



Micro HDMI with removable HDMI plugs

1 Overview

ALOGIC's Carbon Series Pluggable HDMI Active Optic Cable (AOC) is a Plug & Play HDMI solution well suited for critical and versatile AV installations that demand flawless HDMI Signal integrity. Featuring a Micro HDMI plug with a removable HDMI plug, it provides unmatched signal fidelity and transparency over a wide range of input resolution up to 100m long run which is much beyond the normal reach of conventional copper cables in distributing HDMI.

ALOGIC's Carbon Series AOC cable holds distinctive performance advantages being thinner, lighter and more flexible than copper or even standard optical cables while providing transparent and widely compatible HDMI essential controls features like HPD, EDID, HDCP and CEC link operations. The cable jackets comply with international frame retardant requirements and provide customers with options on CMP-OF UL Plenum and Low Smoke Zero Halogen cable jacket.

Best in class user experience with its integrator-oriented features along with existing latest advances in HDMI technology including 3D, 4K UHD resolution and deep colors from an HDMI-D or DVI-D interfaces. The removable HDMI-A connector solution enable system integrators to pull the cables very effectively through small size of conduits in a number of onsite professional AV installation environments.

2 Features

- * Up to 4K 30Hz, 3D, Deep Color
- * Multi-channel Audio, Dolby TrueHD, DTS-HD Master Audio
- * EMI & RFI Immunity
- * Plug & Play Operation
- * HDMI 1.4 Compliant : EDID, CEC, HDCP
- * Integrator-oriented removable HDMI-A ends for easy advanced wiring
- * Interoperable field flexibility : HDMI-D with HDMI-A & HDMI-D with DVI-D single link
- * Built-in Powering (No external Power Required)
- * High Pulling Strength & Compression Load
- * Low Power Consumption
- * Compliant with International Frame Retardant Standards : UL CMP-OF (Plenum), IEC LSZH (Low Smoke Zero Halogen)
- * Warranty: Life Time

3 Applications

- * Professional AV System Interconnection
- * In & Outdoor Digital Signage Panels & Kiosks
- * Home Theater Systems
- * Facility Automation Systems

4 Absolute maximum ratings

Parameter	Symbol	Min.	Typ.	Max	Unit
Supply Voltage	VCC	-0.5		6	V
Storage Temperature	Tstg	-30		70	°C
Relative Humidity	RH	5		85	%
Electrostatic Discharge Immunity (Air: 8kV, Contact: 6kV)		B			Class

5 Recommended Characteristics

Parameter	Symbol	Min.	Typ.	Max	Unit
Supply Voltage*	VCC	4.8	5	5.3	V
Operating Temperature	T _{OP}	0		50	°C

6 Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max	Unit
Operating Current	I _{OP}	35	47	56	mA
Power Consumption	P _O	0.18	0.24	0.28	W
TMDS Differential Input Voltage	V _{ID}	400		1600	mV
TMDS Differential Output Voltage	V _{OD}	200	300	400	mV
TMDS data bit rate		250		3400	Mbps

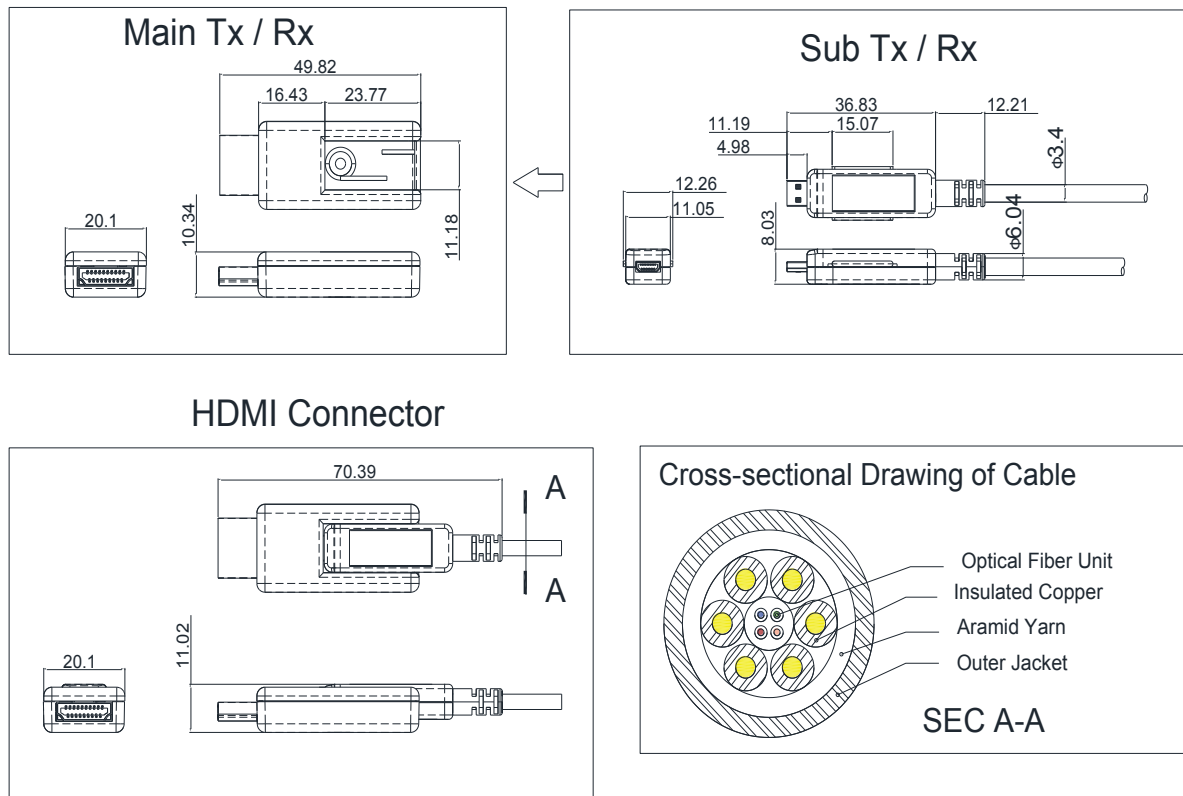
7 Physical Characteristics

Parameter	Value	Unit
Cable Dimensions (WXH)	3.4mm (± 0.2mm)	mm
Cable Color	Gray	-
Optical Fiber	Multi-mode fiber	-
Copper Wire	28 AWG TA (7/0.127mm)	-
Cable Jacket Material	CMP-OF (UL) & LSZH	-
Connector Pull Strength	50	Kg
Compression Load Resistance	50	Kg
Minimum Bending Radius	6	mm
Case Material PC	(Polycarbonate)	-

8 Product dimensions

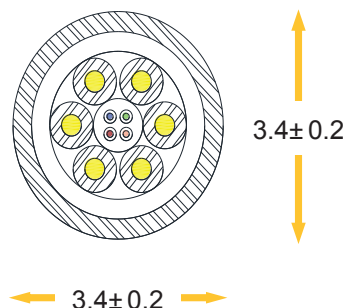
Unit of Measure [mm]

- Connector



- Cable

Unit of Measure [mm]



9 Physical Characteristics

Pin	Symbol	Functional Description
1	GH2+	TMDS data signal channel 2 positive
2	GND	TMDS data signal channel 2 shield
3	CH2-	TMDS data signal 2 negative
4	CH1+	TMDS data signal channel 1 positive
5	GND	TMDS data signal channel 1 shield
6	CH1-	TMDS data signal channel 1 negative
7	CH0+	TMDS data signal channel 0 positive
8	GND	TMDS data signal channel 0 shield
9	CH0-	TMDS data signal channel 0 negative
10	CLK+	TMDS clock signal channel positive
11	GND	TMDS clock signal channel shield
12	CLK-	TMDS clock signal channel negative
13	CEC	That are connected through HDMI, by using only one of their remote controls
14	RESERVED	N.C
15	SCL	DDC clock
16	SDA	DDC data
17	GND	DDC/CEC shield
18	5V	DC +5V
19	HPD	Monitor detector signal

10 Part No.

No.	Length
PAOHD-20MM	20m
PAOHD-30MM	30m
PAOHD-40MM	40m
PAOHD-50MM	50m
PAOHD-70MM	70m
PAOHD-100MM	100m

11 Connection Guide

