

USB-C Active Optical Cable (Data + Video + PD)

**USB 3.2 Gen 2x1 Adaptive 2 or 4 Lanes Type C Full Featured AOC
Data 10G + Video 4K + PD 60W, Two Modes Version**

SKU: UFF-CCF10G-XXXM

PRODUCT OVERVIEW

The **UFF-CCF10G** USB-C to USB-C Active Optical Cable (AOC) series redefines the capabilities of traditional AOCs by offering support for two configurations: 4-lane DisplayPort (DP) 2.1 + USB 2.0, or 2-lane DP 1.4 + USB 3.2 (10Gbps). By utilizing optical fiber instead of copper for high-speed signal transmission, these cables are longer, thinner, more flexible, and free from radiation and electromagnetic interference (EMI). The UFF-CCF10G series enables multiple functions, including 10Gbps data transfer via USB 3.2, DisplayPort video output, and Power Delivery (PD) charging, while maintaining backward compatibility with USB 2.0 and 1.1. This makes it an ideal solution for a wide range of applications.

**Adaptive 2 or 4-Lane
USB-C Full-Featured AOC**



**(Downward Compatible
with USB 2.0/1.1)**

KEY FEATURES

- Supports Full Function Type-C Mode, **4-Lane DP 2.1 + USB 2.0**, and **2-Lane DP 1.4 + USB 3.2 10Gbps**. The two modes switch automatically.
- Supports bi-directional data transfer at **20Gbps**
- **Backward compatible with USB 2.0 and USB 1.1**
- Connector: Nickel-Plated USB Type-C Male
- Connector Material: Zinc Alloy
- Supports **DP-Alt-Mode at 4K@60Hz / 8K@30Hz**
- Supports **PD (Power Delivery) up to 60W (20V/3A) for lengths up to 10m (40W for lengths over 10m)**
- Requires no external power adapter
- Hybrid cable with 5 fiber strands and 12 copper wires
- Cable OD (Outer Diameter): **6.5 ± 0.2mm**
- Default Jacket: PVC
- Maximum Length: **Up to 15m**

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SPECIFICATIONS

Product Specifications

Parameter	Descriptions
Cable Length	Up to 15m
Interface	USB Type-C Male
Bandwidth	USB 3: 10Gbps and DP 1.4, 8.1Gbps x 2 USB 2: 480Mbps and DP 2.1, 10Gbps x 4
Power Delivery	5m to 10m: 60W 15m: 40W
Power Supply	By Vconn (3.0V to 20V)
Power Consumption (Typical)	1200mW (5V input)
Cable Outer Diameter	6.5mm
Jacket Outer Material	PVC
Cable Filler	Kevlar
Cable Colour	Black
Minimum Bend Radius	20mm (Dynamic) / 10mm (Static)
Tensile Strength	200N (Long Term) / 400N (Short Term)

Environment and Power Specifications

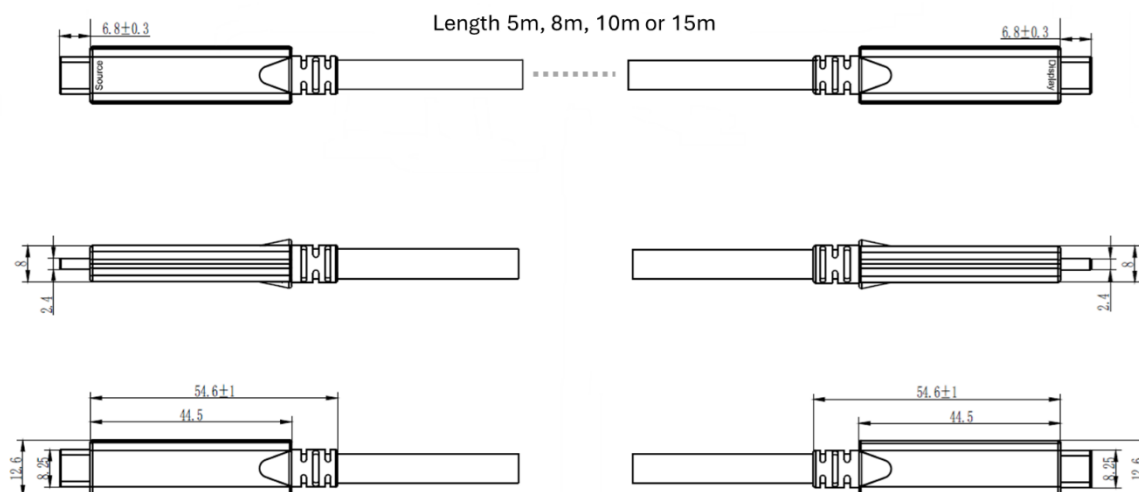
Parameter	Min	Max	Unit
Power Supply Voltage	3.0	20.0	V
Operating Temperature	0	50	°C
Storage Temperature	-40	70	°C
Relative Humidity	10	80	%RH

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CONNECTION DIAGRAM

Connection to Source/Host

Connection to Display/Remote Device



Note:

1. Supports 4 Lane DP2.1+USB2.0 & 2 Lane DP1.4+USB3.2
2. Supports 4K@60Hz video transmission
3. Supports 10Gbps data transmission
4. Backwards USB 2.0 & USB 1.1 compatible
5. Supports PD 60W (20V/3A) Power Delivery up to 10m. PD 40W for over 10m.

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HANDLING AND INSTALLATION

Proper installation and handling of USB-C Active Optical Cables (AOC) are crucial to ensure optimal performance and longevity. Follow these guidelines to maintain signal integrity and ensure reliable data transmission:

Installation Instructions:

1. **Handle with Care:** When installing the cable, avoid any sharp bends or kinks that could damage the delicate optical fibers inside.
2. **Secure Connections:** Connect one end of the cable to the USB Host device, ensuring a snug fit to prevent any signal loss. Connect the other end to the peripheral device, such as a monitor or external storage, ensuring a secure connection.
3. **Avoid Excessive Strain:** Provide adequate support for the cable to avoid unnecessary tension on the connectors.
4. **Gentle Handling:** Avoid pulling or twisting the cable excessively. Always disconnect devices by gripping the connectors rather than pulling on the cable itself.

Additional Notes:

- **Directional Use:** This cable can only be used in one direction. The connectors are marked with "Source" and "Display". Each connector must be plugged into the correct port to avoid signal loss.
- **No Intermediate Adapters and Cables:** We do not recommend using any intermediate adapters or cables between the connections. This can attenuate signal transmission performance and may result in insufficient power being supplied to the USB connection, preventing the internal fiber optic module from functioning correctly.

Following these guidelines will help ensure the longevity and reliability of your USB-C Active Optical Cable, providing consistent high-speed data transmission and device connectivity.

PACKAGE CONTENTS

- 1 x USB 3.2 Gen 2x1 Adaptive 2 or 4 Lanes Type C Full Featured AOC

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WARRANTY

- 2-Year Limited Warranty
- Advance Replacement Warranty is available and optional

ORDERING INFORMATION

Part Number	Descriptions	Length
UFF-CCF10G-005M	USB 3.2 Gen 2x1 Adaptive 2 or 4 Lanes Type C Full Featured AOC, Backward Compatible, PVC, 5m - Data 10G + Video 4K + PD 60W, Two Modes Version	5m
UFF-CCF10G-008M	USB 3.2 Gen 2x1 Adaptive 2 or 4 Lanes Type C Full Featured AOC, Backward Compatible, PVC, 8m Data 10G + Video 4K + PD 60W, Two Modes Version	8m
UFF-CCF10G-010M	USB 3.2 Gen 2x1 Adaptive 2 or 4 Lanes Type C Full Featured AOC, Backward Compatible, PVC, 10m Data 10G + Video 4K + PD 60W, Two Modes Version	10m
UFF-CCF10G-015M	USB 3.2 Gen 2x1 Adaptive 2 or 4 Lanes Type C Full Featured AOC, Backward Compatible, PVC, 15m Data 10G + Video 4K + PD 40W, Two Modes Version	15m

CONTACT INFORMATION

For more information, please visit our website or contact our customer service team:

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