CLS-AOCU32/FF-50, CLS-AOCU32/FF-66

USB 3.2 GEN–2 Full Featured USB–C (M) to USB–C (M) Active AOC Cable

According to displays capabilities or configuration the laptop should choose whether to use for video the 4 lanes that USB-C cable offers or 2 for video and 2 for USB 3.X

This USB-C cable is designed to support dynamic lane configuration for optimal performance, automatically adjusting based on the communication between the laptop and the monitor. It can operate in two modes:

- **2 Lanes for Video + 2 Lanes for Data** (for simultaneous USB 3.X high-speed data transfer and video output)
- **4 Lanes for Video** (for maximum video bandwidth, disabling USB 3.X data transfer)

This automatic switching ensures compatibility with a wide range of devices while maximizing video and data performance.

FEATURES

- Supports USB 3.2 Gen 2 data transfer up to 10Gbps (when in 2-lane video mode)

- Supports DisplayPort Alt Mode for video output up to 8K@60 (when in 4 lane mode) or up to 4K@60Hz 4:4:4 (when in 2-lane video mode)

- Automatic lane switching based on system communication

- Backward compatible with USB 2.0 and legacy DisplayPort versions

- Plug-and-play functionality, no drivers required

OPERATING MODES

The cable automatically switches between the following modes:

Mode 1: 2 Lanes Video + 2 Lanes Data

- Used when a device supports **simultaneous video and high-speed data transfer**.

- Provides up to **4K@60Hz** video output.

- Allows USB 3.2 Gen 2 data transfer (up to **10Gbps)**.

- Ideal for users who need both **video and external USB device connectivity** (e.g., docking stations, touch monitors).

Mode 2: 4 Lanes Video Only

- Used when maximum video bandwidth is required.

- Provides **4K@60Hz 4:4:4** or 8K@60 if the Source/Monitor supports.

- **USB 3.X** data is disabled (USB 2.0 remains available).

- Suitable for high-performance display setups.

The cable automatically determines the appropriate mode based on a handshake protocol between the laptop and the monitor. If the connected laptop does not support USB 3.2 data alongside video, it will default to 4-lane video mode.
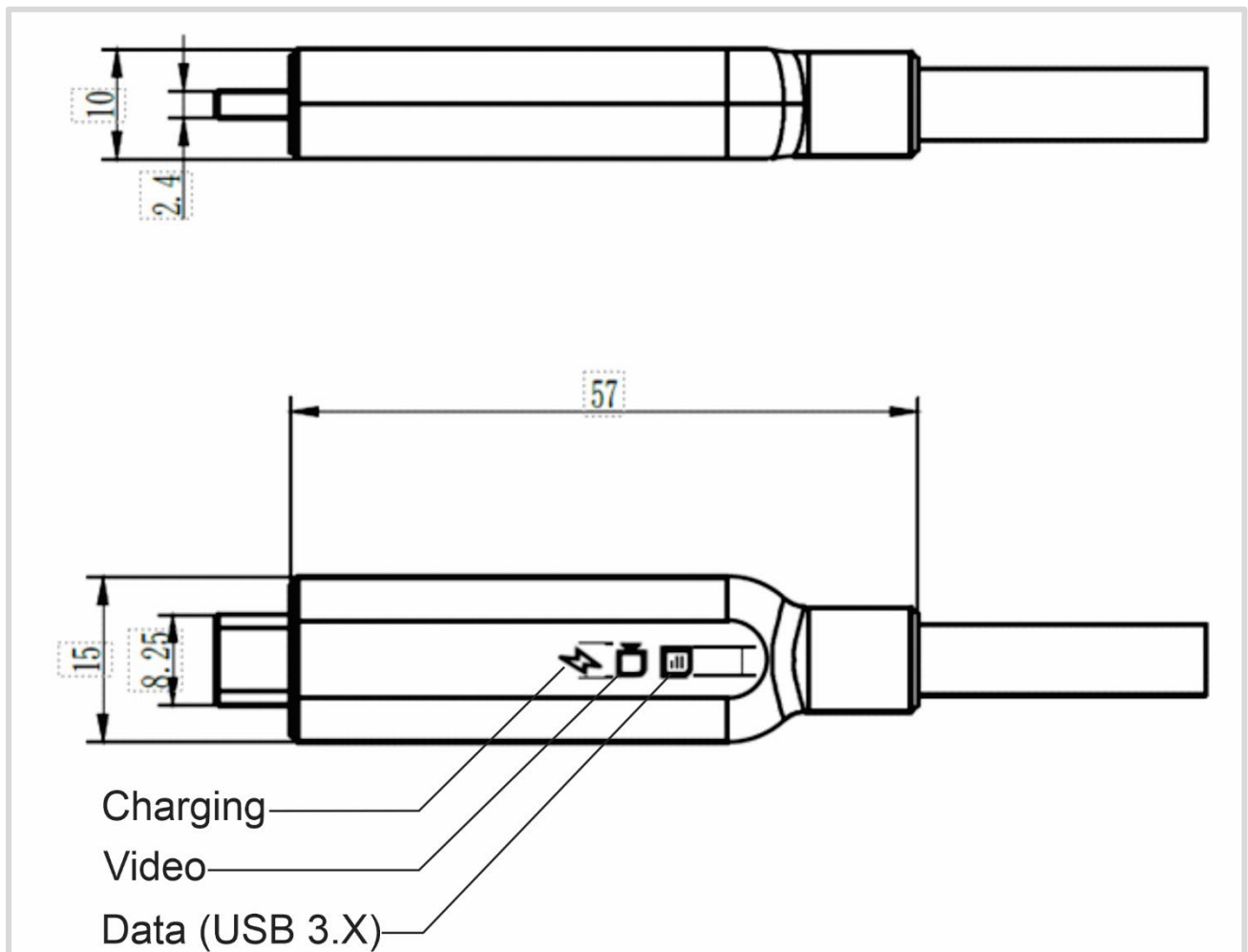
TECHNICAL SPECIFICATIONS

Bandwidth	USB 3.2 Gen 2: 10 Gbps USB 2.0 480Mbps DP1.4 8.1 Gbps
Power Delivery	PD3.0, 20V 3A
Power Supply	By Vconn (3.0 V to 5.5V)
Cable Outer Diameter	6.5mm
Cable structure	5- core optical fiber + 12 copper wires
Jacket Outer Material	Black PVC
Cable Filler	Kevlar
Cable Color	Black or custom
Minimum Bend Radius	20mm/ 10mm (Dynamic/static)
Cable pressure resistance	200N/400N (Long term/short term)

POWER DROP

		Input power (W)			
		40		60	
		Output power at the far end			
Model	Length (ft)	Power Drop(W)	Voltage Drop(V)	Power Drop(W)	Voltage Drop(V)
CLS-AOCU32/FF-50	50	2W	1V	3W	1.5V
CLS-AOCU32/FF-66	66	3W	1.5V	4.2W	2.1V

CONNECTORS DIMENSIONS

The X3 icons in the figure below represent the cable's capability.

Charging
Video
Data (USB 3.X)

NOTE

If the USB-C connector socket on your device is recessed, you can use the slim USB-C (female) to USB-C (male) adapter – model PG-U32/FF (96-0235100).

1. Place the SOURCE/DISPLAY end inside the Pulling Tool and close its cover.

NOTE:
You can pull the cable either from the display side or the source side
but you have to make sure that the cable polarity is correct.
(tagged Source if pulling the source side or Display if pulling the display side).
Attach the pulling cable to the Pulling Tool.

2. Carefully install the cable (for example, in the wall or conduit or under the floor).

3. Plug the SOURCE connector head of the cable into the source devices.

    - **Do not plug the SOURCE connector into the display device.**

4. Plug the DISPLAY connector head of the cable into the display devices.

    - **Do not plug the DISPLAY connector into the source device.**