ | Max                          | Notes |
|----------------------------|-----------|------|------|-----|------------------------------|-------|
| Storage temperature        | Ts        | -40℃ | -    | -   | 100                          |       |
| Case operating temperature | Tc        | 0℃   | -    | -   | 100M:70<br>200M:*<br>300M:60 |       |
| Relative humidity          | RH        | 5%   | -    | -   | 95                           |       |
| Supply voltage             | VccT,VccR | V    | -0.3 | -   | 3.8                          |       |

### ***Key parameters:***

| Parameter                  | Min             | Typ          | Max                          | Unit     | Notes                                 |
|----------------------------|-----------------|--------------|------------------------------|----------|---------------------------------------|
| Data rate per lane         |                 | 10           |                              | Gbps     |                                       |
| Power consumption          |                 | 1420<br>1220 |                              | mW<br>mW | TX side<br>RX side                    |
| Temperature range          | 0               |              | 100M:70<br>200M:*<br>300M:60 | ℃        |                                       |
| Power supply voltage       |                 | 5            |                              | V        | +/-5%                                 |
| Resolution Up              | To 4K/2K        |              |                              |          |                                       |
| Refresh rate               | Up to 120 Hz    |              |                              |          |                                       |
| Depth up                   | yes             |              |                              |          |                                       |
| Support 3D                 | yes             |              |                              |          |                                       |
| Support HDCP               | yes             |              |                              |          |                                       |
| wavelength                 | 850             |              |                              | nm       |                                       |
| Bit Error Rate performance | 1.00E-12        |              |                              |          |                                       |
| Laser output power         | Class 1         |              |                              |          | EN 60285-1 2007<br>EN 60825-2 A2 2010 |
| Management interface       | Two-wire serial |              |                              |          |                                       |
| Mechanical specification   |                 |              |                              |          |                                       |
| Electrical interface       | 19              |              |                              | pins     | HDMI A type port                      |
|                            | 5               |              |                              | pins     | Micro USB B type                      |
| Pulling force              | 111             |              |                              | N        |                                       |