cmotion Lens Control System

frequently asked questions
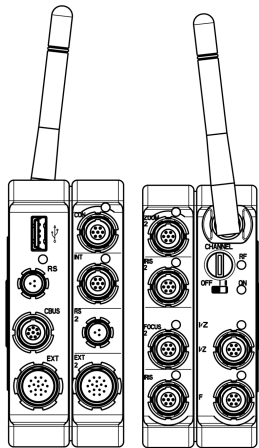
Why use cmotion?

Built with modularity and versatility in mind, the cmotion LCS is a product that can grow with you. From the single channel czoom II to the 2, 4, and 8 motor camin (motor control box), cmotion has a configuration that meets your needs and with the new design, one can upgrade from a 2 motor box to a 4 motor all the way to an 8 motor camin easily.

When used with our award winning cdisplay II, real-time lens and camera data can be viewed along with the live feed from the video tap. Never again does the Focus Puller need to guess when the camera is inaccessible, be it on a crane or around a corner.

camin

- Interface for camera and motor control
- 2 motor ports, 1 RS port, 1 EXT port, USB
- 4 or 8 motor ports, 2 RS ports, 2 EXT ports, USB

Why does the camin now come in 2, 4, or 8 motors?

With 2, 4, or 8 motors the camera dept can control almost anything they need. The 2 motor camin is perfect for simple Focus/Iris control or pulling Focus on 2 cameras in 3D. The 4 motor camin allows for full Focus, Iris, Zoom control, or sync Focus/Iris in 3D. With the 8 motor camin, one can control sync Focus, Iris, Zoom, along with I/O, convergence, rig control, or even a skater dolly or slider.

What is the frequency and range of the unit?

The cmotion LCS operates in the 2.4GHz spectrum with a typical indoor range of 300ft or with an ideal line of sight up to 1500ft.

What if I need to plug more than 1 accessory into the cbus port?

cmotion offers the cbus splitter cable allowing you to have 2 cbus ports.

Why are there 2 RS ports on the 4 and 8 motor camin?

When using 4 or more motors it is recommended to use both RS ports. RS 1 only powers ports M1 and M2 and RS 2 is used for ports M3-M8. Separating the power allows for easier upgrades from one camin to another.

Is the new camin compatible with the previous versions?

The new camin uses a new, more powerful wireless module which is not compatible with previous units. The coperate, czoom II, and cdisplay II can be updated to the new wireless module upon request. The cbus and motor cables have also been upgraded. Adapters and upgrades are available upon request.

How much does the camin weigh?

2 motor = 300g (10.6oz)   3 motor = 325g (11.5oz)   ***each additional M26VE will add ~266g (9.4oz)
4 motor = 480g (16.9oz)   8 motor = 520g (18.3oz)   *each additional M21VE will add ~153g (5.4oz)

How does the LCS control the camera?

With the proper cable youa re able to control the start/stop of the camera. With the cdisplay II it is possible to control most anything the camera manufacturer allows. With some cameras it is possible to control ramping and shutter angle.

What is the USB used for?
The USB port is not used as of right now, but will be implemented sometime in the near future.

Motors

What motors work with cmotion?
You can use any digital motors as long as you have the proper cable. cmotion recommends the Hedén M21VE & M26VE which have been serviced by cmotion.

Why does cmotion change the Hedén M21VE & M26VE motors?
cmotion modifies the motors slightly to adjust the torque and to regulate their power consumption, allowing less wear on both the motor and the lens.

cvolution Handunit

- Handunit control up to 8 motors
- Ergonomic design for both right and left handed operation
- Built in display and menu for full control
- Modular – allows for additional components (sliders, zoom controller, cdisplay II)

How do I adjust the focus scale?
While holding the LENS button turn the knob from the close limit to the far limit and release. This will allow a more fine adjustment by expanding the range selected to take up the entire knob rotation.

Holding the KNOB button while turning the knob allows you to condense the scale, allowing for faster pulls.

Can I separate the iris or stereo controls to another unit?
Up to 3 handunits can be linked to 1 camin allowing for the 1st AC to control Focus, DoP to control Iris, and Stereographer to the Rig.

What is the difference between normal and advance knob?
The advanced knob provides torque adjustment to the users preference, mechanical end stops for knob rotation limits, and marker ring illumination for dark environments.

Why is the 3D mode disabled?
The 3D mode in the cvolution menu is for use with the SCREEN PLANE Production Rig and its integrated cmotion parts. If no SCREEN PLANE Production Rig is present, the 3D mode will be greyed out. For 3D configuration use the MOTOR menu to assign each motor a job (See "3D" section).

What is "Factory Settings"?
Because the menus allow you to configure so many options, a "Factory Settings" resets the system back to a standard FIZ configuration.

czoom

- Displays Zoom motor position
- Joystick capable of fine movements
- Adjustable Zoom motor speed control
- ZAP to Zoom As fast as Possible

How can the czoom module be mounted?
czoom can be attached to the cvolution handunit or attached to the chandle II and used handheld or on a Pan Bar.

How can I set a lens motor limit for zoom?
To limit the Zoom control to a specific portion of the lens scale by moving to one mark, then while holding the LENS button (located on the underside of the zoom unit) move to the second mark. When you release the LENS button the czoom will only operate between those two points.

cdisplay II

- Real-time lens and camera data
- Camera control (ramping, shutter, etc)
- Touchscreen
- Optional live feed from video tap with lens data overlay and last take playback
- Wireless option

Is it compatible with CINE TAPE?
The cdisplay II is completely compatible with the CINE TAPE using the same software as with the cfinder (see "cfinder" below).

How do I add a lens?
You can use cdiscal found by pressing the scroll wheel. Turn the handunit off and follow the instructions. For more information please find the manual in the downloads section.

How do I back up my lenses?
Use the program ccalibrate for PC to backup and load lenses to the cdisplay II.

What is a ctag?
The ctag is a RFID transponder which can be paired with a lens. This makes loading a lens as easy as swiping the RFID transponder (stored on the lens cap) with the cdisplay II.

What is the USB used for?
The USB port can be used to load lens and update the firmware.

cfinder

- Accurate to ±5cm (≈1.97in) from 20cm (≈7.87in) to 150m (≈492.13ft)
- Autofocus capabilities

What's the difference between the cfinder and CINE TAPE?
The cfinder uses a laser to measure a single point while the CINE TAPE uses sonar to measure a plane.

What are the benefits of a laser?
A laser is a single point as opposed to a sonar plane. This allows for a much more precise measurement of an object. It is even possible to track an object with the sights and have an accurate measurement. The laser also allows for measurements in circumstances where there might normally be interference (e.g. a crowded room or through a window).

Is the laser of the cfinder visible?
The visible laser used for aiming can be turned off with a switch.

What is the range of a cfinder and what is its refresh rate?
With a clear line of sight the cfinder can track an object up to 1500ft (457.2m). The refresh rate is adjustable up to 50hz.

Autofocus?
Used in conjunction with the cdisplay II, the cfinder or CINE TAPE, the cmotion LCS can perform a very capable autofocus.

czoom II

- Control 1 motor
- Use stand alone - no camin needed
- Displays lens position

How can I mount the czoom II?
It can be mounted to a Pan Bar with the cfast-czoom, used handheld, or with the Oppenheimer Adapter.

How do I use the czoom II wirelessly?
For wireless operation a camin is required.

3D

- Up to 8 motors with 1 unit
- Set offsets between lenses

How can I activate 3D mode?
To configure a 3D setup use the MOTOR menu to assign each motor a job. The "3D MODE" in the menu is used for SCREEN PLANE and therefore greyed out when no SCREEN PLANE is present.

What if my lens scales don't line up around the entire lens?
Because no two lenses can be 100% matched, an offset function is included. After calibrating your motors, hold the MARKER button to adjust one motor to match the lens marks. Currently only 1 mark can be assigned, but up to 32 marks will be available with a future update (mid-December 2010).

How do I set up 3D with the 3 motor camin?
Please see the "3D guide" in the downloads section.

General Questions

What cable do I need to do x? or What does x cable do?
Please see our "cable guide" available in the downloads section.

Where can I get support or speak to someone about cmotion products?

For Europe and Asia:

For North America:

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