

USB3 MACHINE VISION CABLES

● Compact ● Ultra-Slim ● High-Flex ● AOC ● Extension ● HUB ● USB 3.1

JARGY[®]

Mobile Computing [®]
29th Anniversary since 1987


VISION
2016

Booth No: 1J55

LONG DISTANCE CONNECTION

Compact

USB3 Machine Vision A to Micro-B Cables-M/M

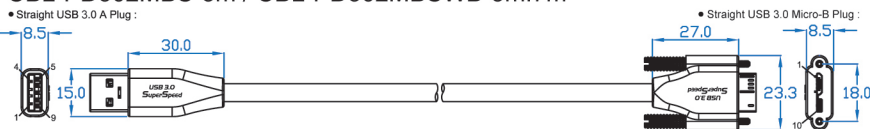
COPPER CABLE (METAL CABLE)

- Extend the limit of USB 3.0 3 meter (10 foot) signals transfer up to 30 meter (98 foot) more!!
- support both USB 3.0 and USB 2.0 data transfer
- USB 3.0 bus-powered, external power supply free for cable of all lengths.



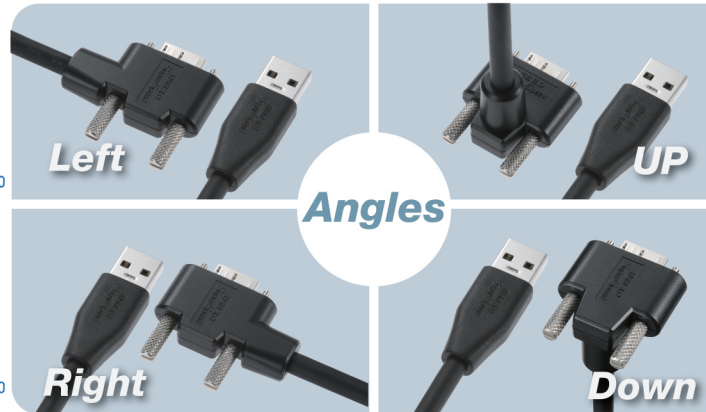
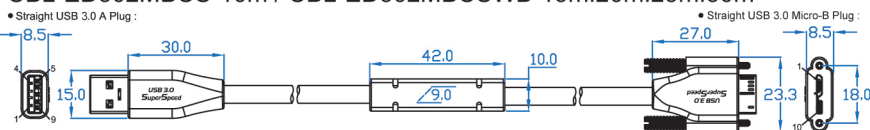
Passive

CBL-PD302MBS-3m / CBL-PD302MBSWB-5m.7m



Active

CBL-ED302MBCS-10m / CBL-ED302MBCSWB-15m.20m.25m.30m



support High Resolution & High FPS USB3 Machine Vision Cameras without lost frames all the time.

high frame rate 170 fps at full 2.0~2.3 MP resolution, high frame rate 121 fps at full 3.2 MP resolution, high frame rate 90 fps at full 4.0~4.2 MP resolution, high frame rate 75 fps at full 5 MP resolution, high frame rate 30 fps at full 12 MP resolution, high frame rate 21 fps at full 18 MP resolution (500 MB/s wide bandwidth data throughput)

Fit for



Slim Straight A to Low Profile Angle Micro-B Cables-M/M

• Passive: 0.5m / 1m / 2m / 3m

• Active: 4m / 5m / 6m / ... / 20m (repeater size: 42(L) x 10(W) x 9(T)mm)

Ultra Slim

- **Slim A Plug**
- **Space-saving Micro-B Plug** (without locking screws)
- **Thin & Flexible Cable** (O.D.: 4.3mm, USB 2.0 + USB 3.0)
- **Tiny repeater for Active Cable** (42(L) x 10(W) x 9(T) in mm)
- **USB 3.0 bus-powered** (no external power supply needed for cable of all lengths)

Slim Straight A Plug



thin!
6.5mm

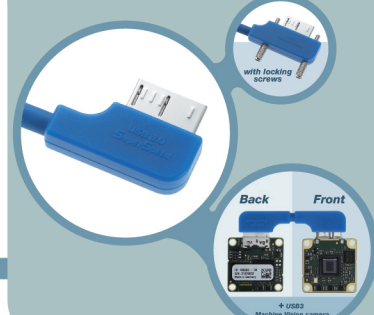
short!
31.5mm

15.8mm
narrow!

support High Resolution & High FPS
USB3 Machine Vision Cameras without
lost frames all the time.

high frame rate 170 fps at full 2.0~2.3 MP
resolution, high frame rate 121 fps at full
3.2 MP resolution, high frame rate 90 fps
at full 4.0~4.2 MP resolution, high frame rate 75 fps at
full 5 MP resolution, high frame rate 30 fps at full 12
MP resolution, high frame rate 21 fps at full 18 MP
resolution (500 MB/s wide bandwidth data
throughput)

Low Profile Left Angle Micro-B Plug without locking screws



Straight A to Left Angle Micro-B Cable-M/M:
• CBL-USPD302MB-0.5mLA / 1mLA / 2mLA / 3mLA
• CBL-USPD302MB-4mLA / 5mLA / 6mLA / ... / 20mLA

6.5mm
thin!

24mm
narrow!

10mm
short!

Low Profile Right Angle Micro-B Plug without locking screws




Straight A to Right Angle Micro-B Cable-M/M:
• CBL-USPD302MB-0.5mRA / 1mRA / 2mRA / 3mRA
• CBL-USPD302MB-4mRA / 5mRA / 6mRA / ... / 20mRA

6.5mm
thin!

24mm
narrow!

10mm
short!

Low Profile Up Angle Micro-B Plug without locking screws



Straight A to Up Angle Micro-B Cable-M/M:
• CBL-USPD302MB-0.5mUA / 1mUA / 2mUA / 3mUA
• CBL-USPD302MB-4mUA / 5mUA / 6mUA / ... / 20mUA

6.5mm
thin!

14mm
short!

16.5mm
narrow!

Low Profile Down Angle Micro-B Plug without locking screws



Straight A to Down Angle Micro-B Cable-M/M:
• CBL-USPD302MB-0.5mDA / 1mDA / 2mDA / 3mDA
• CBL-USPD302MB-4mDA / 5mDA / 6mDA / ... / 20mDA

6.5mm
thin!

14mm
short!

16.5mm
narrow!

Fit for



• Basler



• IDS



• JAI



• Matrix Vision



• Point Grey



• SENTECH



• SVS-VISTEK



• The Imaging Source



• Toshiba Teli



• XIMEA

Slim Straight A to Low Profile Angle Micro-B Cables-M/M

• Passive: 0.5m / 1m / 2m / 3m

• Active: 4m / 5m / 6m / ... / 20m (repeater size: 42(L) x 10(W) x 9(T)mm)

- **Slim A Plug**
- **Space-saving Micro-B Plug** (with locking screws)
- **Thin & Flexible Cable** (O.D.: 4.3mm, USB 2.0 + USB 3.0)
- **Tiny repeater for Active Cable** (42(L) x 10(W) x 9(T) in mm)
- **USB 3.0 bus-powered** (no external power supply needed for cable of all lengths)

Slim Straight A Plug



Thin! 6.5mm
Short! 31.5mm
15.8mm narrow!

Low Profile Left Angle Micro-B Plug with locking screws


Straight A to Left Angle Micro-B Cable-M/M:
 • CBL-USPD302MBS-0.5mLA / 1mLA / 2mLA / 3mLA
 • CBL-USD302MBS-4mLA / 5mLA / 6mLA / ... / 20mLA



6.5mm thin!
32mm narrow!
10mm short!

Low Profile Right Angle Micro-B Plug with locking screws

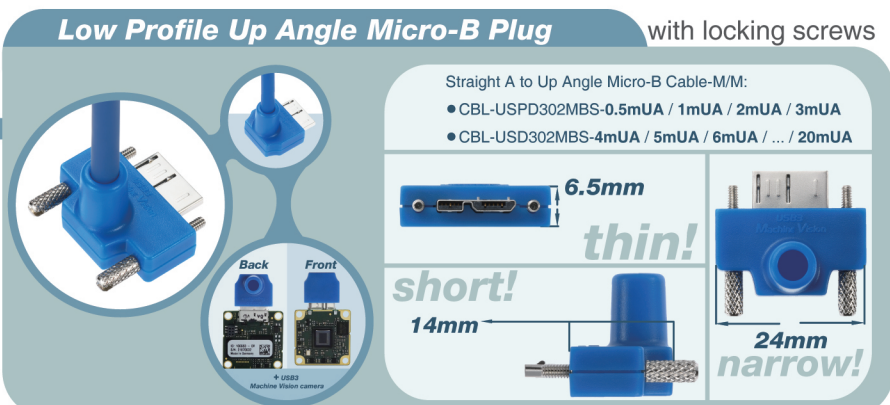
Straight A to Right Angle Micro-B Cable-M/M:
 • CBL-USPD302MBS-0.5mRA / 1mRA / 2mRA / 3mRA
 • CBL-USD302MBS-4mRA / 5mRA / 6mRA / ... / 20mRA



6.5mm thin!
32mm narrow!
10mm short!

Low Profile Up Angle Micro-B Plug with locking screws

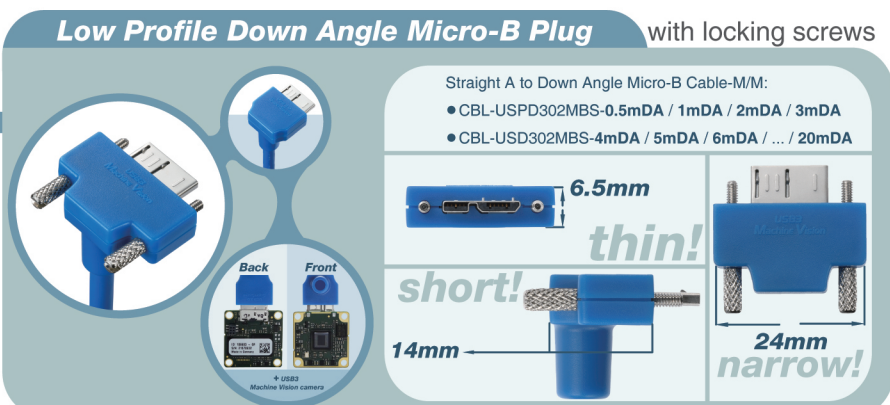
Straight A to Up Angle Micro-B Cable-M/M:
 • CBL-USPD302MBS-0.5mUA / 1mUA / 2mUA / 3mUA
 • CBL-USD302MBS-4mUA / 5mUA / 6mUA / ... / 20mUA



6.5mm thin!
14mm short!
24mm narrow!

Low Profile Down Angle Micro-B Plug with locking screws

Straight A to Down Angle Micro-B Cable-M/M:
 • CBL-USPD302MBS-0.5mDA / 1mDA / 2mDA / 3mDA
 • CBL-USD302MBS-4mDA / 5mDA / 6mDA / ... / 20mDA



6.5mm thin!
14mm short!
24mm narrow!

support High Resolution & High FPS
USB3 Machine Vision Cameras without
lost frames all the time.

high frame rate 170 fps at full 2.0~2.3 MP
resolution, high frame rate 121 fps at full
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MP resolution, high frame rate 21 fps at full 18 MP
resolution (500 MB/s wide bandwidth data
throughput)

Fit for



•Basler

•IDS

•JAI

•Matrix Vision

•Point Grey

•SENTECH

•SVS-VISTEK

•The Imaging Source

•Toshiba Teli

•XIMEA

USB3 Machine Vision Camera Cables

High-Flex

High-Flex (Hi-Flex/Continuous-Flex)

- Drag-chain Testing (Type-U Testing):

(1) R:125mm ▶ **Minimum 10,000,000 cycles (double strokes)**

(2) R:100mm ▶ Minimum 7,500,000 cycles (double strokes)

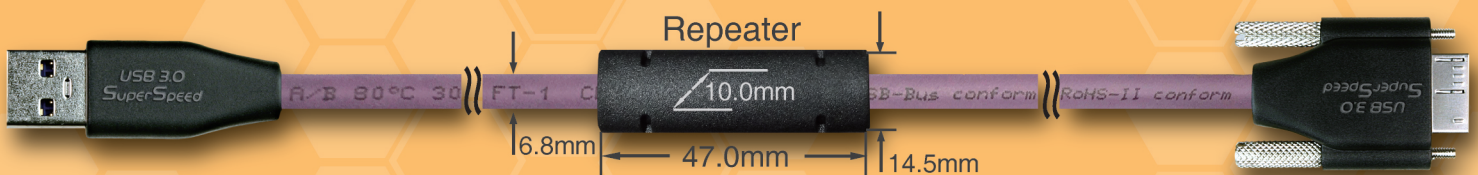
(3) R:88mm ▶ Minimum 5,000,000 cycles (double strokes)

USB3 Connectors [, Repeater(s)] & Cable Assemblies

Passive ▶ CBL-HFPD3igMBS-1m/2m/3m



Active ▶ CBL-HFD3igMBS-4m/5m/6m/7m/8m/9m/10m/...../20m



Straight A to Angle Micro-B M/M



CBL-HF(P)D3igMBS-(x)mLA



CBL-HF(P)D3igMBS-(x)mRA



CBL-HF(P)D3igMBS-(x)mUA



CBL-HF(P)D3igMBS-(x)mDA

- **support High Resolution & High FPS USB3 Cameras**

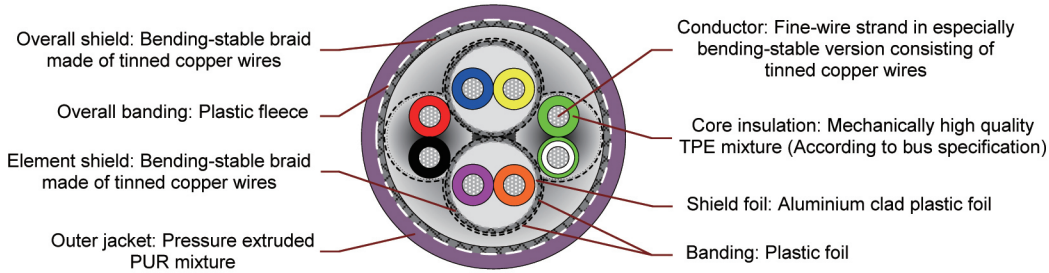
high frame rate 170 fps at full 2.0~2.3 MP resolution, high frame rate 121 fps at full 3.2 MP resolution, high frame rate 90 fps at full 4.0~4.2 MP resolution, high frame rate 75 fps at full 5 MP resolution, high frame rate 30 fps at full 12 MP resolution, high frame rate 21 fps at full 18 MP resolution (500 MB/s wide bandwidth data throughput)

without lost frames all the time.

- **USB 3.0 bus-powered, external Power supply free for cable of all lengths.**
- **USB 3.0/2.0/1.1/1.0 supported**

PUR - e-chain[®] - Bus cable for medium load requirements (class 4.3.3): shielded, oil- and coolant-resistant, PVC- and halogen- free, notch-resistant as well as flame-retardant.

CFBUS.PUR.068 (USB 3.0)



Electrical values:

- Nominal voltage:** 50 V
- Test voltage:** 500 V (Core / Core) & 500 V (Core / Shield) following DIN EN 50289-1-3
- Certifications:** cRUus: (E310776: Style 1598 & 20236, 30 V / 80 °C)
- Operating capacity:** Shielded pair: approx. 60 pF / m
Unshielded pair: approx. 52 pF / m
⇒ (at 800 Hz) following DIN EN 50289-1-5
- Characteristic wave resistance:** Shielded pair: 90 ± 18 Ω (at 1 MHz to 1200 MHz)
Unshielded pair: 105 ± 16 Ω (at 1 MHz)
⇒ following DIN EN 50289-1-11

Line attenuation {Signal pairs} [approx. db / 100 m] (following DIN EN 50289-1-8)			
Frequency [MHz]	1	625	1200
Part no.			
CFBUS.PUR.068	0,4	11,5	18,0

Construction table:

Part No.	Colour code	Cable construction
CFBUS.PUR.068	2x2xAWG28	red/black, green/whitegreen
	2x(2xAWG28)C	blue/yellow, orange/violet

USB2 Machine Vision Camera Cables

High-Flex (Hi-Flex/Continuous-Flex)

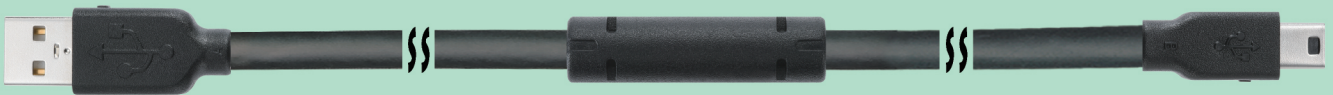
• Flex Testing:

- (1) TYPE-U (Rolling, C-Track, C-Chain) / R=67.5mm ▶ Minimum 5,000,000 times
- (2) TYPE-S / R=60mm ▶ Minimum 1,000,000 times
- (3) 90° BENDING (Tick-Tock Bending) / R=60mm ▶ Minimum 1,000,000 times

USB2 Connectors [, Repeater(s)] & Cable Assemblies

Passive ▶ CBL-HFPD203MB-1m/2m/3m/4m/5m/...../10m (no repeater)

Active ▶ CBL-HFD203MB-11m/12m/13m/14m/15m/20m/25m/...../50m



Passive ▶ CBL-HFPD203MBS-1m/2m/3m/4m/5m/...../10m (no repeater)

Active ▶ CBL-HFD203MBS-11m/12m/13m/14m/15m/20m/25m/...../50m



Passive ▶ CBL-HFPD203-1m/2m/3m/4m/5m/...../10m (no repeater)

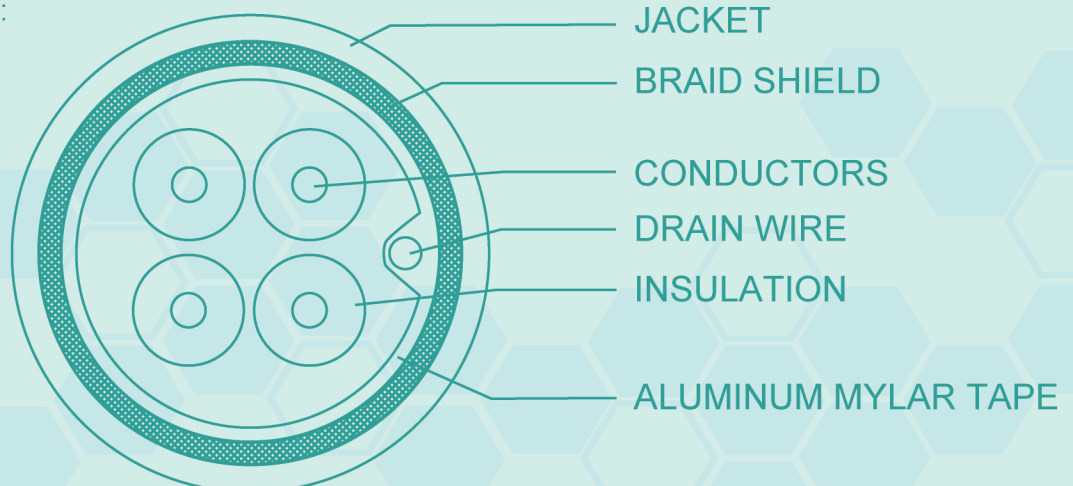
Active ▶ CBL-HFD203-11m/12m/13m/14m/15m/20m/25m/...../50m



APPENDIX

IDENTIFICATION:

- 1.Green ; White
- 2.Black
- 3.Red



Active Optical Cables

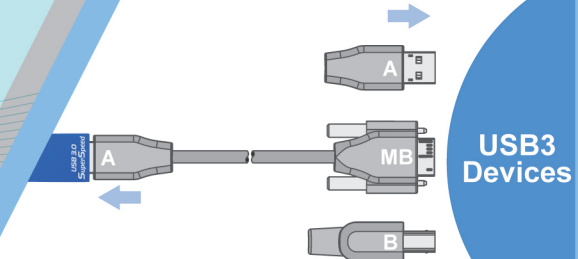
AOC

- Extend the limit of USB 3.0 3 meter (10 foot) signals transfer up to 50 meter (164 foot) more!!
- support USB 3.0 data transfer only
- External power supply needed & bundled with cable set



USB3 A to A Extension : M/F
CBL-U3AOC01-
10m/15m/20m/30m/40m/50m

Fit for



Suggested maximum cable length: 3 meters



USB3 A to B : M/M
CBL-U3AOC02-
10m/15m/20m/30m/40m/50m

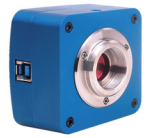
Fit for



Microsoft XBOX ONE Kinect Sensor



Video Conferencing Camera



USB3 Machine Vision Camera



USB3 A to Micro-B : M/M
CBL-U3AOC03S-
10m/15m/20m/30m/40m/50m

Fit for



USB3 Machine Vision Camera

Active Optical Cables

- USB 3.0 bus-powered - external power supply free for cable of all lengths
- Deliver sufficient USB 3.0 bus-power to remote A female end / connected USB 3.0 device / USB3 Machine Vision camera
- 2C optical fiber + 2C copper wire used
- support USB 3.0 data transfer only (USB 2.0 / 1.1 / 1.0 not supported)

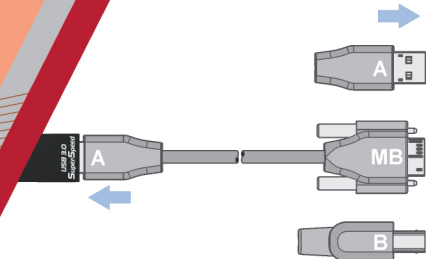


USB 3.0 bus-powered
USB3 A to A Extension : M/F

CBL-U3AOC04-

3m/5m/8m/10m

Fit for



USB3 Devices

Suggested maximum cable length: 3 meters



USB 3.0 bus-powered
USB3 A to B : M/M

CBL-U3AOC05-

3m/5m/8m/10m

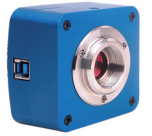
Fit for



Microsoft XBOX ONE Kinect Sensor



Video Conferencing Camera



USB3 Machine Vision Camera



USB 3.0 bus-powered
USB3 A to Micro-B : M/M

CBL-U3AOC06S-

3m/5m/8m/10m

Fit for



USB3 Machine Vision Camera

Active Optical Cables

- USB 3.0 bus-powered - external power supply free for cable of all lengths
- Deliver USB 3.0 bus-power of 5VDC±5%, maximum 900mA / 4.5W to remote A female end / connected USB 3.0 device / USB3 Machine Vision Camera
- 2C optical fiber + 2C copper wire used
- support USB 3.0 data transfer only (USB 2.0 / 1.1 / 1.0 not supported)

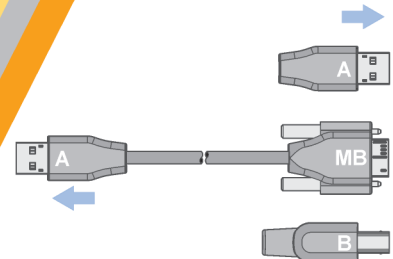


USB 3.0 bus-powered
USB3 A to A Extension : M/F

CBL-U3AOC07-

10m/15m/20m/30m/40m/50m

Fit for



USB3
Devices

Suggested maximum cable length: 3 meters



USB 3.0 bus-powered
USB3 A to B : M/M

CBL-U3AOC08-

10m/15m/20m/30m/40m/50m

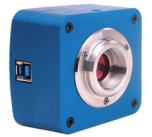
Fit for



Microsoft XBOX ONE Kinect Sensor



Video Conferencing Camera



USB3 Machine Vision Camera



USB 3.0 bus-powered
USB3 A to Micro-B : M/M

CBL-U3AOC09S-

10m/15m/20m/30m/40m/50m

Fit for



USB3 Machine Vision Camera

USB 3.0 bus-powered

LONG DISTANCE CONNECTION **ACTIVE**

Extension

A to A Extension Cables-M/F

COPPER CABLE (METAL CABLE)

- Extend the limit of USB 3.0 3 meter (10 foot) signals transfer up to 30 meter (98 foot) more!!
- support both USB 3.0 and USB 2.0 data transfer



USB 3.0 bus-powered, no external power supply needed for cable of all lengths!

Suggested maximum cable length: 3 meters



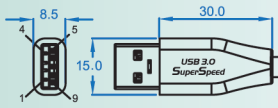
COPPER

- Deliver sufficient USB 3.0 bus power (5VDC \pm 5%, max. 900mA / 4.5W) to remote A female end

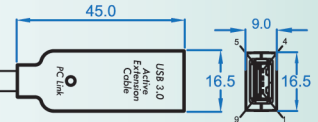
Drawing

CBL-PB302-3m/5m

- Straight USB 3.0 A Plug :

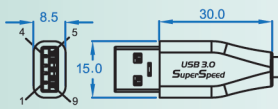


- Straight USB 3.0 A Female :

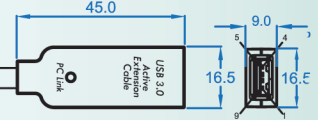


CBL-PB302-7m/10m/15m/20m/25m/30m

- Straight USB 3.0 A Plug :



- Straight USB 3.0 A Female :



There are more than 1 middle repeater for CBL-PB302-15m/20m/25m/30m

Fit for



- Basler •IDS •JAI •Matrix Vision •Point Grey •SENTECH •SVS-VISTEK •The Imaging Source •Toshiba Teli •XIMEA

USB 3.0 5Gbps SuperSpeed

Industrial Hub

Sheet metal construction cabinet

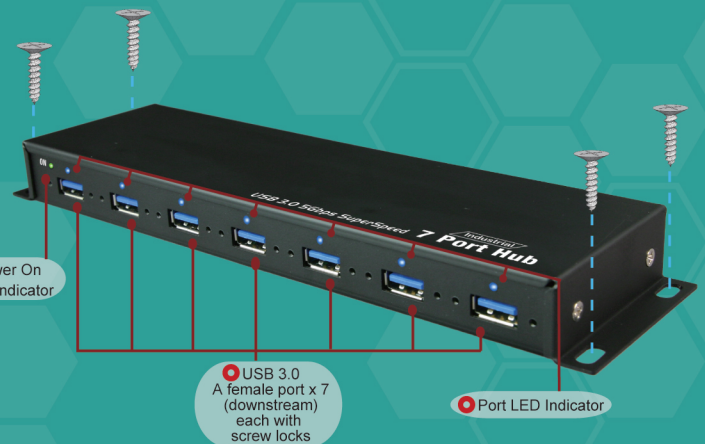
Easily for either Horizontal Placement or Wall-mounting Placement

HUB

HUB-318
4 port



HUB-318
4 port



Features

- USB 3.0 SuperSpeed transfer rate of up to 5Gbps
- Backwards compatible with USB 2.0/1.1
- Plug-&-Play, hot swappable, no driver required
- USB bus-powered or DC self-powered
- LED indicators for Link/AC Power and each device connection status monitoring
- Instant connection to computer through USB port
- Compact design for a small footprint that saves placement space
- Compatible with Windows 8/7/Vista/XP and Mac OS 10.7/10.8
- 100% developed/assembled/manufactured in Taiwan

USB 3.1 Gen 2 10Gbps

Passive USB 3.1 Gen 2 10Gbps connectors & cable assemblies-M/M
(A to Micro-B, A to C, C to Micro-B, C to C) are available also!

USB 3.1

A



Micro-B



C



USB 3.1 A to Micro-B



CBL-U3.1AMB- 1m / 2m / 3m

Cable O.D.: 4.8mm

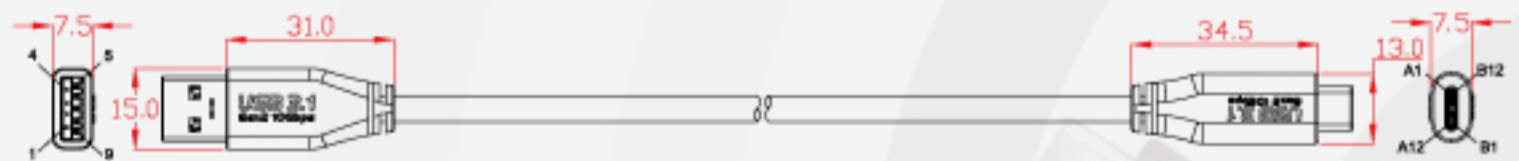


USB 3.1 A to C



CBL-U3.1AC- 1m / 2m / 2.7m

Cable O.D.: 4.8mm



USB 3.1 C to Micro-B



CBL-U3.1CMB- 1m / 2m / 2.7m

Cable O.D.: 4.8mm



USB 3.1 C to C



CBL-U3.1CC- 1m / 2m / 2.7m

Cable O.D.: 4.8mm





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