



Manual

BX USB-C Breakout Hub

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Please read before proceeding.

Before operating, please ensure that you read this document fully, and any additional documentation that may be included with the product.

Please keep this Manual for future reference.

For further support please contact us at: support@ashtonbentley.com

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1. Important Safety Information

PLEASE READ AND SAVE THIS INFORMATION

The following information and precautions should always be followed to reduce the risk of damage, fire, electric shock or injury to people. If in any doubt about installation, operation or maintenance please contact your vendor or Ashton Bentley.

- Follow all warnings and instructions in this document and marked on the equipment.
- Allow plenty of space in the construction area.
- Never operate the system outdoors or in very humid conditions or allow ingress of any liquid.
- Always use suitable cable management or install under a raised floor to avoid trip hazards.
- Do not block or cover any ventilation vents in the products.

Electrical

If the incoming mains electrical feed is unstable or prone to transient input voltage spikes of more than 1KV, we recommend the use of a surge protector connected to the power input cable.

If any of the following are noticed, then do not use the product until everything is back to a fully safe state:

- Power cables, plugs, power supplies/adapters, extension cords, surge protectors that are broken or damaged.
- Signs of overheating, smoke, sparks, or fire.
- Signs of liquid ingress or an object has fallen onto the electronic elements of product, the power cable, or power supply/adapter.

Note: Any product not supplied by Ashton Bentley should not be used if any of the above or other faults are experienced. Immediately disconnect from the Ashton Bentley product and any power supply, and contact the product manufacturer for further instructions, or until you get a suitable replacement.

Never wrap a power cable around a power supply/adapter or other object. Always route power cables so that they will not be walked on, tripped over, or pinched by objects.

Do not use any power supply/adapter that shows corrosion at the ac input pins or shows signs of overheating (such as deformed plastic).

The power cable and supply/adapter provided with this product are intended to be used with this product only. Do not use them with any other products. The use of 3rd party power supplies/adaptors will invalidate the warranty.

Do not use your system, or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.

2. What's in the box

2.A Box Contents.

BX USB-C Breakout Hub

900-00466

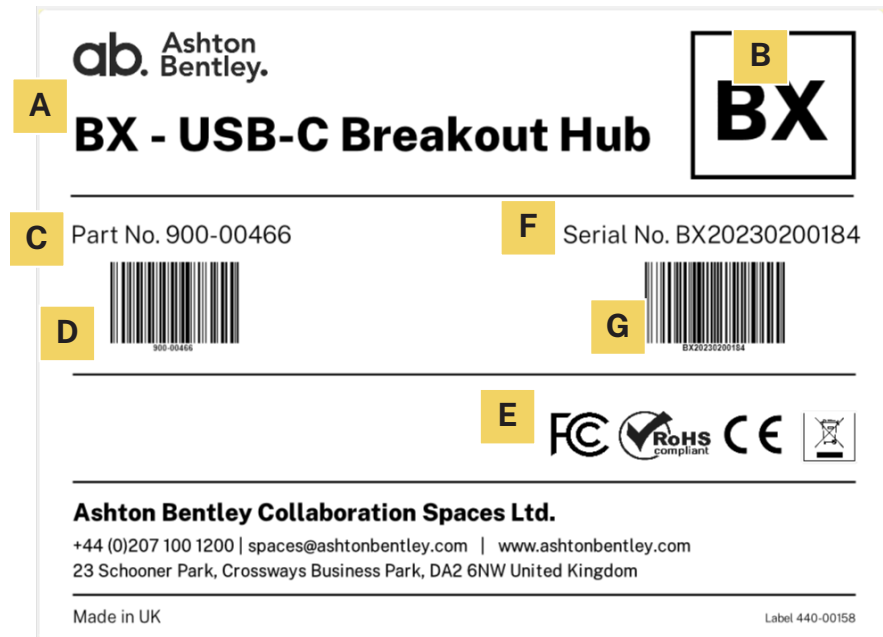
Qty	Box Contents	Part Number
1	BX USB-C Breakout Hub Unit	

2.B Shipping Weights & Dimensions.

Shipping Weight:	0.5Kg
Dimensions (mm):	(L) 315 x (W)220 x (H)75

2.C Box Labels.

The product is supplied in one or more boxes. Please ensure you have all boxes as listed below. Please inform your vendor immediately if any boxes are damaged, or contents missing.



- A: Product description.
- B: Carton ID.
- C: Part number.
- D: Part number barcode.
- E: Compliance & Conformity.
- F: Unit serial number.
- G: Unit serial number barcode

3. BX USB-C Breakout hub

3.A Overview BX USB-C Breakout Hub.

The BX Breakout Hub replaces proprietary USB-C docks with a professional grade unit that can be neatly mounted under a desk or table.

The BX provides a single USB-C connection for a laptop and breaks that out to:

- HDMI
- Network
- 3 x USB-A ports

The BX can be powered in two ways:

- Bus - the laptop provides power to the BX and the peripherals.
- Self - using the optional USB-C charging PSU. The PSU provides power for the BX and its peripherals, plus provides charging to the laptop using USB-C PD.

We strongly advise using the optional Ashton Bentley Locking USB-C and HDMI Cables as they prevent inadvertent disconnection from the BX.

The Locking USB-C Cable also provides 100W charging power to connected laptop (with optional charging PSU).

See Section 4 for details on Optional Accessories



3.B Dynamic USB 3.0 5V power switching.

Why is USB power control important?

Some Video Bars can only switch in and out of device mode if 5v is present in the USB connection.

Most 3rd party USB Break Out hubs permanently power the USB sockets when a charging power supply is attached, and so the Video Bar 'remains' in device mode and many fail to detect when a new laptop is connected.

With our dynamic 5v switching, when the laptop is disconnected the 5v on the USB 3.0 port is automatically turned off allowing the Video Bar to revert to 'normal' mode.

This unique feature prevents devices locking up or going into 'device mode' when they should not.

3.C Connectivity – Plate 1.



Connection	Type	Function
USB-C Retractor	USB-C (locking)	Connection to Laptop video/Network/USB/Power*

*With the optional BX Charging PSU, the BX will supply 100W charging power for the connected USB-C laptop.

We recommend either of the following Ashton Bentley USB-C inputs:

- 2.5m Locking USB-C Input cable
- USB-C Retractor

See Section 4 for details.

3.D Connectivity – Plate 2.

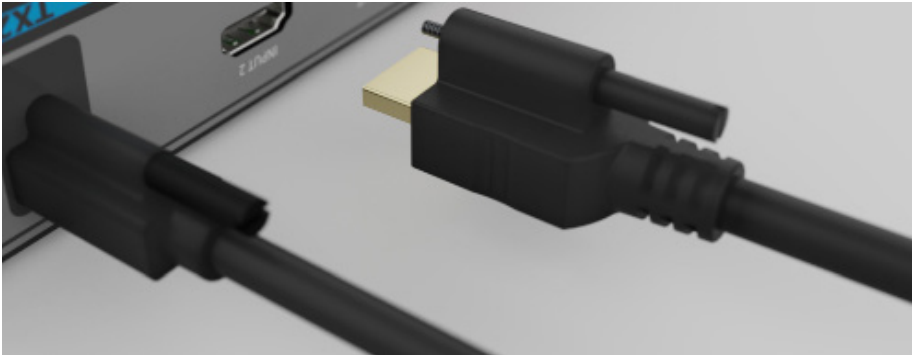


Connection	Type	Function
PWR	USB-C	Optional BX Laptop Charging PSU
HDMI	HDMI (locking)	HDMI Out: Resolution up to 4K@30Hz
NETWORK	RJ45	Ethernet Port: Speed up to 1Gbps
USB 2.0	USB	Loudspeaker/Mic etc. Transfer speed up to 480Mbps. Power 5v@0.9A
USB 3.0 (5v Switching)	USB	Videobar/Camera etc. Transfer speed up to 5Gbps. Power 5v@0.9A
USB 3.0 (5v Switching)	USB	Videobar/Camera etc. Transfer speed up to 5Gbps. Power 5v@0.9A

We recommend the Ashton Bentley 2.8m Locking HDMI Cable. See Section 4 for optional accessories..

3.E: Locking USB-C & HDMI Cables.

Ashton Bentley developed two cables for use with the BX (and other Ashton Bentley products).



USB-C **Part No. 115-00065 2.5m Locking USB-C Input Cable**

Features:

- A unique screw-in locking connector to prevent inadvertent disconnection
- 2.5m length which is longer than most USB-C Cables
- When used with optional USB-C Charging PSU, provides up to 100W of charging power to the laptop

HDMI **Part No. 115-00066 2.8m Locking HDMI Input Cable**

This cable has a unique screw-in locking connector to prevent inadvertent disconnection.

4. Setup and Operation

4.A: Setup.

The BX USB-C Breakout Hub is fully configured and ready to use out of the box. There are no additional drivers and/or configuration required prior to use.

Once the BX, and peripherals, are connected and powered up, the system is fully operational.

If problems are encountered, ensure all cables are routed and connected correctly, and if used the optional PSU powered.

4.B: Wiring.

- Connect a display via HDMI
- Connect the USB ports to devices in the system (Camera, Audio bar etc.).
- If required connect the BX ethernet port to the building network.
- If using the optional charging PSU, connect to the charging port
- Connect a USB-C input device

4.C: Basic Operation.

With room devices connected to the BX, when connecting a USB-C laptop via the USB-C port:

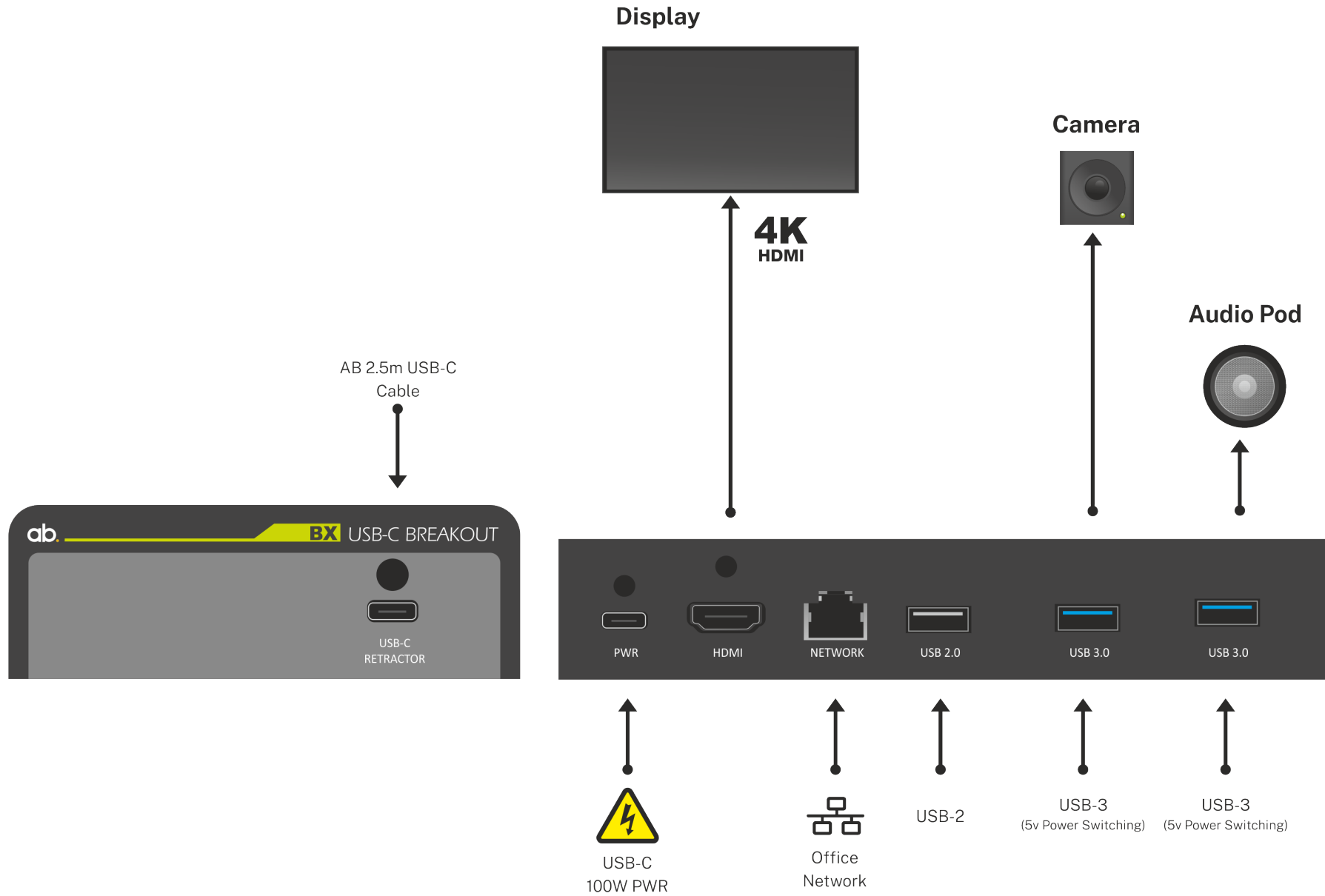
- The laptop's desktop will appear on the room display.
- The camera and audio will be available to the laptop.
- The wired ethernet connection will be available to the laptop.
- If the optional charging power supply is fitted, then the laptop will receive power from the BX.

When the Laptop is disconnected the 5V USB power on both USB 3.0 ports will turn off allowing the connected devices to revert to 'normal' mode and not behave as if the laptop had not been disconnected.

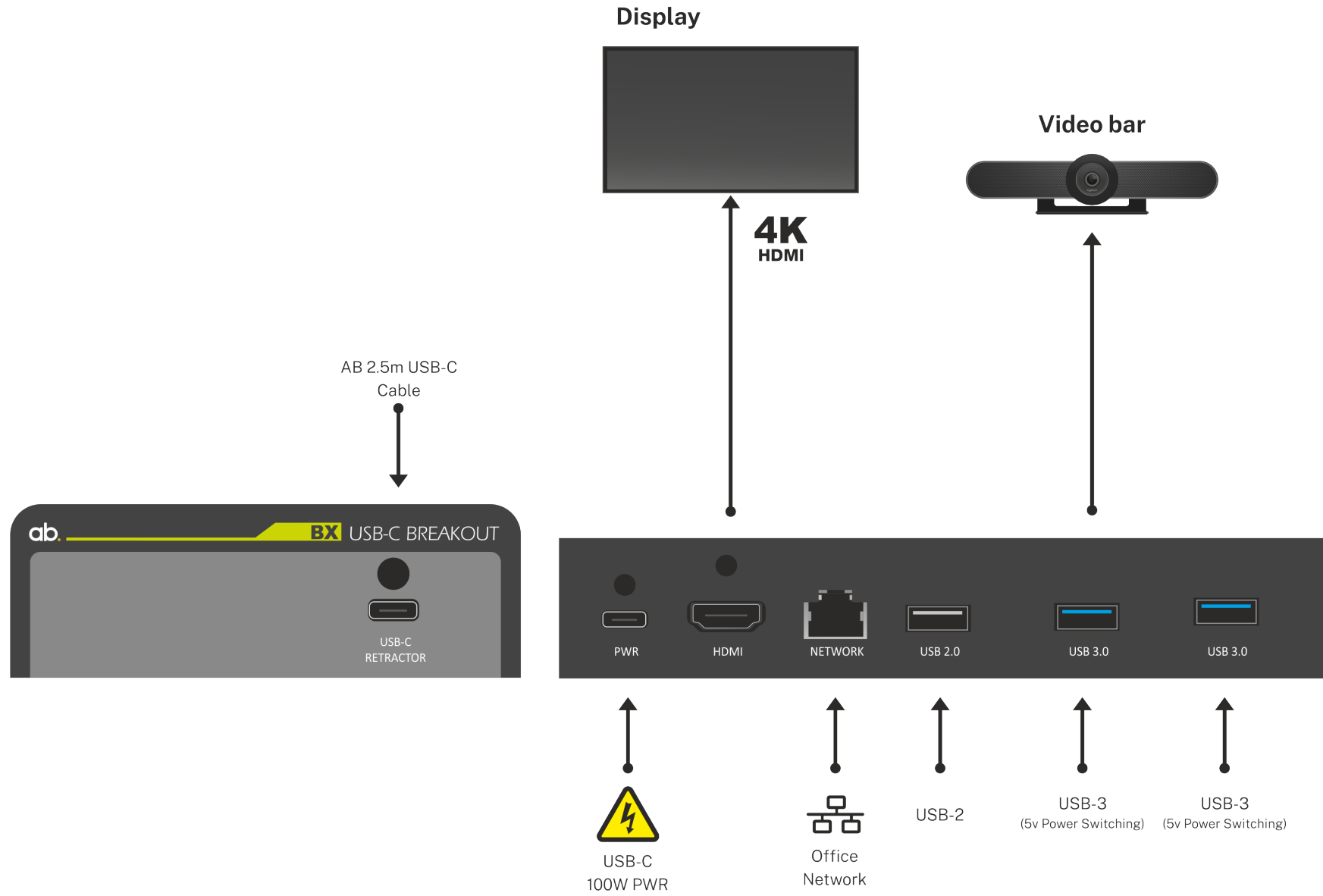
It should be noted that the USB 2.0 port does not have this 'Dynamic USB 5v power switching' function and will maintain its 5V USB power when the laptop is disconnected. (Note: the optional charging PSU is required to maintain the 5V output on the USB 2.0 port when the laptop is disconnected).

5. Application Examples

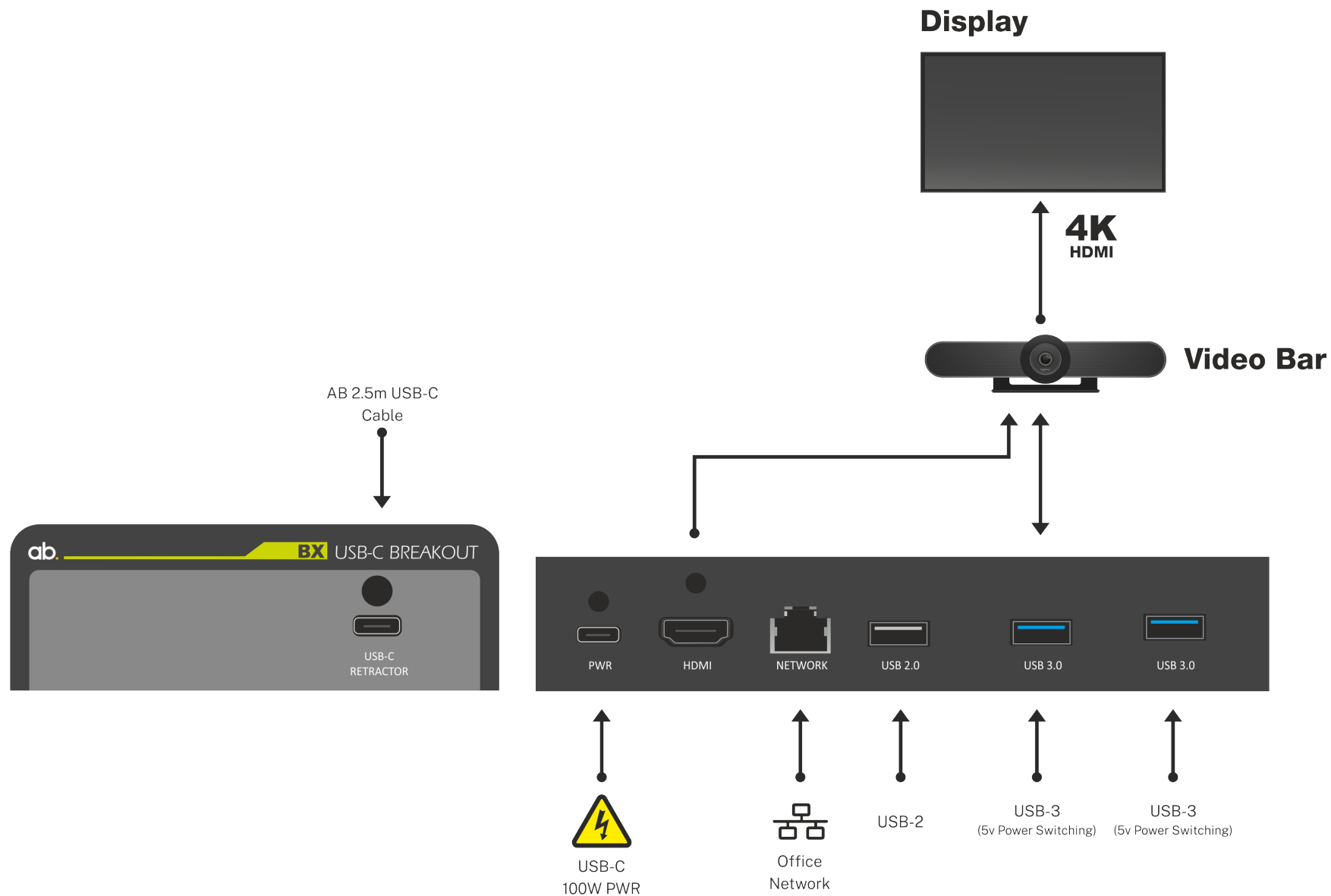
5.A VC Separates



5.B BYOD Video Bar



5.C Android based Video Bar

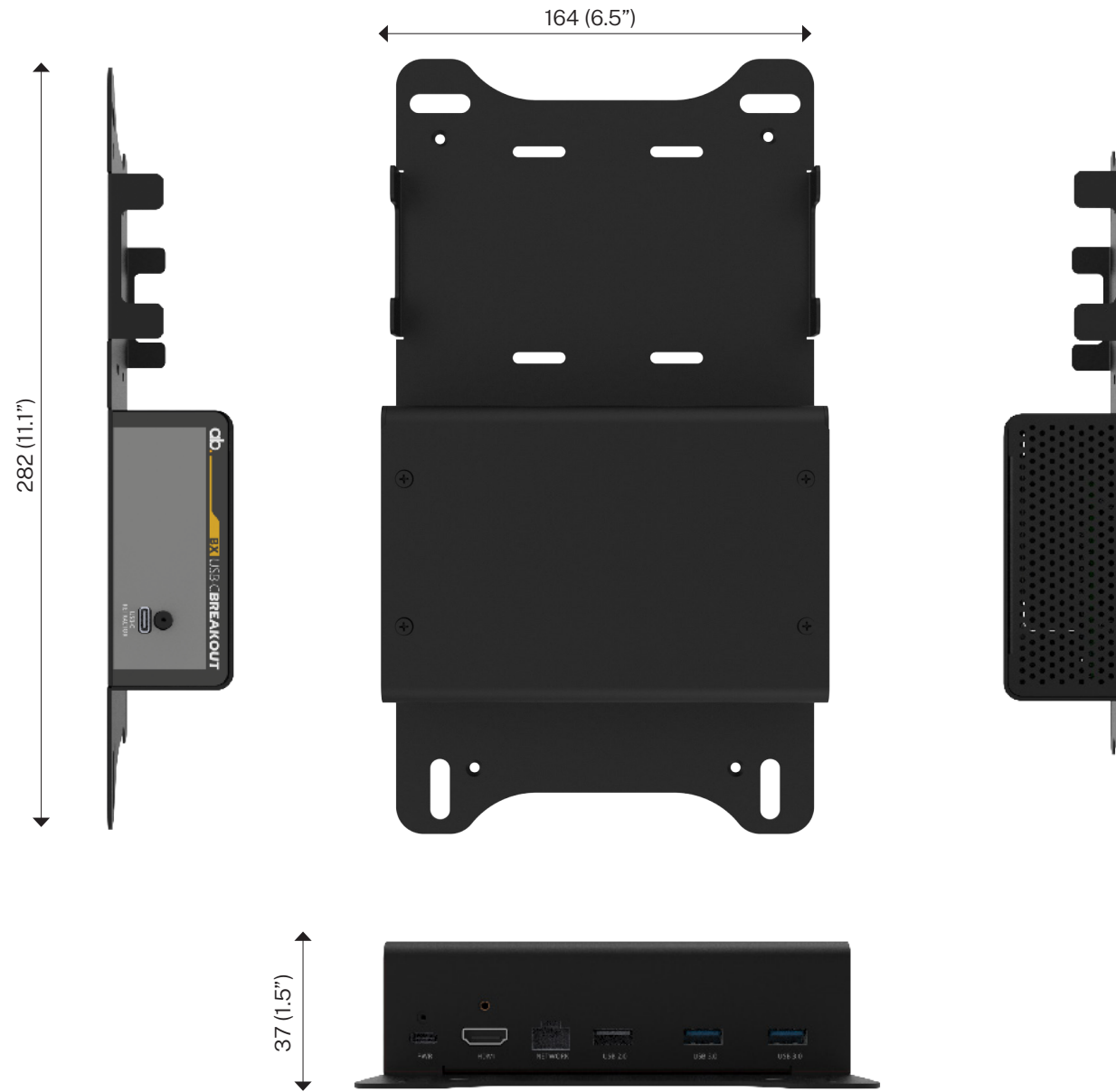


6. Technical Data

6.A BX Specification.

HDMI Compliance	HDMI 1.4 – 4K @ 30Hz
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Inputs	1 x USB-C 1x USB-C Power Delivery
Outputs	1x HDMI OUT [Up to 4K@30Hz] 1x Ethernet Port [Speeds up to 1 Gbps] 2x USB3.0 Ports [With 5v power switching] 1x USB2.0 Port [Without 5v power switching]
Housing:	Metal Enclosure
Color:	Black
Shipping Weight	0.5Kg,
Dimensions	See Mechanical Dimensions (Pg22)
Power Supply	Powered by connected laptop or via optional USB-C PD power supply
Power Consumption	3W (excluding connected USB devices)
Operating Temperature	32-104°F / 0-40°C
Storage Temperature	-4-140°F / -20-60°C
Relative Humidity	20-90% RH (no condensation)

6.B Dimensions



The BX is housed on a back plate for mounting under furniture or inside cabinets.

7. Optional Accessories

7.A USB-C Charging PSU (100W).

Part No. 900-00586 BX/VX USB-C Charging PSU (100W)

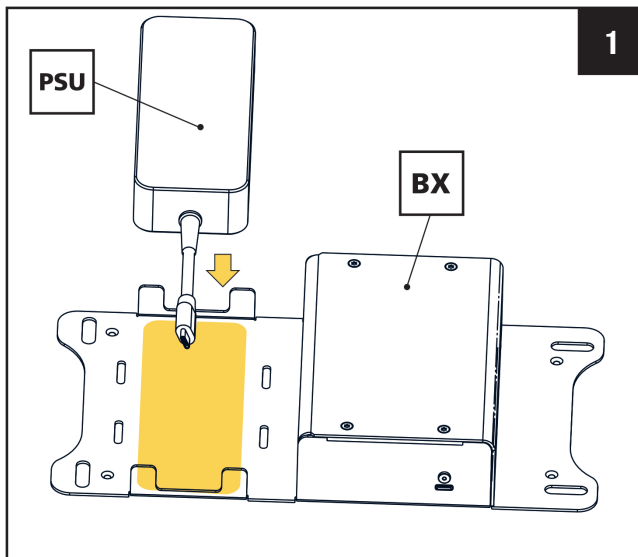
With the optional USB-C Charging PSU, the BX can provide up to 100W charging to any connected device.

However, achieving this depends on the quality and length of USB-C cable used.

We recommend the Ashton Bentley 2.5m Locking USB-C Input Cable. This has a locking USB-C connector to prevent inadvertent disconnection from the BX.

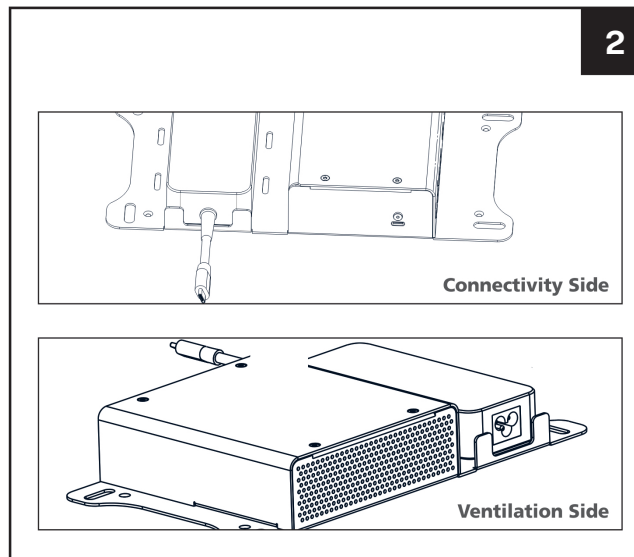


Optional BX USB-C Charging PSU (100W) Installation



Attach the PSU to the BX mounting plate with cable ties or bands

The PSU attaches to the BX mounting plate.



Check the orientation of the PSU. Power-In socket towards ventilation side of BX.

The PSU Power-Out (with USB-C connector) can now be connected to the BX.



Want to know more?

Ashton Bentley Collaboration Spaces Ltd
www.ashtonbentley.com | spaces@ashtonbentley.com | +44 (0)207 100 1200

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