DESCRIPTION

The Real4K™ HDMI Optical Cable is a turnkey HDMI 2.0 optical cable kit that provides full resolution, long distance Ultra High Definition 4K video transmission up to 18 Gbps enabling 4K video the way it was meant to be seen.

FEATURES

- Supports both HDMI 2.x and HDMI 1.x signals
- Full UHD 4K 4:4:4, 60 frames per second video transmission
- Transmits superior HDMI video up to 1000m*
- Supports both HDCP 2.2 and HDCP 1.4 content protection
- All video transport, content protection and maintenance operation transmitted over a single fiber
- Integrated safety feature turns off lasers when an open fiber connection is detected
- Multicolor LED provides status indication and alerts

HDMI INTERFACE

- Transmitter and receiver automatically select between HDMI 2.x and HDMI 1.x based on the video source
- Content protection is based on the auto-detected HDCP of the source for No HDCP, HDCP 1.4 and HDCP 2.2
- Support is provided for Consumer Electronics Control (CEC) over HDMI
- Provides power to the Black Jaguar Transmitter module from the video source
- Modules supplied with HDMI Type A connector cables

USB INTERFACE

- Provides power to the Black Jaguar Receiver module from the video sink
- Optionally, can provide power to the Black Jaguar Transmitter module from the video source
  - This can be simultaneously connected with HDMI power without adverse effects on the module or the Host system
- Enables firmware upgrades to the local Black Jaguar module via USB 2.0 or 1.1 compatible Host
- Modules supplied with USB Standard-A connector cables

FIBER INTERFACE

- Fiber type: OM4 Multimode fiber (MMF), Single fiber cable
- Connector type: SC
- Standard fiber lengths:1m reference, 20m, 30m, 50m, 75m, 100m, 150m, 200m, 300m, 500m
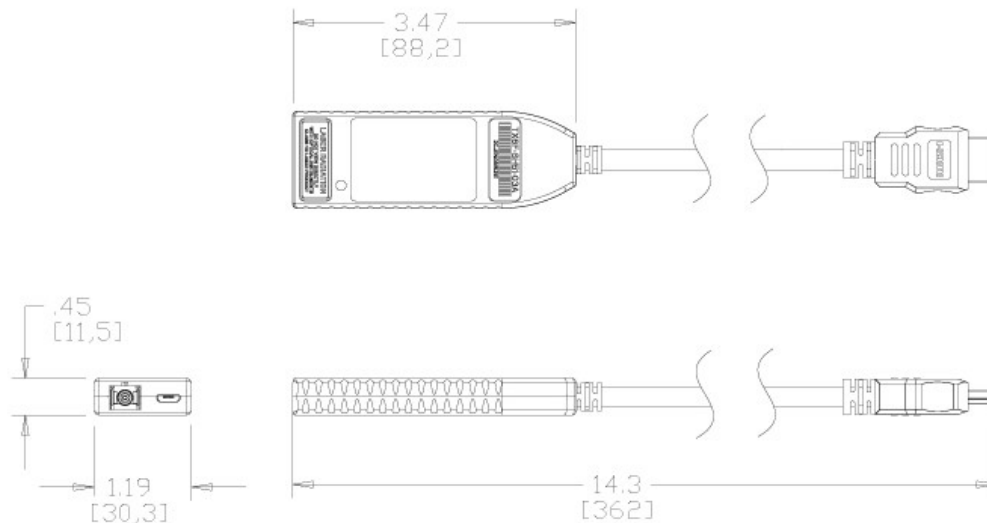 - Contact Inneos for longer fiber lengths

LED STATUS INDICATORS

Color	Link Status
Off	Module end has no power
Red – Steady/Flashing	Module detects open fiber connection and has disabled the lasers
Yellow	Fiber detected but link initialization failed
Green – Flashing	Link functional with no HDCP video
Green – Steady	Link functional with HDCP 1.x video
Blue	Link functional with HDCP 2.x video
Pink – Steady/Flashing	Bootloader connected

ELECTRICAL OPERATING CONDITIONS

Parameter	Symbol	Min	Max	Unit
Supply Voltage	V_{dd}	4.75	5.25	V
Transmitter Supply Current	I_{TX}	0	400	mA
Receiver Supply Current	I_{RX}	0	250	mA
Operating Temperature Range	T_C	0	50	°C

DIMENSIONS

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min	Max	Unit
Storage Temperature Range	T_S	-40	85	°C
Electrostatic Discharge Contact (IEC)	ESD		8	kV
ESD Air Discharge (IEC)			15	kV
Supply Voltage	V_{dd}		5.5	V

COMPLIANCE

- FCC Part 15 Class B for Susceptibility, Radiated and Conducted
- CE for Susceptibility, Radiated and Conducted
- Optical Fiber Communication System Class 1 Eye Safety per IEC 60825-1
- IEC 60825-1:2014-05 Ed. 3.0
- FDA CDRH

* Maximum fiber length supported depends on quality of the fiber deployed. 1000m based on OM4 having 6000 MHz-km bandwidth and typical coupling and transmitter and receiver optical performance limits. Contact Inneos for additional information.