



USB-C AOC Fiber Optic Cable for 8K30 & 4K60 Video, 10Gbps Data and up to 60W Power Delivery

FX-I605 – Active USB 3.2 Gen2x1 Hybrid Cable: Fibre-Copper Transmission for High-Speed AV Connectivity

The FX-I605 integrates an active hybrid cable architecture, combining fibre optics for AV signals with copper conductors for power and data. This design supports high-bandwidth USB 3.2 Gen2x1 transmission while maintaining mechanical flexibility and robust EMI resistance, making it suitable for professional AV deployments in meeting rooms, control centres, and collaborative workspaces. The cable's full-metal housing and gold-plated contacts contribute to enhanced signal integrity and mechanical durability. Its halogen-free TPE sheath enables compliance with demanding installation environments, supporting both fixed and semi-permanent setups without requiring external power.

- **High-Speed USB 3.2 Gen2x1:** Active electronics support 10Gbps data transfer rates, ensuring reliable high-resolution video and fast data transmission. Downward compatibility with earlier USB standards allows seamless integration with legacy devices in diverse AV system configurations.
- **Gold-Plated Precision Contacts:** The connectors utilise gold-plated contacts to reduce contact resistance and improve long-term reliability. This feature supports stable signal transmission in environments where frequent connection cycles are required.
- **USB-C Male to Male Configuration:** The cable features USB-C male connectors at both ends, supporting direct connections between modern AV equipment, such as conferencing systems, interactive displays, and BYOD interfaces, without the need for adapters.
- **Unidirectional Hybrid Construction:** Fibre optic conductors handle AV signal transmission, while copper wires carry power and data. This hybrid approach minimises attenuation and electromagnetic interference, supporting consistent performance over extended cable lengths.
- **EMI Resistance and Halogen-Free Sheath:** The 6.5mm diameter TPE sheath is halogen-free, providing low smoke emission and enhanced safety in public or enclosed spaces. Integrated EMI resistance ensures stable operation in electrically noisy AV environments.

Reliable Hybrid Connectivity for Professional AV

By combining active signal processing with a fibre-copper hybrid topology, the FX-I605 supports high-speed USB connectivity and stable AV signal transmission across a range of professional installations. Its mechanical durability, EMI resistance, and halogen-free construction address the technical requirements of modern meeting spaces and control environments, facilitating secure and compliant AV integration.



Features

- Active USB 3.2 Gen2x1 - 10Gbps data transmission, downward compatible
- Gold-plated precision contacts
- USB-C male to USB-C male, full-metal housing
- Unidirectional Hybrid cable – Fiber for AV; copper for power and data, Ø 6.5mm

- With EMI resistance, low attenuation, no external power supply required
- TPE cable sheath with a halogen-free composition

Specifications

Cable	
Cable standard	USB 10Gbps 60W
Cable jacket material	Thermoplastic Elastomer (TPE)
Cable jacket characteristics	Matte
Cable shape	Round
Cable fire class	UL VW-1
Cable diameter (mm)	6.5 mm
Cable length detection	Yes
Cable shielding	Single shielded
Shield materials	Aluminium foil
Primary conductor gauge (AWG)	24
Additional cable components	Cotton filler material
Conductor material	Fibre optic/Copper
Mechanical durability (cycles)	10000
Minimum bending radius (fixed installation)(mm)	65 mm
Minimum bending radius (flexible use)(mm)	65 mm
Nominal voltage (V)	20 V
Tensile strength (N/mm ²)	78.45 N/mm ²
Unidirectional	Yes

Connection	
Connector material	Gold-plated
Connector housing material	Zinc alloy
Connector contacts plating	Gold-plated
Connector shielding	Yes
Connector shield material	Cupronickel
Pulling force (kN)	0.147 kN
Connector 1 standard	USB-IF
Connector 1	USB Type-C (2.0/1.0)
Connector 1 gender	Male connector
Connector 1 form factor	Straight
Connector 1 lockable	No locking
Connector 1 pinout	22+1 (Type-C full feature)
Connector 1 dimensions (WxDxH) (mm)	54.60 mm x 12.60 mm x 8.00 mm
Connector 1 current (A)	3 A
Connector 2 standard	USB-IF
Connector 2	USB Type-C (2.0/1.0)
Connector 2 gender	Male connector
Connector 2 form factor	Straight
Connector 2 lockable	No locking
Connector 2 pinout	22+1 (Type-C full feature)
Connector 2 dimensions (WxDxH) (mm)	54.60 mm x 12.60 mm x 8.00 mm
Connector 2 current (A)	3 A

USB	
USB version	USB 3.2 Gen2x1
USB data rate (Gbit/s)	10 Gbit/s
DP Alt mode	Yes
Maximum resolution (USB)	7680x4320p
USB Power Delivery revision	Fast charge
USB Power Delivery Range	60W SPR
USB port voltage (V)	20 V
USB port current (A)	3 A
Fast charging	Yes
e-Marker	Yes

General Information	
Operating temperature (T-T)(°C)	from 0 °C to 50 °C
Storage temperature (T-T)(°C)	from -20 °C to 70 °C
Operating relative humidity (H-H) (%)	from 10 % to 80 %
Storage relative humidity (H-H) (%)	from 10 % to 80 %
Certification	RoHS, CE

Delivery Content

Description
1x FiberX FX-I605 USB-C AOC Fiber Optic Cable
1x User Manual DE/EN
1x Warning Card (AOC)



Active Optical Cable

Please check the polarities of the cable connectors before installation. The connector labeled "Device" must be connected to the receiving device and the connector labeled "Host" must be connected to the transmitting source device.

Overview

Parent	Item-No.	Cable length
FX-I605	FX-I605-003	3.00 m
	FX-I605-005	5.00 m
	FX-I605-007	7.50 m
	FX-I605-010	10.00 m
	FX-I605-012	12.00 m
	FX-I605-015	15.00 m

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