



USB3.1 Gen1 Hybrid Active Optical Cable

EPIUH64-A0B3

Rev. 1.0



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Change History

Rev	Date	Modification	Prepared by
V1.0	21, 01, 2022	Initial release	Lydia

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1 Description

Everpro introduce new generation of USB Type A to USB Micro B interface series active optical cable (AOC). EPIUH64 is metal housing with locking screws in device side. On the basis of use optical fiber as the transmission medium, IUH64 integrate copper to achieve the purpose of supplying power to device. The hybrid cable length can be up to 50m without adding any relay device which is suitable for the scene of having no on-site power supply. The high flexible cable of IUH64 series is suitable for machine vision using. This production can meet the USB3.1 GEN1 vision standard.

2 Feature

- Cable length can be up to 50m.
- Transition speed can be up to 5Gbps.
- Meet USB3 Vision Standard.
- With locking screw in device side.
- Metal can.
- High flexibility: >10million cycle times bending test.
- Providing maximum 900mA/5V for the device.
- No driver.
- Support hot-plugging.

3 Specification

Physical Specification

Host Side	USB3.0 Standard-A Plug
Device Side	USB3.0 Micro B Plug (with locking screw)
Dimension of The End	MB 51.61mm/23.5mm/8mm
	AM 53.04mm/19.14mm/10mm
Net Weight (Typical 10m)	408g
Cable Diameter	4.0mm
Cable Length	Up to 50m
Option Cable length	5m/10m/20m/30m/40m/50m
Bend Radius (Dynamic/Static)	40mm/20mm
Tensile Strength (Long Term/Short Term)	220N/120N
Crush Resistance (Long Term/Short Term)/100mm	200N/350N
Operating/Storage Temperature	-20~+60°C/-40~+85°C
Operating/Storage humidity	20%~80% RH/20%~80% RH

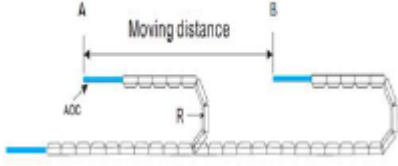
Electrical Specification

Input Power(Host Side):	
-Input Voltage	4.75~5V
-Current(max)	200mA
-Power Consumption (max)	0.94W
Output Power(Device Side):	
-Output Voltage	>4V
-Current(max)	900mA(0~ < 40m), 600mA(40m~50m)

General Information

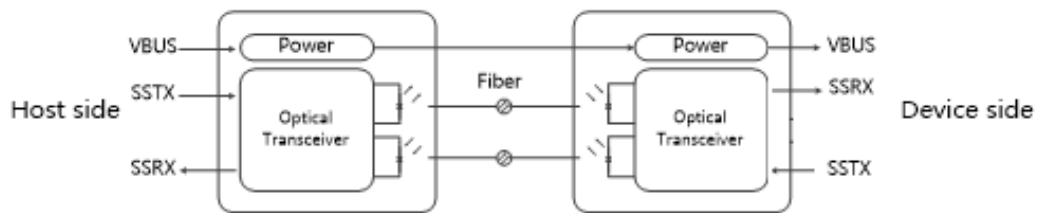
ROHS2.0	Yes
CE/FCC	Yes
Warranty	1 year

Reliability Test Information

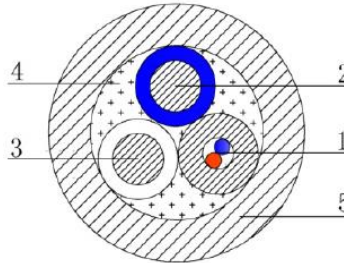
No.1	Item	Test Description	Pass/Fail Criteria
1	Cable high Flexibility test 	Bending Stroke(mm): 1000 Bending Cycle: A→B→A Bending Velocity V(cycle/min): 80 Ambient Temperature: 25°C Bending Radius (mm): 50 Duration:>20million cycles	No bit error had been detected by AOC tester after High Flexibility test

Technical Description

IUH64 built-in optical transceiver chip to complete the OE & EO conversion.

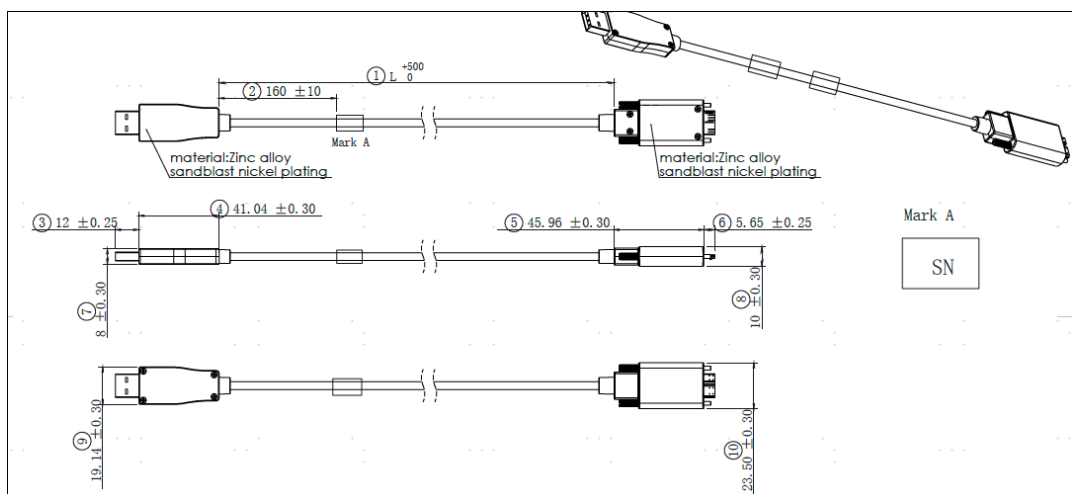


4 Fiber Specification



No.	category	Value	supplementary
1	Raw cable	Outer diameter $1.1 \pm 0.05\text{mm}$, thickness $0.25 \pm 0.03\text{mm}$	2 cores
2	Blue PE copper wire	Outer diameter $1.20-1.25\text{mm}$	twist
3	White PE copper wire	Outer diameter $1.20-1.25\text{mm}$	twist
4	Kevlar	Strength Member	$5*1610\text{dtex}$
5	Outer Jacket	Black TPU	$\text{OD } 4.0 \pm 0.15\text{mm}$

5 Cable Dimension



6 Part Number

Part Number	Description
EPIUH64-AOB3KxxxM	USB3.1 GEN1 Hybrid AOC, Type A male to Micro B male with locking screw, Metal Housing, xxx=xxx meter, for example 050=50 meter

Note1: NRE is need if adding customized logo.

Note2: The longest cable length is 50m.

Note3: Lead time will be increased if need customized length.

7 Application (Possible but not limited)

- Machine Vision Camera Extension
- Security Camera Extension
- Digital Signage and TV Wall
- Smart Digital Video Surveillance System
- Zero Client Connectivity
- Remote Storage