

# HDMI 2.0 **ARMORED** Active Optical Cable

Rugged and Watertight 4K60 4:4:4 Extension

MG-AOC-66A-xxx

## OVERVIEW

The Magenta Research rugged Active Optical cable provides a simple yet powerful solution for extending high resolution video over long distances with watertight ends and an armored core. This plug and play HDMI 2.0 cable supports up to 4K60 4:4:4 with no compression nor latency up to 328ft (100m). Crush resistant up to 15,000lbs of force and without the need for external power, makes this a very flexible option for live events.



## ORDERING INFORMATION

MG-AOC-66A-10	HDMI 2.0 Watertight <b>ARMORED</b> Active Optical Cable 33ft (10m)
MG-AOC-66A-30	HDMI 2.0 Watertight <b>ARMORED</b> Active Optical Cable 100ft (30m)
MG-AOC-66A-100	HDMI 2.0 Watertight <b>ARMORED</b> Active Optical Cable 328ft (100m)
MG-AOC-66P	HDMI 2.0 Power injector; powered via any USB2.0 source

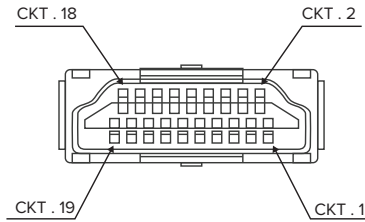
## KEY FEATURES

- ◆ Up to 328ft (100m)
- ◆ No external power required
- ◆ Plug and play
- ◆ HDMI 2.0
- ◆ Crush resistant armored core up to 15,000lbs
- ◆ Watertight end caps
- ◆ HDCP support
- ◆ EDID support
- ◆ No signal loss
- ◆ 4K2Kp60 down to 480i supported

## TECHNICAL SPECIFICATIONS

Item	Description
Units	Transmitter (Source) Receiver (Sink)
HDCP & DDC	HDCP 2.0 Fully Supports bi-directional EDID and HDCP communication
Video Bandwidth	6 Gbps/x3Channel (max) + Clock.
Supported Resolutions up to 100m	1920 x 1200, 480p, 720p, 1080i and 1080p deep color, 4K(60P), 3DFull HD 1920 x 1080
O/E Converter	4 channel 850 nm VCSEL array 4 CH GaAs PD array
Connector Type	HDMI 2.0 type A
Cable Type	Armored Hybrid type with OM3 fiber and copper wire
Cable Length	10m/30m/100m (with +/-30cm tolerance).
Cable Outer Diameter	4.8mm
Jacket Outer Material	TPU (Custom)
Crush Resistance	2000N/100mm; 204kg (450lbs) per sq mm; 6804kg (15,000lbs) of force
Cable Weight	TBD
Cable Color	Black
Maximum Tensile Load	Long Term: 400N (41kgf) Short Term: 800N (82kgf)
Minimum Bend Radius(mm)	Dynamic: 10D Static: 20D
Differential Input	100 ohm (typical)
Power Consumption	250mW (max)
Power Supply	No external power required
Operating Temperature	0-50°C
Limited Warranty	1 year parts and labor

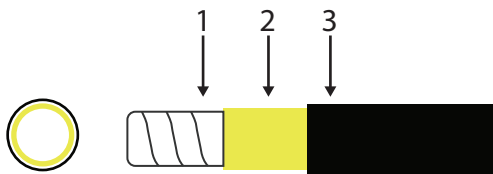
## HDMI Type A Pin Assignment



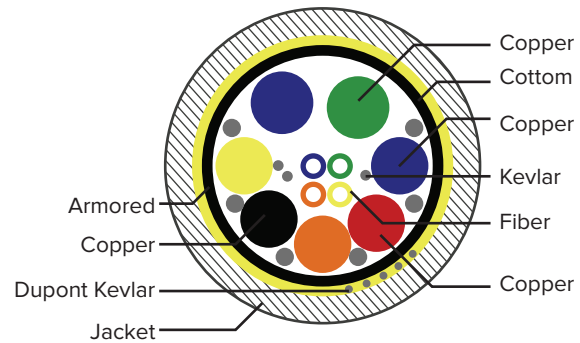
PIN	FUNCTION
1	T.M.D.S. Data 2+
2	T.M.D.S. Data 2 Shield
3	T.M.D.S. Data 2-
4	T.M.D.S. Data 1+
5	T.M.D.S. Data 1 Shield
6	T.M.D.S. Data 1-
7	T.M.D.S. Data 0+
8	T.M.D.S. Data 2 Shield
9	T.M.D.S. Data 0-
10	TMDS Clock+

PIN	FUNCTION
11	TMDS Clock Shield
12	TMDS Clock-
13	CEC
14	Utility
15	SCL
16	SDA
17	DDC/CEC Ground
18	+5V Power
19	Hot Plug Detect

## ARMORED Cable Profile



- 1 - 200CU stainless Steel Armored Core
- 2 - Dupont Kevlar
- 3 - Thermoplastic polyurethane (TPU) Jacket



## Watertight End Caps

