

Savlink Active Optical USB 3.2 Gen2 Cable

Bidirectional | 10Gbps | PD 60W

Model: (SVRC-3120)

Specification

ECN Change History Form

Edition	Release Date	Change Details	Prepare	Verify	Ratify
1.0	2024.5.20	First Edition Release	R&D		

I Product View

Savlink USB 3.2 Gen 2 Type-C AOC is a pioneering active optical cable designed to break the distance limits of traditional copper wires. Extending up to 10 meters, it delivers true 10Gbps Super Speed+with absolute stability and is completely immune to EMI, making it the definitive solution for data centers and professional studios.

For creators, it is a game-changer. Equipped with a German Silicon Line chip and a 90° Right-Angle Design, it ensures lag-free live capture of high-res RAW files while protecting your camera gear. With 60W PD fast charging, it supports simultaneous data transfer and power, eliminating battery anxiety during long shoots or VR sessions.

Breaking the traditional Host-to-Device limitation, Savlink's upgraded cable supports true bi-directional transmission. Both ends are identical, allowing blind-plug connection to PCs, cameras, VR headsets, or consoles without worrying about orientation. Fully backward compatible with USB 3.0/2.0 protocols.



Alternative Molds Available

II. Product Features

- Meet USB3.2 Gen2 Standard, bandwidth can reach 10Gbps superspeed (Not Support the USB 4 Disk)
- Uncompressed signal and the image quality is not distorted.
- Hybrid copper and fiber cable, anti-interference, no-radiation, strong resistance to EMI
- Support to 60W fast charging.
- True Bi-Directional, No Direction
- 850nm VCSEL and PIN photo detector
- Plug and play, support hot plug
- 90° Right-Angle Design or Screw Design
- Cable OD less than $\Phi 5.0\text{mm}$, lighter application
- No external power supply required
- Applicable length: 0.2-10 meters, support other distance customization.
- Ultra-lightweight design for unrestricted VR/AR movement; driver-free direct connect bypasses hub limits for camera tethering and high-speed HDD sync.
- Gold-plated pins and double-layer shielding ensure decade-long reliability.
- Compatible with Mac Book, AR VR, Storage Camera and USB 3.2 devices for Conference, and data centers.
- Not Support Thunderbolt

III. Performance Parameters

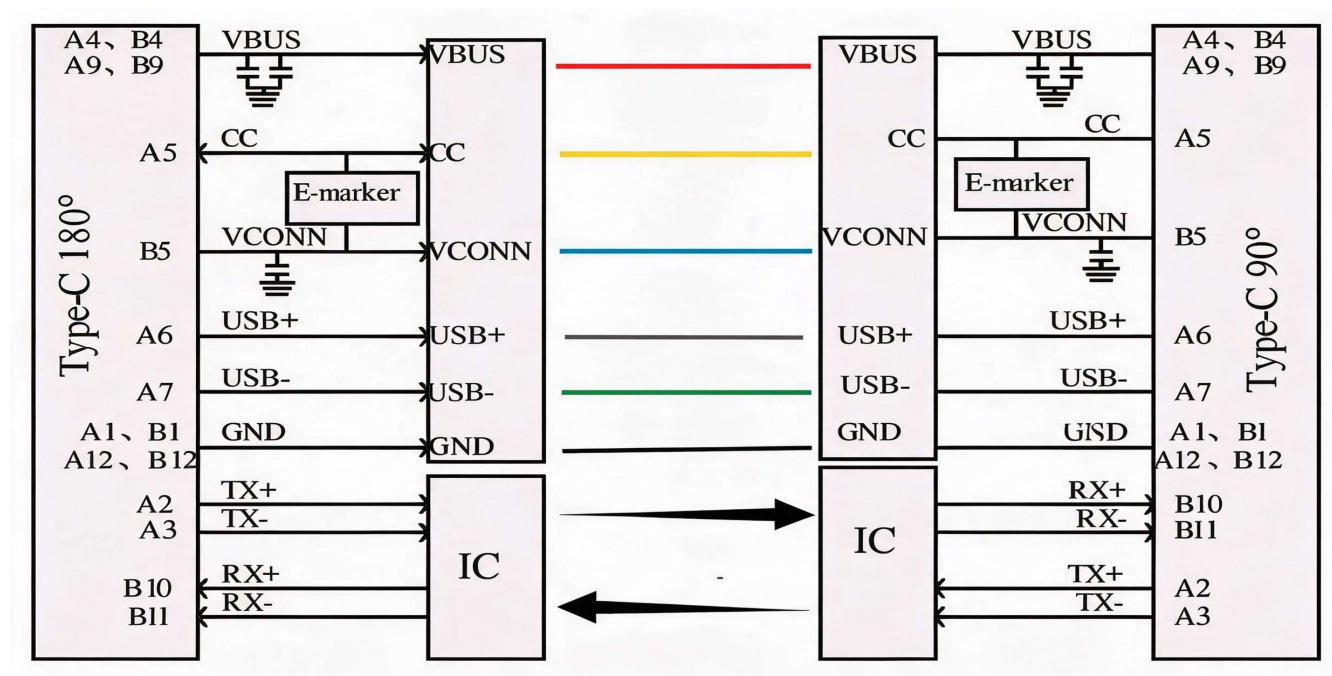
3.1 The performance parameters of the Savlink Active Optical USB 3.2 Gen2 Cable are shown in the following table:

Parameter	Specification
Interface type	2 x USB Type-C Male Nickel Plated
Cable	Hybrid with OM3 Fiber / Copper 2 fiber + 6 Copper + Ground + Braid OD: 5.0mm
Power Consumption	PD 60W
Bandwidth	10Gbps
USB Version	USB 3.2 Version Compatible with USB 2.0 & 1.1
Power	Non external power required
Driver	Hot-Plug Support/No Driver
Jacket Material	Standard :PVC Customize:TPE or CMP or LSZH or TPU

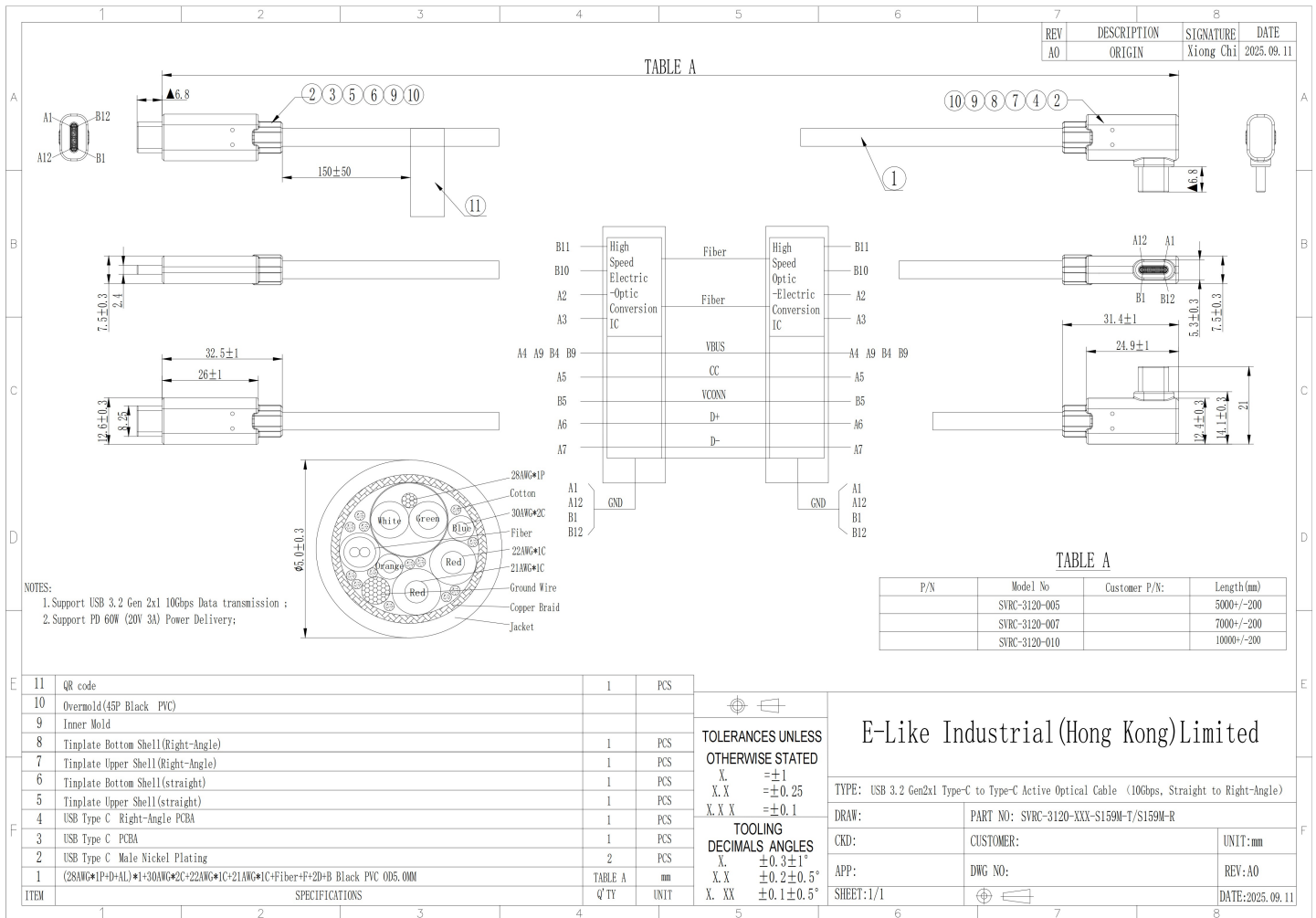
Correct connection	True Bi-Directional
Temperature Range	Operating : 0~50 degree C Storage: -20 ~70 degree C
Differential Input	100 ohm
Bend Radius	50mmnd depends on your connected devices.
Relative Working Humidity	0 ~ 85 % RH,Non-Condensing
O/E Converter	4 channel 850 nm VCSEL array
Tensile strength	200N
Crush resistance	100N
Video Bandwidth	Not Support
Safety and Emission	CE / FCC / RoHS / REACH / UL VW-1
Correct connection	True Bi-Directional
Cable length	5m/7.5m/10m Custom length available.
Shell	Plastic Shell or Custom design
Package	1PCS/ Anti-Static Foil Bag +Yellow Box

IV.Interface Definition

4.1 Savlink Active Optical USB 3.2 Gen2 Cable Typical Interface Circuit



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V.Working Principle

Unlike standard passive copper cables, a USB 10G AOC utilizes a hybrid construction to handle different types of signals efficiently:

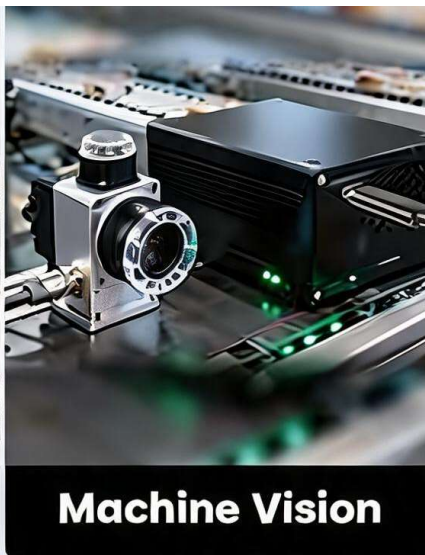
High-Speed Data (USB 3.2 Gen 2): 2 multi-mode glass fibers (OM3) replace the original copper wires to carry 10Gbps data. These fibers utilize Vertical-Cavity Surface-Emitting Lasers (VCSELs) operating at an 850nm wavelength.

Low-Speed Control & Power: Standard copper wires are retained within the cable jacket to handle USB 2.0 signals (480Mbps) and deliver bus power (up to 3V/20mA via 10M) to the active chips and connected devices



VI. Applications

- Data Storage & Transfer
- Professional Imaging & Photography
- Cameras (DSLR/Mirror less Tethering)
- Conferencing & Collaboration
- Smart Education & Training
- VR / AR Headsets & Glasses
- Machine Vision



VII. Q&A

Q1: Does this fiber optic cable really support bi-directional transmission? My previous cable required distinguishing between host and device ends, which was very troublesome.

A1: Yes, the Savlink upgraded version adopts the latest optoelectronic conversion scheme and truly supports **Bi-Directional Transmission**. Both ends are identical USB-C connectors, allowing you to connect cameras, computers, VR headsets, or phones without worrying about orientation. It completely eliminates the "no signal when plugged in backwards" issue of traditional fiber cables—just plug and play.

Q2: Since it is designed for camera tethering, how does it solve dropouts and instability during long shooting sessions?

A2: This cable is built for high-load tethering:

Built-in German SiliconLine Chip: Intelligently regulates current and data flow to prevent overloads and signal interruption, ensuring zero-lag, real-time preview and shooting.

90° Right-Angle Design: Greatly reduces stress on the camera port, preventing accidental disconnection or damage caused by gravity, ideal for studio setups and outdoor shooting.

Fiber Optic Immunity: Completely isolates electromagnetic interference (EMI/RFI), guaranteeing stable transmission of large RAW files.

Q4: Can this cable charge the camera while transferring data? Is the power sufficient?

A4: Absolutely. It supports **60W PD Fast Charging**. While transferring massive photos and videos via USB 3.2 at 10Gbps, it simultaneously provides stable power to your host (laptop) or camera.

Real-world test: Paired with a 60W adapter, it fast charges an iPhone 16 Pro Max; for mirror less cameras like the Sony A7IV or Canon R5, it fully covers power demands for shooting while charging, ending battery anxiety. (Note: Not compatible with Fujifilm XT4).

Q5: Is 10Gbps speed really necessary for camera tethering?

A5: It is highly necessary. When shooting **RAW format** or **4K/8K video live streams** with high-megapixel cameras like the Sony A7IV or Canon R5, data throughput is immense. 10Gbps (USB 3.2 Gen 2) ensures images load instantly on your computer screen for true "WYSIWYG" real-time editing, avoiding the lag caused by standard USB 3.0 cables.

Q6: Is this cable compatible with my devices?

A6: It is widely compatible with all standard USB-C devices, including but not limited to:

Cameras: Sony A7IV/A7SIII, Canon R5/R6, Nikon Z series, etc.

Computers: MacBook Pro/Air, Windows laptops.

Others: VR headsets, smartphones, HDD docks.

 **Note:** This cable uses the USB protocol and is **not compatible with Thunderbolt devices**.

Q7: Is this cable durable? It looks quite thin.

A7: Although the cable body uses flexible PVC material to reduce weight, it features an internal double-layer shielding structure. User feedback confirms it is "sturdy and well built," capable of withstanding daily pulling and bending.

Q8: What are the benefits of the 45°/90° right-angle design in actual use?

A8:The L-shape is not just for aesthetics. It allows the cable to hang naturally along the camera body instead of sticking straight out. This reduces lever stress on the camera's USB port (protecting your expensive gear) and allows the camera to sit closer to walls or desktop mounts, offering more flexibility in tight spaces.

Q9: Does this cable support connecting and reading USB4 external hard drives?

A9:No, it does not. As this is an active optical cable (AOC) designed based on the USB 3.2 (U3) standard, its bandwidth and protocol architecture do not meet USB4 requirements. Therefore, it cannot be used to connect or read USB4 external hard drives.

Q10: Does this cable support transmitting 4K & 8K video?

A10:No, it does not. This product is a **Data-Only cable** and does not support video signal transmission. If you need to transmit both data and 4K/8K video signals simultaneously, please choose our other model: the **Full-Function USB-C AOC Cable**.