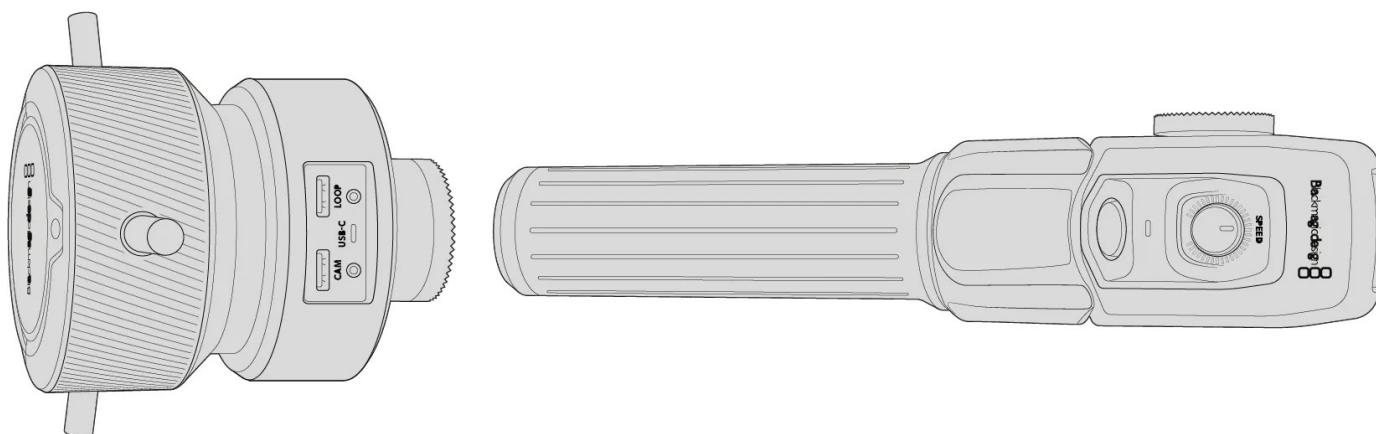← **Blackmagic Studio Camera 4K Plus**

Blackmagic Studio Camera User Manual

Blackmagic Zoom and Focus Demands

Blackmagic Zoom Demand and Blackmagic Focus Demand are optional accessories for controlling focus and zoom when using compatible lenses with Blackmagic Studio Cameras. You can read more about compatible lenses later in this section.
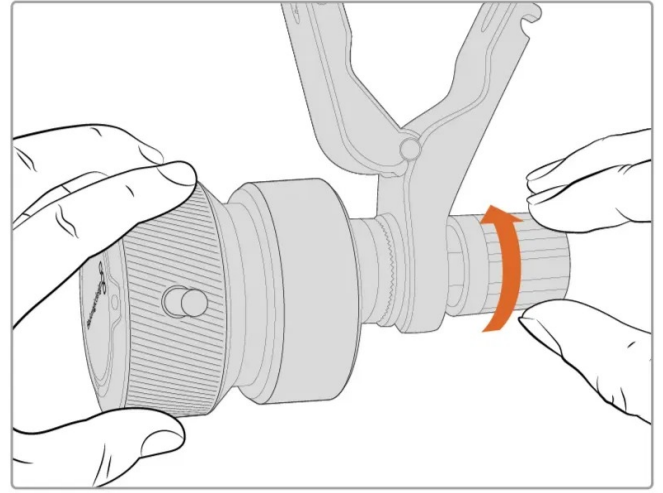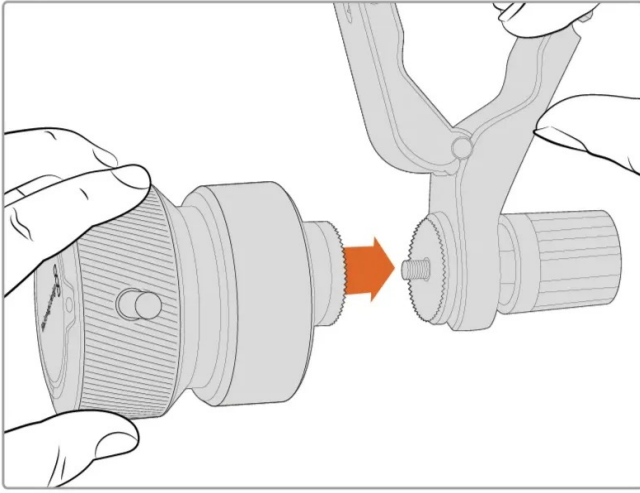
Each unit attaches to a tripod handle on your tripod or camera pedestal. This lets you control focus and zoom while simultaneously panning and tilting the camera using both hands. Additional buttons and controls let you refine the speed and sensitivity of the zoom control, engage talkback, monitor program return and more.

Connecting and Attaching to your Camera

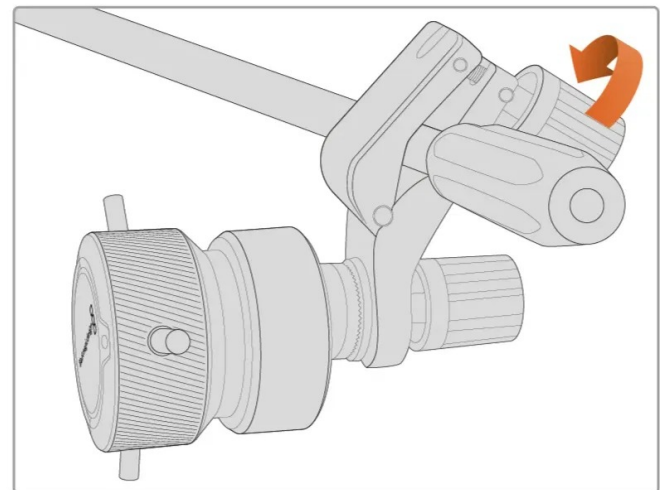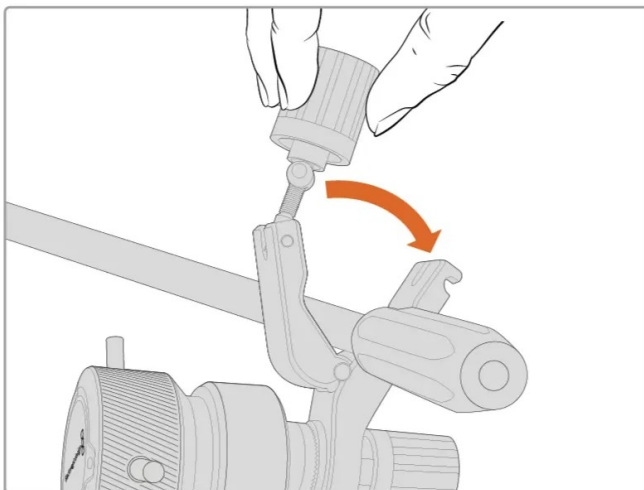### Attaching to Tripod Handles

Each unit attaches to a tripod handle via their mounting brackets. Attach each unit to the brackets via their rosette mounts.

To attach the demand units to their brackets, simply connect them together via their rosette mounts and secure them by tightening the fastening knob.

1. Place the zoom demand or focus demand against their bracket's rosette mount.
2. Tighten their fastening knob so the demand units are firmly attached to their brackets.

Now that the units are attached to the brackets, you can attach the brackets to the tripod arms. One end of each bracket contains a 'T' shaped latch that hinges into a slot and is then tightened.
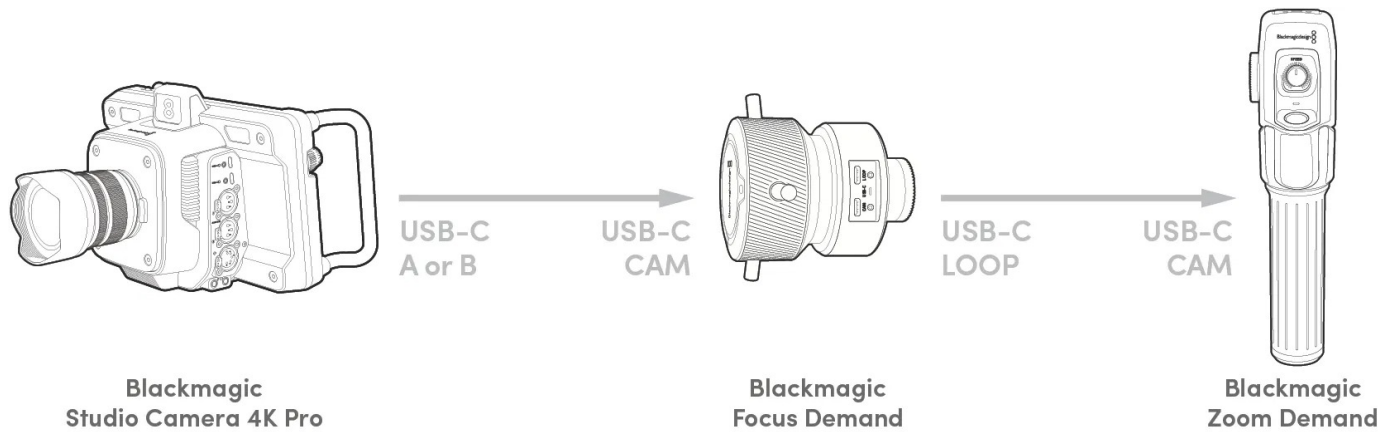

1. Loosen the latch by unscrewing the latch knob in a counterclockwise motion. This will release the 'T' shaped latch.
2. With the latch open, place the bracket onto the tripod arm and clamp the bracket shut by closing the latch into its fastening slot. Rotate the bracket to your preferred position on the tripod arm.
3. Tighten the latch knob to secure the bracket to the tripod arm.

Connecting to Your Camera

Blackmagic Focus and Zoom Demands have two USB-C ports. This lets you use one unit individually, or both units together.
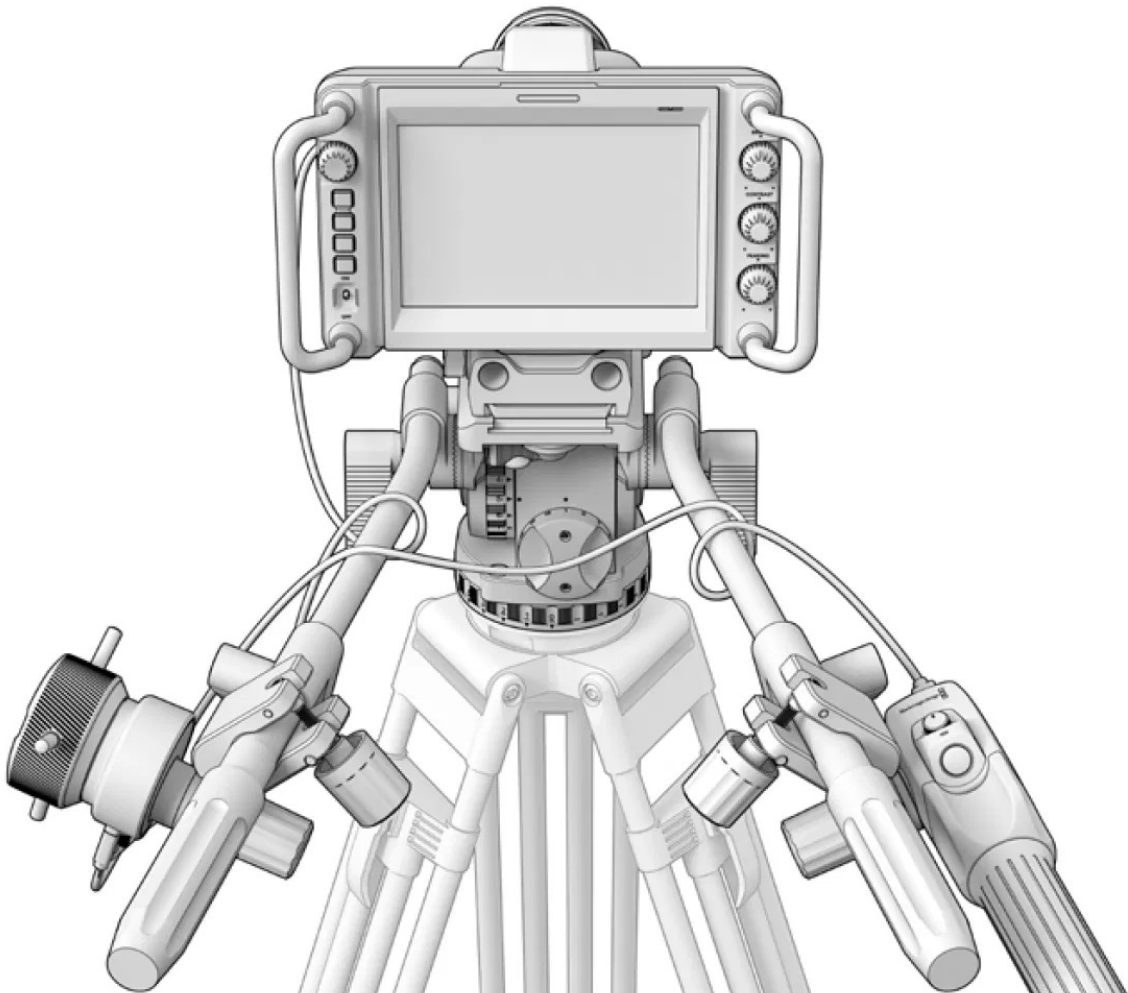
Each unit is supplied with a 1 meter long USB-C cable which is connected directly from either of your studio camera's USB-C expansion ports to the demand unit's 'cam' port.

If you are using both demand units, daisy chain them together by connecting the first unit to the second unit via USB-C.

USB-C A or B	USB-C CAM	USB-C LOOP	USB-C CAM

**Blackmagic
Studio Camera 4K Pro**   **Blackmagic
Focus Demand**   **Blackmagic
Zoom Demand**

Daisy chaining allows for both units to be controlled using one USB port on your studio camera, letting you use the second port for an external USB flash disk. For example, connect a USB-C cable into either of the camera's expansion ports A or B and connect the other end of the cable into the focus demand's 'cam' port. With a second cable, plug the focus demand's 'loop' port into the zoom demand's 'cam' port.

The USB-C cable has locking screws on each end to secure the connectors to each unit, preventing accidental disconnection. You don't have to use the locking screws, but they are helpful for studio setups where the units are always connected to your studio camera.
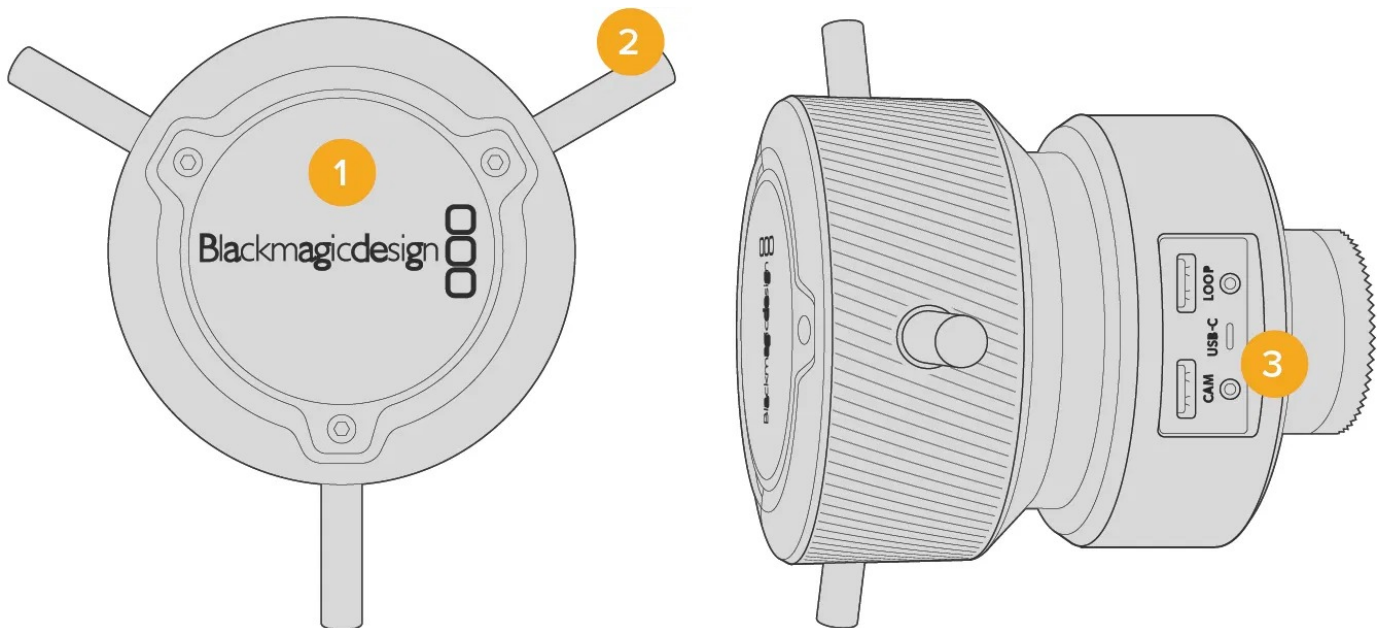
The Blackmagic Focus and Zoom Demands let you control focus and zoom without looking away from the screen

Using Blackmagic Focus Demand

This section describes the features and connectors on Blackmagic Focus Demand.

1 Control Knob

Rotate the focus wheel clockwise to focus on subjects closer to the lens, or counterclockwise to focus on subjects further away. You can change the focus direction in the menu by setting it either 'forward' or 'reverse'.

> 📘 **TIP** If you are also using a Blackmagic Zoom Demand, press the quick zoom button to magnify the image as you focus using the focus demand.

2 Control Pins

These three pins expand the diameter of the control surface to let you make finer focus adjustments with the tip of a finger.
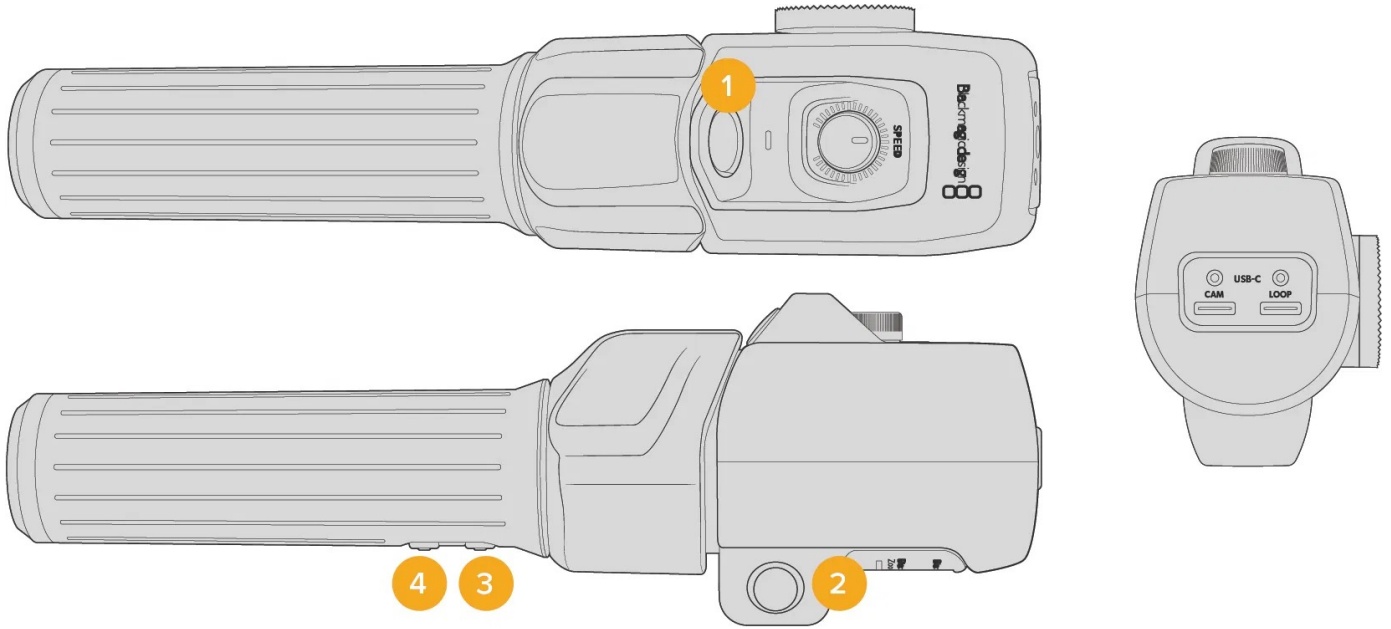
3 USB ports

Allows for connecting the focus demand to the camera and daisy chaining to the zoom demand. The 'cam' port is also used for updating the internal software via the Blackmagic Camera Setup utility.

Using Blackmagic Zoom Demand

The controls on the Zoom Demand are mappable through the Camera settings. To change the button functions, refer to the 'setup settings' chapter in the 'settings' section.

The following commands are set as default:

1 Zoom F1

This is the zoom function button 1. By default, it is mapped as a 'record' button for recording to an external drive connected to an available USB-C port on your Blackmagic Studio Camera.

2 Zoom F2

This is the zoom function button 2. On the other side of the controller is an identical button that performs the same function, allowing for left and right handed control. By default, it is set as a quick zoom function which instantaneously punches into the live image.

> **NOTE** The quick zoom feature is only visible on the Blackmagic Studio Camera's LCD and will not be visible on the output video connected to a switcher or recorder.
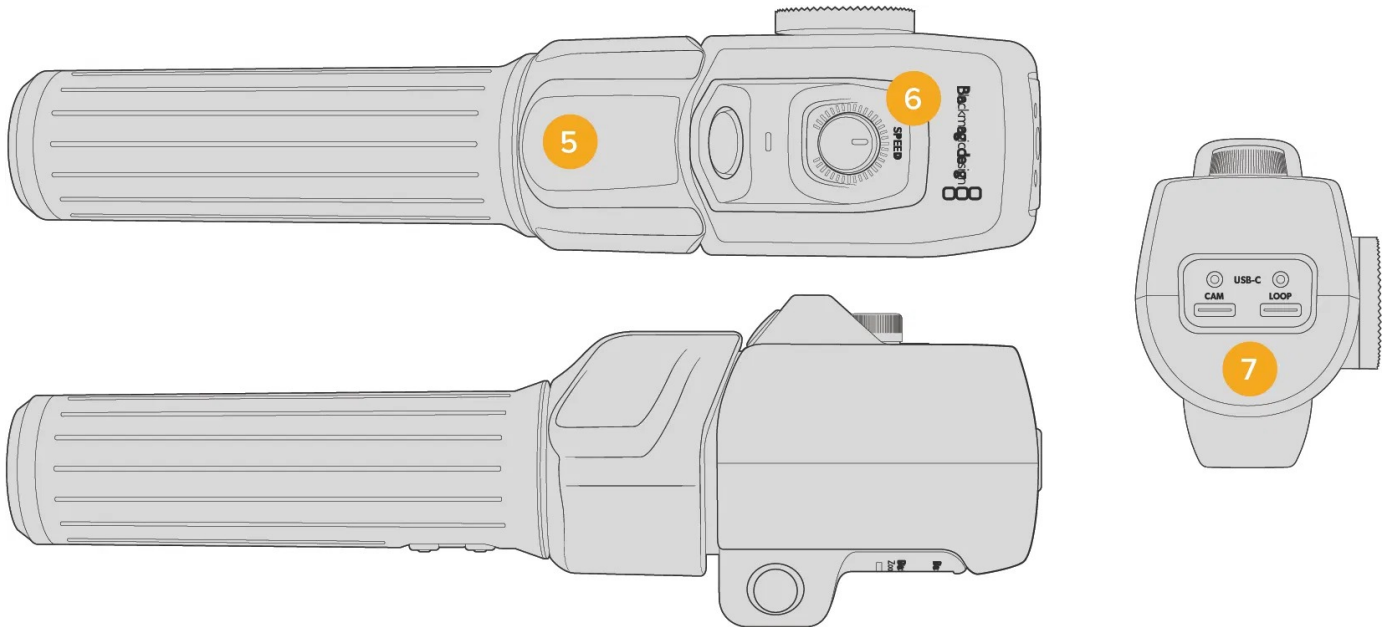
3 Zoom F3

This is the zoom function button 3. On Blackmagic Studio Camera 4K Pro and 6K Pro models, the default action for this button is set to program return. This would normally be a switcher's program return feed, but can be any SDI signal connected to your camera's SDI input.

On Blackmagic Studio Camera 4K Plus, the default action is set to auto white balance.

4 Zoom F4

This is the zoom function button 4. On Blackmagic Studio Camera 4K Pro and 6K Pro models, the default action for this button is set to push to talk. When connected to an ATEM switcher via SDI, press and hold the button to communicate with the switcher operator.

On Blackmagic Studio Camera 4K Plus, the default action for this button is set to frame guides.

5 Thumb Rocker

The zoom demand handle provides a thumb rocker control. Push the thumb rocker left to zoom out, and right to zoom in. The direction of the zoom can be reversed using the camera's menu settings.

6 Speed Dial

Finely adjust the speed of the zoom by adjusting the speed dial at the top of the unit. You can map this dial to also control the headphone level, iris adjustment and even focus adjustment!

7 USB-C Ports

Allows for connecting the zoom demand to the camera and daisy chaining to the focus demand. The 'cam' port is also used for updating the internal software via the Blackmagic Camera Setup utility.

Compatible Compact Servo Zoom EF Mount Lenses

On Studio Camera 6K Pro you can electronically control focus, iris and zoom on 'compact-servo' zoom lenses. Information such as lens name, iris, focus and zoom position values are all able to be read and recorded by Studio Camera 6K Pro's lens metadata system.

If you are operating in a live broadcast or studio environment, use of these lenses with Blackmagic Zoom and Focus Demands is possible provided the iris switch on the barrel of the lens is set to 'A', the

focus switch is set to 'AF', and the zoom servo switch is set to 'servo'.

Hybrid Compact Servo Zoom EF Mount Lenses

- Canon CN-E 18-80mm T4.4 Compact-servo.
- Canon CN-E 70-200mm T4.4 Compact-servo.

EF-S Mount Lenses

- Canon EF-S 18-135mm f3.5-5.6 IS USM with Canon PZ-E1 Power Zoom Adapter.

This lens is usable with Blackmagic Zoom and Focus Demands via the Canon PZ-E1 with the focus switch on the lens set to 'AF' and the zoom servo set to 'PZ'. 4 AAA batteries are required for the zoom servo to function. Please ensure your camera is using Blackmagic Cameras 8.1 or above.

Compatible Micro Four Thirds Lenses

While more than 50 micro four thirds lenses will work with Blackmagic Focus Demand, the following lenses will work with both focus and zoom demands on Blackmagic Studio Camera 4K Plus and 4K Pro models.

Power Zoom Lenses

- Olympus 12-50mm f/3.5-6.3 ED M.Zuiko EZ Micro 4/3 lens.
- Panasonic Lumix G X Vario PZ 45-175mm f/4.0-5.6 Zoom OIS lens.

Pancake Power Zoom Lenses

- Olympus 14-42mm M.Zuiko f/3.5-5.6 Digital ED EZ lens.
- Panasonic Lumix G X Vario PZ 14-42mm f/3.5-5.6 Power OIS lens.

Compatible EF Mount Lenses using Third Party Adapters

EF power zoom lenses can be used via Metabones EF to MFT adapters on Studio Camera 4K models running Blackmagic Cameras 8.1 or later. Set the lens focus to 'AF' and make sure the power zoom is enabled. It's also important the adapter's firmware is updated to Metabones 3.9 or later.

- Canon CN-E 18-80mm T4.4 Compact Servo with Metabones EF mount adapters and EF mount Speed Boosters.
- Canon CN-E 70-200mm T4.4 Compact Servo with Metabones EF mount adapters and EF mount Speed Boosters.
- Canon EF-S 18-135mm f3.5-5.6 IS USM zoom lens with Canon PZ-E1 Power Zoom Adapter and Metabones EF mount adapters.

Was this information helpful?

Yes No