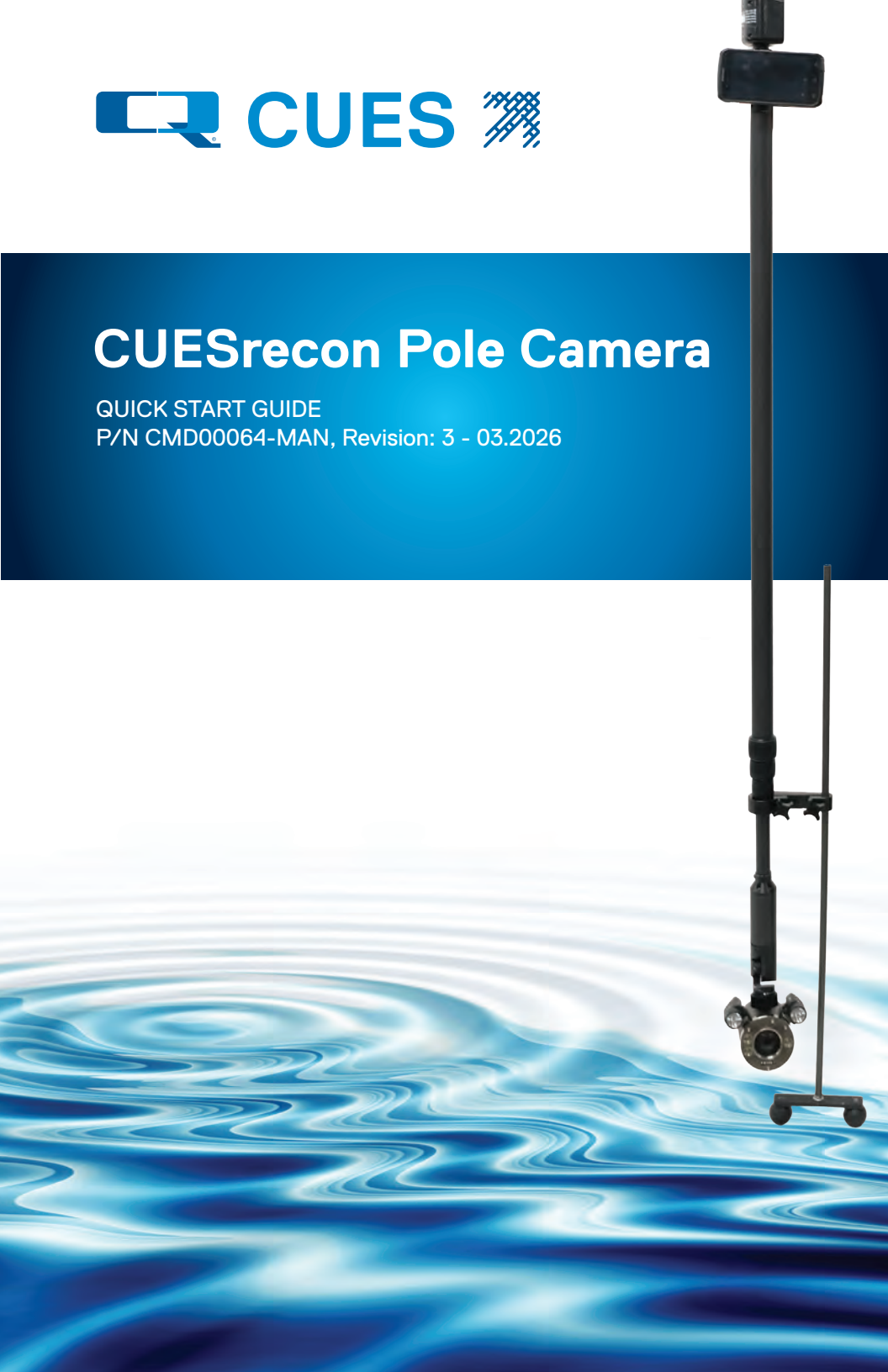
CUESrecon Pole Camera

QUICK START GUIDE

P/N CMD00064-MAN, Revision: 3 - 03.2026



We’re Always Here To Help

Thank you for purchasing our CCTV pipeline inspection equipment! We truly appreciate your business and are confident that our products will meet your pipeline inspection needs. Should you require further assistance, please do not hesitate to reach out to us through one of the weblinks listed below. Your satisfaction is our priority, and we are here to support you every step of the way!

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CUES

CUESrecon
USER MANUAL
CMD00064-MAN

NOTICES

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The information contained in this document is subject to change without notice.

There are no user serviceable parts inside the **CUES** video system. Do not disassemble or attempt to repair. If a problem cannot be resolved, then contact CUES.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide a reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

This Class B digital apparatus complies with Canadian ICES-003

RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an occupational/controlled environment. This equipment should be operated with a minimum separation distance of 1" (2.5 cm) between the internal antennas and the user or nearby persons.

This device is intended for use by trained personnel only and is not intended for use in a general population/uncontrolled environment. This equipment is intended for **occupational use only**.

WARNING

THE FOLLOWING HAZARDOUS SITUATIONS MAY RESULT IN DEATH OR SERIOUS INJURY.

Never use any CUES instrument to observe body cavities of humans or animals.

To avoid explosions or fires, never use any CUES equipment in areas exposed to flammable gases or liquids. The System is not explosion proof.

Contents

System Description

Overview

CUES offer a state-of-the-art, high resolution, wireless video inspection tool that allows an individual to make a safe visual assessment, using highly detailed video images of conditions, in a dangerous or inaccessible area. The interior conditions of many confined spaces such as tanks, vats, and hoppers can be safely viewed without the need to make a confined space entry.

The new **CUESrecon** video system supports true 1080P HD video. This advanced system design maximizes its suitability for use in many different industrial inspection applications by offering interchangeable video camera modules. They can be switched in the field to enhance the effectiveness of the system — in many different environments and applications.

The system has been engineered to offer the highest resolution images, which can be viewed on a variety of different digital display options, such as Windows Android or IOS-based tablets, smartphones, laptops or desktops. The images can be transmitted via wired or wireless methods, and the table display can be pole, or wrist-mounted. The **CUESrecon** system will directly support up to three different wireless viewers concurrently.

The heart of the **CUESrecon** Video System is the ergonomically designed HD Handle. The HD Handle offers integrated push buttons that facilitate all operations, including illumination level control, still image capture, video record, zoom functions, and motorized camera pan controls. The Wireless Handle accepts a rechargeable Lithium-ion battery that has an easily viewable built-in battery charge level indicator. The battery charge level is even viewable when the system is off or the batteries are unplugged from the handle. The Wireless Handle is ruggedly designed and all antennas are internal to prevent damage from rough handling.

Available High Definition Inspection Systems

Systems are available with many options of camera, pole, and display.

Typical system example:

Part Number*	Product Description
CMA00014	CUESrecon 16ft (5M) Motorized Pole, Rugged 5" Tablet, 30X Zoom Camera

Camera Options

CMA00015	HD Color 30X Zoom Camera with Side Light

Pole Options

CMD00059	16ft System Motorized Pole
CMD00069	22ft System Motorized Pole
CMD00070	30ft System Motorized Pole

Display Options (see detailed list on following page)

ELE00024	5" Rugged Tablet
KIT00014	10" Rugged Tablet Kit

Included in all CUESrecon kits

CMD00060	CUESrecon Handle – contains the power and control circuity for all of the functions of the pole, camera, and Wi-Fi system.
ELE00023	Extended capacity battery for powering the CUESrecon Handle. 2 batteries are supplied with each system
KIT00013	LBC Charger Base to charge ELE00023, includes the 24V Power Supply
CMD00068	Pole Support Rod

*Detailed list of display components

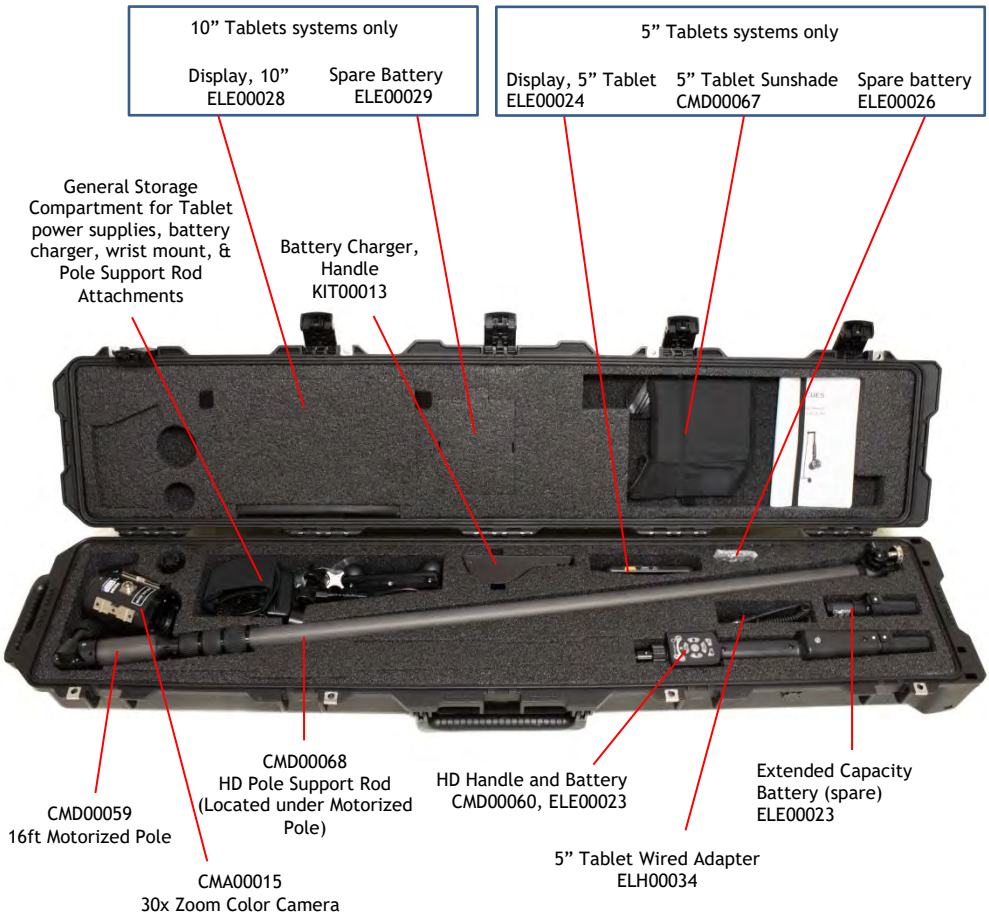
5” Rugged Tablet Systems include:

- ELE00024 5” Rugged Display Tablet with 32GB uSD card
- ELE00026 Spare Battery
- ELE00025 Battery Charger/ Docking Station
- CMD00061 Tablet Wrist Mount
- CMD00062 Tablet Pole mount (factory installed on the system pole)
- ELH00034 Wired Adapter to wire the tablet to the Handle

KIT00014 10” Rugged Tablet Systems include:

- ELE00028 10” Rugged Display Tablet with 32GB uSD card
- ELE00029 Spare Battery
- ELE00030 Battery Charger
- ELE00031 Wired Adapter to wire the tablet to the Handle

Rugged Case with custom compartments – 16ft Pole Systems



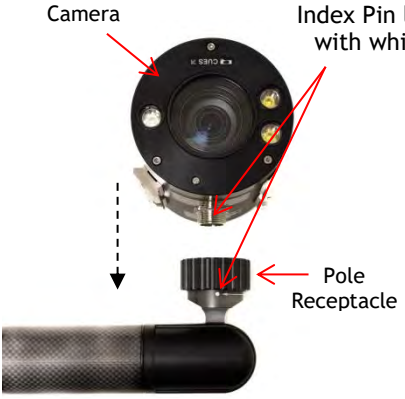
Setting Up and Operating the System

Connecting the Camera to the Pole

1. Position the Camera at the end of the pole. Make sure the index pin on the Camera is in line with the index slot at the end the Pole. The white dot at the end of the pole indicates Index Slot location. The Camera should fall into place if properly aligned.
2. Tighten the knurled nut to lock the Camera onto the HD pole. DO NOT use the system without fully locking the Camera onto the pole. ***Do not over tighten!***

Pole Camera Receptacle – End View

Camera Connector – End View



Insert Camera connector into Pole Receptacle

Tighten knurled Nut while holding camera body

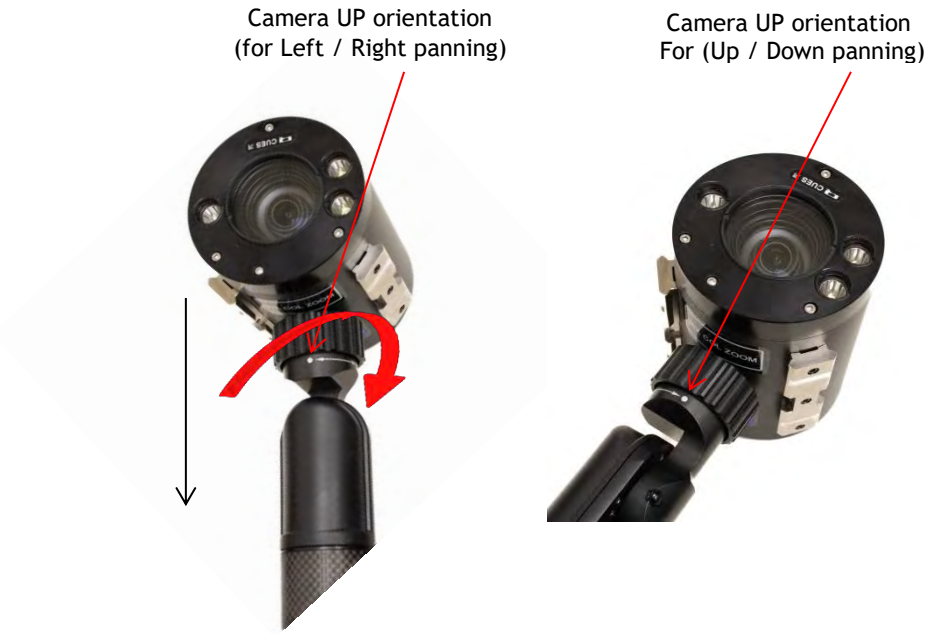
Pole options and use

Motorized Pole

The motorized pole head is controlled with the buttons on the key pad. The head can be panned +/- 120 degrees.

The 16ft CMD00059, 22ft CMD00069, & CMD00070 30ft poles feature telescoping pole sections that can be adjusted to length as required. Loosen the locking collar about a half turn, extend the pole section and tighten the collar to lock the pole length into position. The pole sections have internal keyway which keeps the pole sections inline so relative camera UP position will remain even as pole sections are extended.

Rotating Motorized Head Camera position

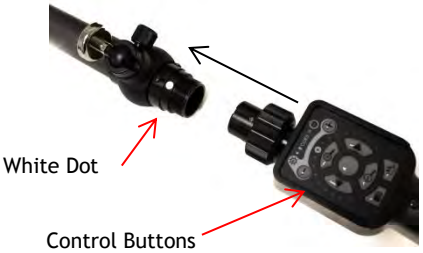


The camera UP position relative to the HD Handle can be rotated 90° if required.

When the camera is attached, while holding the pole, push the camera in and rotate so the Index marker on the camera moves to the alternate position.

Connecting a Pole to the HD Handle

Pole shown with HD Handle attached



1. Position the HD Handle at the appropriate end of the pole.
2. Insert the connector end of the HD Handle into the receptacle at the end of the pole.
3. Tighten the knurled nut to lock the HD Handle onto the pole. DO NOT use the system without fully locking the HD Handle onto the pole.

CUESrecon Battery

The HD Handle is powered by the supplied extended capacity rechargeable battery, ELE00023.

Extended Capacity Battery
ELE00023
(Supplied in all systems)

	CUESrecon Camera Runtime in hr:mn	
Camera Model	ELE00023	
	LEDS off	LEDS on
CMA00015	7:45	5:50

Battery Gauge

The ELE00023 battery has a built in battery gauge to show relative strength of the battery. When all five bars are shown, the battery is at full strength.

Charging the Battery

1) Apply power to the charger with the wall power supply.
2) Insert the battery to be charged into the battery charger base. A fully discharged battery will take less than 3-1/2 hours to charge.
3) The charger LED sequences as follows:

Green, slow flash:	System preparing to charge
Green, fast flash:	Battery charging
Green, solid:	Battery fully charged
Red, solid:	Error - Remove the battery from the charging base and re-insert making sure the battery is fully seated in the charging base.

CAUTION – Charge only battery pack provided and intended with the charger provided. Other types of batteries or battery packs may burst causing personal injury and product damage.

- **Only use the supplied Wall Power Supply or vehicle adapter to power the charger base.**
- **Do not expose the charger, power supply, or cables to water or liquids.**
- **Do not open the charger or power supply case; no user serviceable parts are inside.**
- **Do not cover the air vent or obstruct the airflow. This will cause overheating.**
- **Place the charger in a cool spot, away from external heat sources.**

Connecting the Battery

Battery pack being inserted

Battery Pack fully inserted

The HD Handle is powered by a lithium-ion battery pack.

1. Insert the battery into the HD Handle by lining up the White Dots prior to insertion.
2. Press the battery pack fully into place until the battery latches click, indicating they are locked in place.
3. The battery pack removes from the HD Handle by pressing the 2 battery latches simultaneously and pulling.

Two battery packs are supplied with each CUESrecon camera system.

Mounting the Display

Magnetic Mount

CUESrecon Kits with HD 5" Tablet ELE00024 type System Displays come with a Magnetic Pole mount to hold the display in a convenient position while using the pole.

Magnetic Mount

Tablet Mounted on Pole

Wrist Mount

A convenient Wrist Mount is also included in the kit and allows the Tablet to be mounted on the arm or wrist. When mounted, the tablet can be rotated into the desired position and held in relative position with detents.

Installing the Wrist Mount

1. Stretch the webbing onto the Tablet as shown so that the Index Plate is on the rear of the Tablet.

2. Position the Strap base onto the arm as desired.
3. Insert the Index Plate into the Base Strap Mount as shown. When properly engaged, the Index Plate will snap into position.
4. To disengage, push the Release Tab in while sliding the Tablet with Index Plate out.

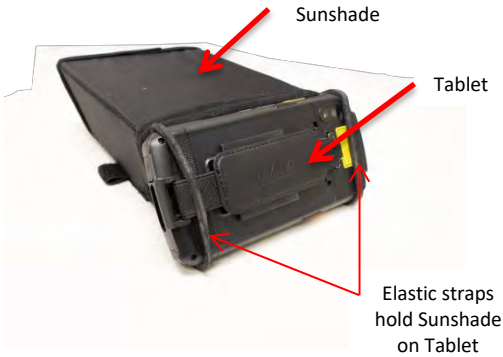
Sunshade

Using the Sunshade with the Tablet

CUESrecon Kits with HD 5" Tablet ELE00024 type System Displays come with a removable Sunshade for use in bright sunlight glare situations. The Sunshade features 2 elastic bands which hold the Sunshade in place on the Tablet.

The Sunshade also has a flip up flap to allow access to the Tablet touchscreen as required.

Sunshade Mounted on Tablet



Operation

1. Turn the System ON.
2. Turn the Configured Tablet ON
3. Verify the camera image

Note: the system will take about a minute to fully boot up and display an image.

How to Hold the Handle

To maintain compliance with FCC RF exposure requirements, the user should hold the handle as it was intended to be held as shown below.

Proper hand position when holding pole facing upwards

Proper hand position when holding pole facing downwards

Improper hand position when holding pole facing upwards

Improper hand position when holding pole facing downwards

System Component Detail

HD Handle

The HD Handle is the heart of the CUESrecon camera system. It contains the power and control circuity for all of the functions of the pole, camera, and Wi-Fi system.

HD Handle

ON / OFF Switch – during the first 3 seconds after pressing the power switch, the Multi-function Meter indicators will show the relative battery capacity of the battery connected to the handle.

Controls / Indicators

Button and Indicator Function Table

Button	Function
Illumination Down	Decreases camera illumination from 100% to 0%. The Illumination LED will turn OFF at 0%.
Illumination Up	Increases camera illumination up from 0% to 100%, Any increase from 0% off turns on the Illumination LED.
Zoom In	Press and hold to Zoom IN (with Zoom camera only). Tablet displays zoom level.
Zoom Out	Press and hold to Zoom Out (with Zoom camera only). Tablet displays zoom level.
Pan Right / Up	Pressing operates the motorized head (if present) and tilts the camera up/right until released. Angle LEDs change to indicate approximate camera position. The tablet also displays angular position.
Pan Left / Down	Pressing operates the motorized head (if present) and tilts the camera down/left until released. Angle LEDs change to indicate approximate camera position. The tablet also displays angular position.
Snapshot	Causes the tablet to take a snapshot. Tablet flashes a SNAPSHOT icon.
Video Start/Stop	Causes the tablet to start/stop a video. Tablet display a VIDEO icon and timer.
Enter	Used as enter key for special camera menus.

Keypad Controls

Illumination

Pressing the illumination **-** and **+** controls will increase or decrease the LED illumination built into CUESrecon cameras. As one of the illumination buttons are pressed, the Multi-mode Indicator Gauge will show the relative intensity of the illumination setting. If the LED illumination is active, the illumination LED indicator will be lit.

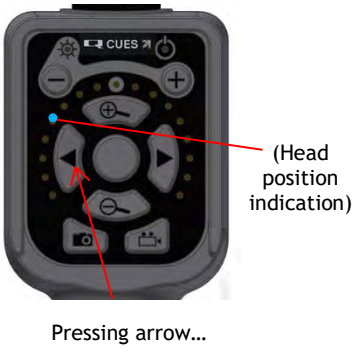
Focus-

Pressing the ILLUMINATION UP and ILLUMINATION DOWN buttons simultaneously reports the battery gauge on the LEDS.

Motorized Head Control

Pressing the Pan Left  and the Pan Right  button will move the motorized head left and right respectively as it's default speed, High or Low. A quick release/repress within ¼ second will toggle to the other speed.

As the Pan Left or Right buttons are pressed, the Multi-Mode Indicator Gauge will show the position of the head. Each LED position represents 15°. If panning stalls during normal operation because of an obstruction, the motor will shut off and the current position LED blinks. Pressing the PAN LEFT or PAN RIGHT resets this error and makes another attempt to move.



Zoom, Focus, and Image Flip

Zoom-

Press the  button to Zoom in, and press the  button to Zoom out. The camera Zoom speed is set to default Slow speed. While Zooming, a quick release/repress of the zoom button toggles to high speed. Another release/repress will toggle back to the low speed.

Focus-

Pressing both buttons at the same time switches the camera to manual focus mode where the + is *near* focus and – is *far* focus. The on screen text will display either focus near or focus far while the buttons are pressed.

The Multi-mode Indicator Gauge will give an approximate indication of the field of view. (wide – telephoto)

Image Flip-

Pressing both Zoom buttons and the Enter (center) buttons simultaneously flips the camera image 180˚

Image and Video Capture

Pressing the Snapshot  button will capture a still image of the current image on the display. A confirmation message will appear indicating a photo has been captured and stored on the device*.

Pressing the Video  button will begin recording* video of the scene shown on the display. An indicator will appear on the display showing a video recording is in progress. Press the Video button again to stop recording. A confirmation message will appear indicating a successful recording occurred.

**Main Tablet only. Snapshot and video capture will not occur on alternate Tablet Viewers.*

Pole Options

Motorized Pole

CMD00059 - 16 foot system, 4 section telescoping carbon fiber pole

CMD00069 – 22 foot system, 5 section telescoping carbon fiber pole

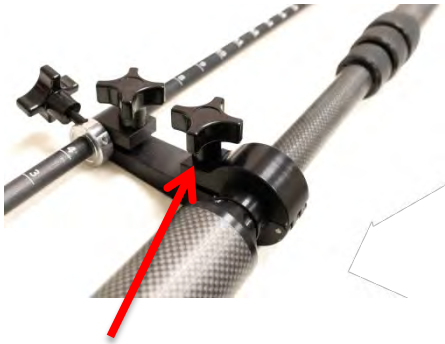
CMD00070 – 30 foot system, 7 section telescoping carbon fiber pole

Features-

- Carbon fiber construction is lightweight, yet rigid
- Available in different lengths, telescoping or fixed
- Easy to use twist collars hold pole section at any position
- Anti-rotational pole sections keep camera oriented while adjusting pole length
- All control and data cables contained within the protection of the carbon fiber pole sections
- Attaches to the HD Handle
- Camera can rotate 90° on pole to upright image for either horizontal or vertical operation
- Motorized hinge is controlled by buttons on the handle
- Built in slip clutch prevents damage to internal motor or gears
- Provides feedback to display angular position on the handle
- Fully submersible

Pole Support Rod

Clamps to the end of the pole as shown.



Tighten thumb screw to secure to pole

CMD00068

Pole Support Rod height can be adjusted with this thumb screw. Tighten thumbscrew when adjusting as required.

Pole Support Rod height can also be adjusted with this thumb screw.

Graduated Pole markings for determining insertion depth

Shown with 16ft motorized pole with 30X Zoom Camera attached

System Component Detail

CUESrecon System Camera

CMA00015

-High Definition 30x Zoom Color Camera with illumination

(Shown with side light attached)

Features

- 30x Optical zoom, 80x digital zoom (240X Total Zoom)
- Rugged, non-conductive housing
- Built in illumination
- Includes Picatinny rail to mount optional high powered side light and Laser Rangefinder
- Image stabilization
- High dynamic range
- Well suited for search and industrial applications
- Can mount an optional 3rd Picatinny rail

System Component Detail

CUESrecon Side Light

- High Powered Illumination Accessory

Features

- Waterproof - can be submerged under water
- Fastens to camera via MIL-STD-1913 (Picatinny) Rail mount
- Super high brightness – 1000 lumens (turbo mode)
- Five levels of brightness
- Beam range of up to 650 feet (200 meters)
- Powered by 2 CR123A Batteries

ELE00027 (Optional)

-Laser Rangefinder

Features

- Provided with user adjustable Picatinny mount. Mount includes adjustment knobs for both Up/down, and Left / Right position allowing the Laser Rangefinder to the precisely aimed relative to the camera image.
- Easily mounts/dismounts to the zoom camera using only thumbscrews.
- Can operate in Toggle mode or Track mode. In Toggle mode, the user presses the button once to turn on the laser and aim it, then again to take the measurement. In Track mode, the laser pulses continuously and takes measurements continuously.
- Displayed units can be set to metric or inches.
- Measuring Range 0.6-200ft (0.2-60M)
- IP rating IP54 dust & splash water protected

Refer to page 68 for Laser Rangefinder setup

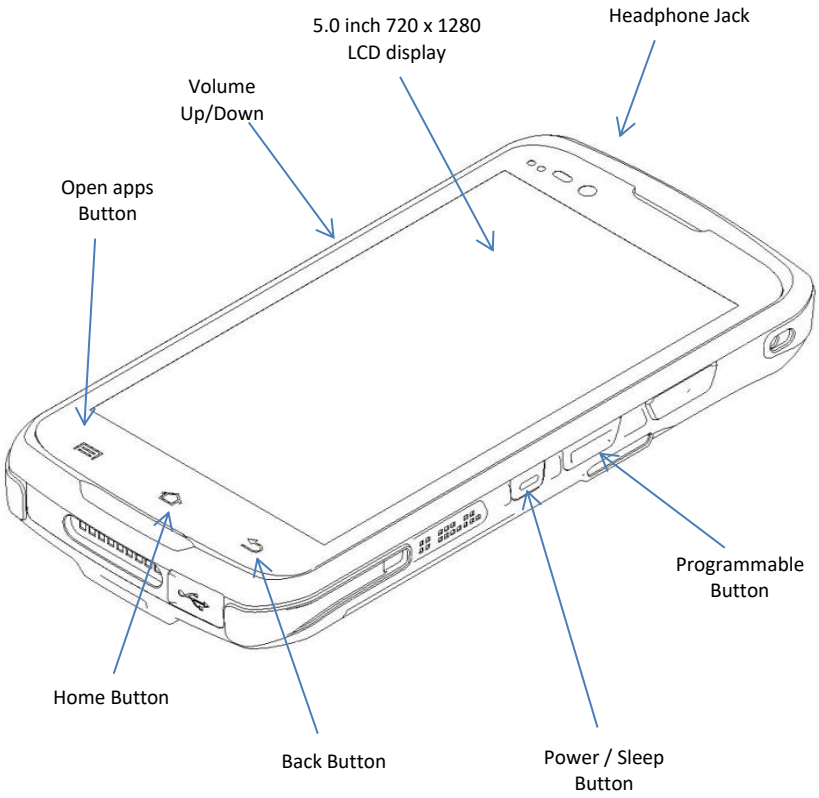
Displays

The CUESrecon system utilizes several different display options based on the configuration selected at the time of purchase. These tablets and or phones utilize the Android operating system and contain many features that are not required to run the CUESrecon system. In some versions, these display devices are full-fledged cellular phones with full phone capabilities. Only the essential functions to run the CUESrecon app will be outlined in these user instructions.

ELE00024

HD 5" Tablet, w/power supply and micro USB cable

Part Description



Getting Started

Turning the ELE00024 on

Press and hold the Power Key (marked red in its center) on the right-hand side of the ELE00024.

When powered on, the device will automatically open the CUESrecon app.

Turning the ELE00024 Rugged Touch Tablet off

Note that there are different levels of turning off power to the ELE00024.

To put the ELE00024 display to sleep, briefly press the Power Button (marked red in its center). The display will turn off. To turn the ELE00024 back on from this state of sleep, depress the Power Key again. The welcome screen will come up, and by swiping up it will return you to the last used app.

To put the ELE00024 display to sleep and also shut down Android, press and hold the Power Button (marked red in its center) until the “Power off/Restart” overlay appears. Tap on Power off and the ELE00024 will power down. To turn it back on, press and hold the Power Button until the device vibrates and the screen turns on, showing “Technology at Work.”

To completely power down the ELE00024 and reboot it from a cold start, press and hold the Power Button and keep holding it for about ten seconds. The display will go black, and in a few seconds the ELE00024 will reboot automatically.

Battery Replacement

1. Turn the device over, back facing up. It may be necessary to unlatch one end of the hand strap if the strap is connected to the device.
2. Locate the Strap Hook at the bottom of the display and push it as shown to unhook.

3. Locate the Battery Cover Latches and slide them to the “Unlocked” position.
4. Pull the cover up and off by lifting at the two tabs on the side of the battery cover.

Remove the battery pack by lifting as shown.

Reinsert the battery by latching the bottom first (1) and then pushing the battery pack down (2).

Charging the ELE00024

Make sure to charge the battery before using the Tablet for the first time, charge the battery until the LED indicator turns solid green. To charge the ELE00024, use the Charging Dock or DC Power plug.

To charge the battery using the DC Power Adapter Plug:

1. Insert the DC Power Plug into the USB/Charge port on the bottom of the ELE00024.
2. Plug in the AC/DC power supply. The ELE00024 LED indicator will light red while charging and will change to green when fully charged. Use only easily accessible wall sockets that are easily reached with the length of the supplied power cable.

Charging the battery with the Charging Dock

1. Locate the power receptacle on the bottom of the Charging dock and connect the Power Adapter Cable to the Charging Dock as shown.

2. Push the Power Adapter Cable into the strain relief slot to keep the cable from accidently becoming disconnected.

3. Insert the battery pack into the docking station battery cavity making sure to align the contacts on the battery with the contacts on the charging dock.

4. Be sure the battery is seated completely into the battery compartment.

Charging the Tablet with the Charging Dock

The ELE00024 can be charged directly by placing the device into the Charging dock as shown.

Inserting a MicroSD card (includes 32g card installed)

The ELE00024 rugged touch computer has a microSD flash memory card slot in its battery compartment that is compatible with SDHC (Secure Digital High Capacity) cards with capacities of up to 256GB (FAT32 card formatting). Older SD cards can also be used. Removable microSD memory is useful for general file storage, uploading and downloading of user data, and more. The use of high-quality microSD cards supplied by a reputable manufacturer is recommended.

To access the microSD card slot:

Remove the battery compartment cover on the back of the unit by first sliding the two spring-loaded cover locks to their unlock position, and then gently pulling the cover up by the two tabs on the left and right of the cover. Then remove the ELE00024 battery.

To install the microSD card:

With the battery removed, locate the microSD card slot in the battery compartment (highlighted orange). Place a compatible microSD card with its brand and capacity markings facing you and its smaller edge going into the card slot. Fully insert the spring-loaded microSD card. DO NOT attempt to insert the microSD card in any other orientation. Put the battery back into its compartment and put the battery compartment cover back on. If you add a SD card new to your ELE00024, you will be asked if the card is to be used for extra device storage or for portable data.

To remove the microSD card:

Before removing a microSD card, Go to **Settings** > **Storage**. Tap the eject symbol next to the listed card and the card will be unmounted. Then remove the battery compartment cover, remove the battery, and gently remove the microSD card.

Wired Network Adapter

The ELH00034 adapter provides a means to connect the HD Handle to the ELE00024 using USB as opposed to the wireless connection. The ELH00034 adapter and tablet Ethernet settings are pre-configured to automatically connect the HD Handle to the Tablet while turning off the Tablet radio to conserve power.

Installing the ELH00034 Adapter

1. Open the Weather Cover Cap on the bottom of the HD Handle.
2. Insert the plug into the receptacle. Assure the keyway on the plug and receptacle are aligned and then tighten the knurled nut finger tight.

3. The Contact Cradle engages to the bottom edge of the ELE00024 as shown.

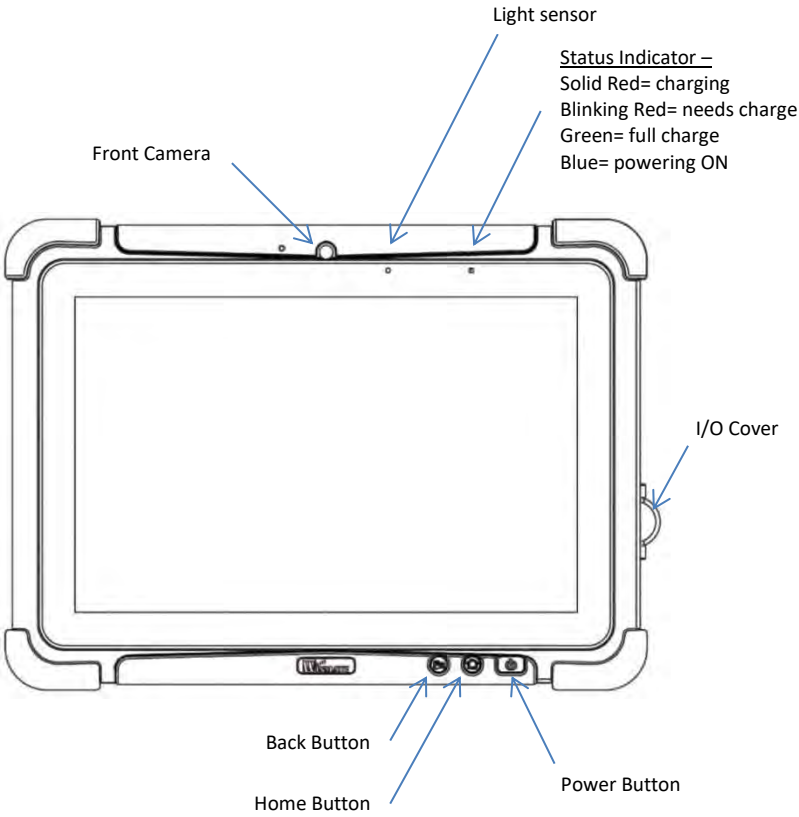
4. The Cradle will lock when fully engaged onto the Tablet.

5. Disengage Cradle by pressing down locking tab while pulling Cradle off Tablet

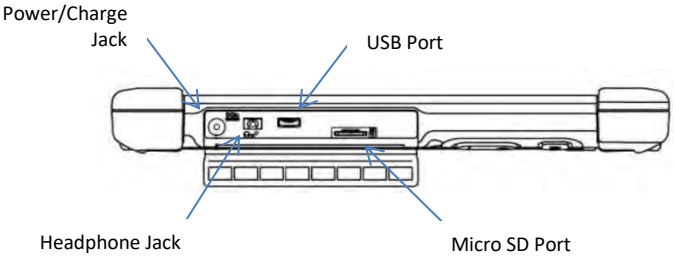
10” Rugged Tablet (Optional)

ELE00028

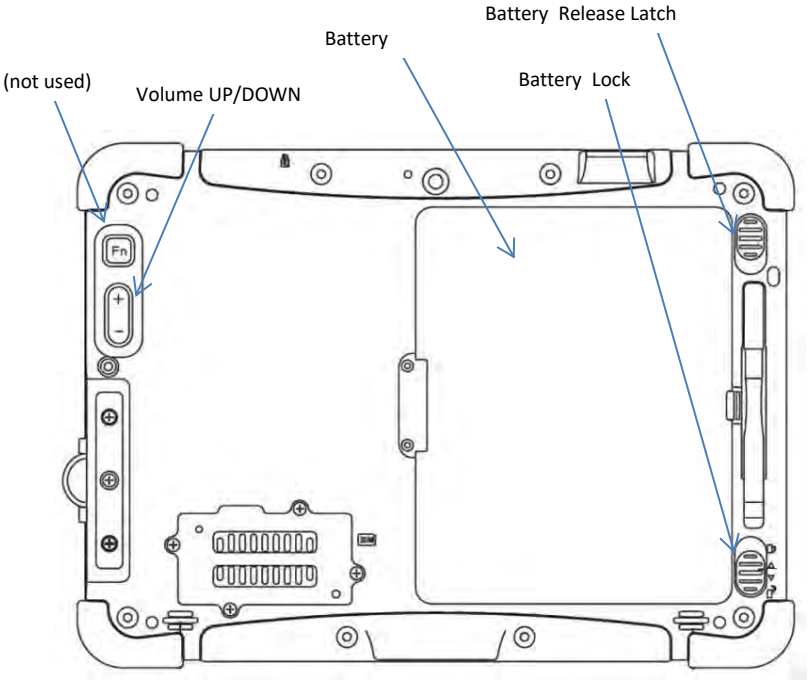
Fully Rugged 10” Tablet



Front view



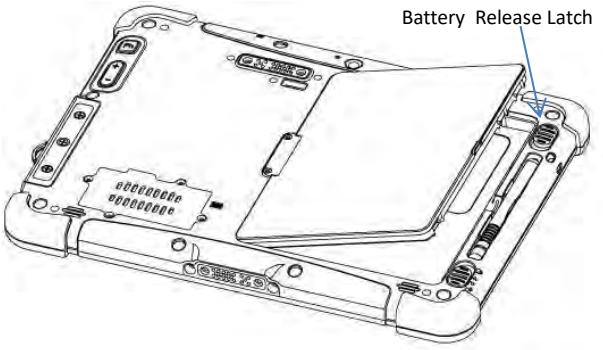
Edge View I/O Cover shown Open



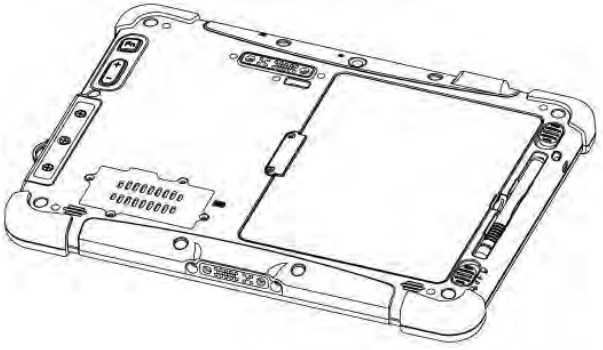
Back View

To insert the standard battery pack into the Tablet:

1. Disconnect AC adapter and power cord from the tablet.
2. Turn the tablet over, back facing up.
3. Locate the Battery Lock Latch and push it to the “Unlocked” position.
4. Locate the Battery Release Slider that is spring-loaded. Pull back and hold.
5. Insert the battery on the connector-pins side first, and then lower the battery into the battery compartment. Continue to hold the Battery Release Slider before battery is fully inserted.
6. Make sure the battery is completely lowered into the compartment before letting go the Battery Release Slider. Battery will be flat against the housing once fully inserted.



Engage this end first



Battery Fully Engaged

Removing the Battery Pack

1. Power off the tablet computer (or put it to sleep). Disconnect any cords connected to the computer.
2. Turn the tablet computer over, back facing up.
3. Locate the Battery Lock Latch and push it to the “Unlocked” position.
4. Locate the Battery Release Slider that is spring-loaded. Pull back and hold.
5. Lift the battery out using the opening on side of battery compartment.

Charging the tablet battery using the charging dock

1. Locate the power receptacle on the bottom of the Charging dock and connect the Power Adapter Cable to the Charging Dock as shown.
2. Insert the battery pack into the docking station battery cavity making sure to align the contacts on the battery with the contacts on the charging dock.

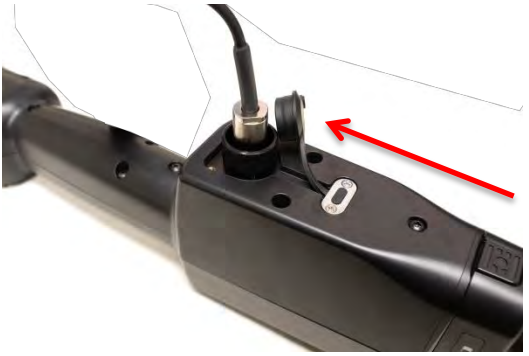
The index tab on the battery must align with the slot in the charger base so that the battery can fully engage the charger base. The battery will not charge unless the battery is fully seated into the battery charger base.

Wired Network Adapter

The ELE00031 adapter provides a means to connect the HD Handle to the ELE00028 Display using USB as opposed to the wireless connection. The Cable Adapter and tablet Ethernet settings are pre-configured to automatically connect the HD Handle to the Tablet while turning off the Tablet radio to conserve power.

Installing the ELE00031 Adapter

1. Open the Weather Cover Cap on the bottom of the HD Handle.
2. Insert the plug into the receptacle. Assure the keyway on the plug and receptacle are aligned and then tighten the knurled nut finger tight.



3. The ELE00031 adapter engages to the bottom edge of the ELE00028 as shown.

4. Once the Adapter is aligned with the contacts of the ELE00028, fasten by tightening the thumbscrews.

Charging the installed battery while powering the Tablet

The 10” Tablet can operate from either the external AC power adapter or the internal battery. When powering the Tablet with the AC Power Adapter, insert the Power Adapter plug into the Interface Module receptacle located on the bottom of the Tablet as shown. When powered the Tablet with this method, the AC Power Adapter will charge the Tablet battery as well as provide power for the full system.

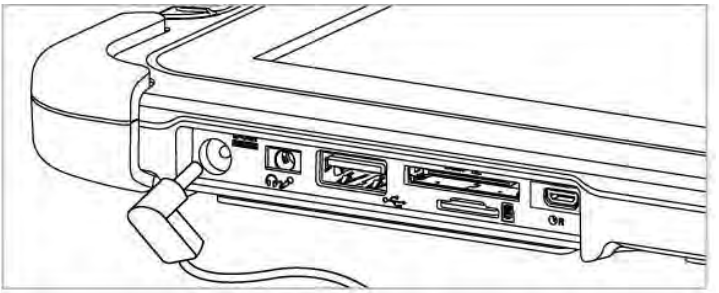
It is recommended to use AC power when you start up the Tablet Computer for the first time. If battery power must be used, please make sure the battery is fully charged before using.

Caution - Use only the AC adapter included with your Tablet Computer. Using other AC adapters may damage the Tablet Computer and the Battery.

Powering the Tablet only

The Tablet can also be powered directly by inserting the Power Adapter plug into the receptacle located on the side of the Tablet, under the waterproof cover.

Note: the Tablet battery will not be receiving a charge when powering the Tablet using this method.

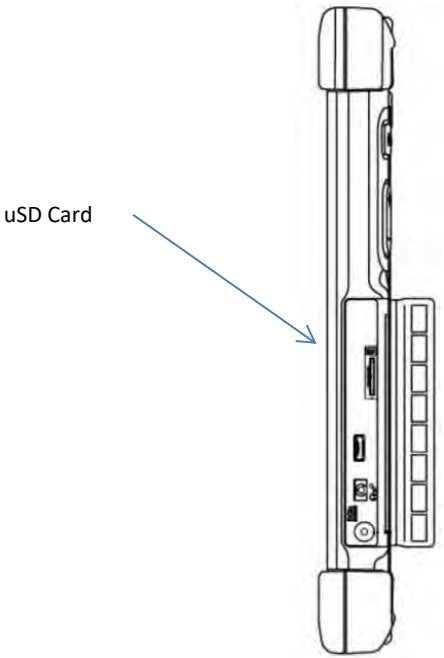


Inserting a Micro SD card (Optional)

A Micro SD can be installed into the Tablet to provide additional recording space and also add the option of removing the card to transfer recorded media onto a remote PC. The tablet is compatible with SDHC series cards with capacities of up to 1TB (FAT32 card formatting). Older SD cards can also be used.

To install a micro SD card:

1. Open the I/O access cover on the side of the Tablet
2. Insert the SD card into the SD card slot where shown
3. Lock the SD card into place by pushing the card until you hear the audible click.
4. To remove the card, press the card into the slot until you hear the audible click. The card will partially eject and then can be removed.



Edge View I/O (Cover shown Open)

Turning the display ON and OFF

Press and hold the power button until the unit vibrates (about 3 to 4 seconds)

To turn the unit OFF, press and hold the power button until the Power menu appears.

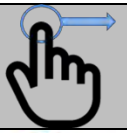
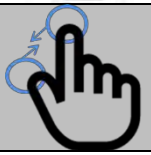
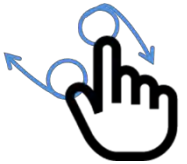
Select Power OFF to completely power down the display

Typical Android Functions

This chapter explains how to use the buttons, status cons, and controls on a typical Android device using the ELE00024 as an example.

Using the Touch Screen

The touchpad supports the core gestures for Android.

Gesture	Action	Description
Tap		To select or activate something
Tap & Hold		Touch and hold an item on the screen by touching it and not lifting your finger until it responds
Touch, Hold & Drag		Touch and hold an item for a moment and then without lifting your finger, move your finger on the screen until you reach the target position. i.e. moving the apps around the home screen
Swipe or slide		Quickly move the finger across the surface of the screen. i.e. slide a lock screen to open the lock
Double-tap		Tap quickly twice on a webpage, screen, or App to zoom
Scale		Place two finger on the screen and pinching them together
Rotate		Two-finger press, simultaneously orbit both fingers around the center point, lift.

Waking Up the Tablet

If you do not use the tablet for a while, the screen dims and then darkens to conserve the Battery. To wake up the tablet:

1. Press the Power button on the side of the tablet.

Using the Home Screen

Home screen is the starting point to access all the features on your tablet Device. It displays application icons, widgets, shortcuts, and other features. User can personalize the home screen. See “Personalizing home screen”.

Personalizing Home Screen

User can add application icons, shortcuts, widgets, and other items to any part of any Home screen where there is free space. User can also switch the wallpaper.

To change wallpaper on the HOME SCREEN:

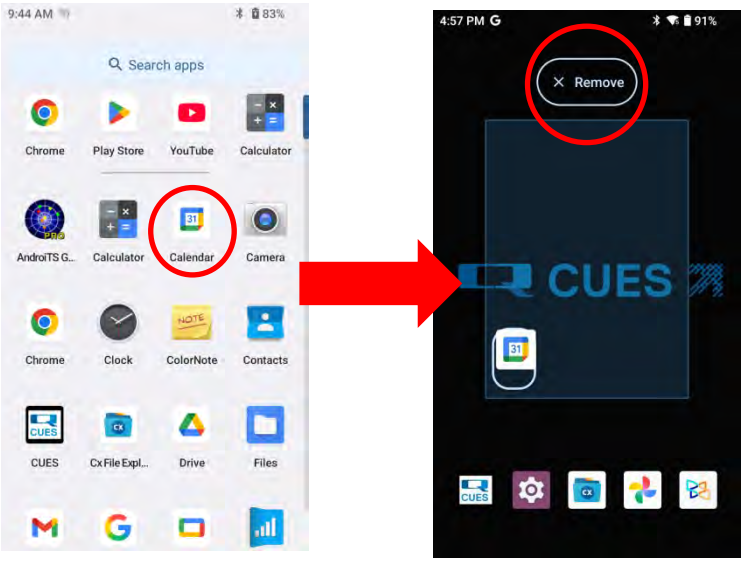
1. Tap **Settings** .
2. In the Device tab, tap **Display > Wallpaper**.
3. In the Wallpaper menu select the location of wallpaper, and then tap the type of item you want to add.

To move or add an item on the HOME SCREEN:

1. Tap and hold the item you want to move, until it can be moved.
2. Drag it to a new location on the screen.
3. Place the item where you want to put it and lift your finger.

To remove items from the HOME SCREEN:

1. Similar to moving or adding an item, tap and hold the item you want to remove.
2. Drag the item you want to remove to the Remove icon.



Network Connection

Each HD Handle is programmed as a network access point with its own unique wireless network name (SSID). The SSID will be "CUES*n.n* where n= the serial number of the HD handle. For example, if the HD Handle serial number is *0.17*, then the SSID for that handle will be *CUES0.17*

The various components of the CUESrecon camera system have network components which have Static IP addresses assigned to them by the factory.

The associated Video Display (Tablet) supplied with the system has been pre-configured to automatically connect to the HD Handle supplied with the kit. Tablets supplied with systems configured from the factory will be marked with the associated HD Handle serial number as well.

The pre-programmed Tablet supplied with the system referred to as the "Master" tablet is configured with a special static IP address and has the ability to control the camera and pole functions. Additional Tablets can be added to the system to allow monitoring and recording functions only.

Tablet Wi-Fi connections

Master Tablet

Under normal circumstances, configuration of the Tablet wifi settings will not be required. However, in the inadvertent case where the Tablet Wi-Fi connection to the CUESrecon system is accidently 'Forgot" or deleted, use the following steps to re-configure the CUESrecon Wi-Fi connection.

Setting the tablet Wi-Fi using this configuration will classify the Tablet as the ***Master*** tablet

1. Make sure the Tablet and the CUESrecon HD Handle are on and have been running for at least 1 minute.
2. In the Tablet settings, click on "Networks & Internet"
3. Scroll through the networks listed and highlight the CUESx.y network where x.y is the number shown on the serial plate of the CUESrecon Handle or Device. For example, if the serial number on the CUESrecon HD Handle is 0.79, then scan for the network 'CUES0.79'
4. When prompted for the password, enter:

When configuring the WiFi connection on the Main Viewing Tablet, additional settings will also need to be configured. Scroll down through 'Advanced Options' and make the changes indicated in the steps below. Note: for additional Viewing Tablets (not the Main Tablet), skip these steps.

5. Connection Type: **Static IP**
6. IP address: **192.167.x.y+3** for example, if the wifi network being connected is 0.79, then the static IP of the tablet shall be 192.167.0.82.
7. Gateway is **192.167.x.y**. As in the example, the gateway would be 192.167.0.79
8. Network Prefix length: **8**
9. Click 'Save'

Viewing Only Tablet

Additional tables can be connected to the system to provide limited functions such as viewing and recording. These tables will not be able to control zoom, Illumination, and pan functions. A total of three additional tablets can be connected to the system in addition to the *Master*.

1. Make sure the Tablet and the CUESrecon HD Handle are on and have been running for at least 1 minute.
2. In the Tablet settings, click on Networks & Internet
3. Scroll through the networks listed and highlight the CUESx.y network where x.y is the number shown on the serial plate of the CUESrecon Handle or Device. For example, if the serial number on the CUESrecon HD Handle is 0.79, then scan for the network 'CUES0.79'
4. When prompted for the password, enter:
5. The system will automatically configure any additional required settings.

Tablet Ethernet Settings (set in Docking Station)

Note: The following settings are pre-configured at the factory and do not need to be performed prior to use. However, If for any reason the Docking Station settings on the tablet have been deleted or altered, the following settings can be set to allow use of the ELH00034 adapter with the CUESrecon Handle and Tablet.

The Tablet Ethernet settings are configured in the menu section, *Docking Station*.

1. In the TABLET settings menu, click on *Docking Station*
2. Click on the checkbox labeled, *Ethernet*
3. Click on the section, *Ethernet Connection*
4. Enter the same IP information as described above with the following exceptions:
5. Connection Type: **Static IP**
6. IP address: **192.167.x.y (plus 3)** For the example shown to the right, if the Wi-Fi network being connected is 1.7, then the static IP of the tablet shall be 192.167.1.10
7. Gateway is **192.167.x.y**. As in the example above, the gateway would be 192.167.1.7
8. Netmask: **8**
9. DNS address 1: **192.167.1.10**
10. DNS address 2: **192.167.1.10**
11. Click **"Save"**

CUESrecon Application

To view video from the CUESrecon system, the associated *System Display* utilizes the CUESrecon app.

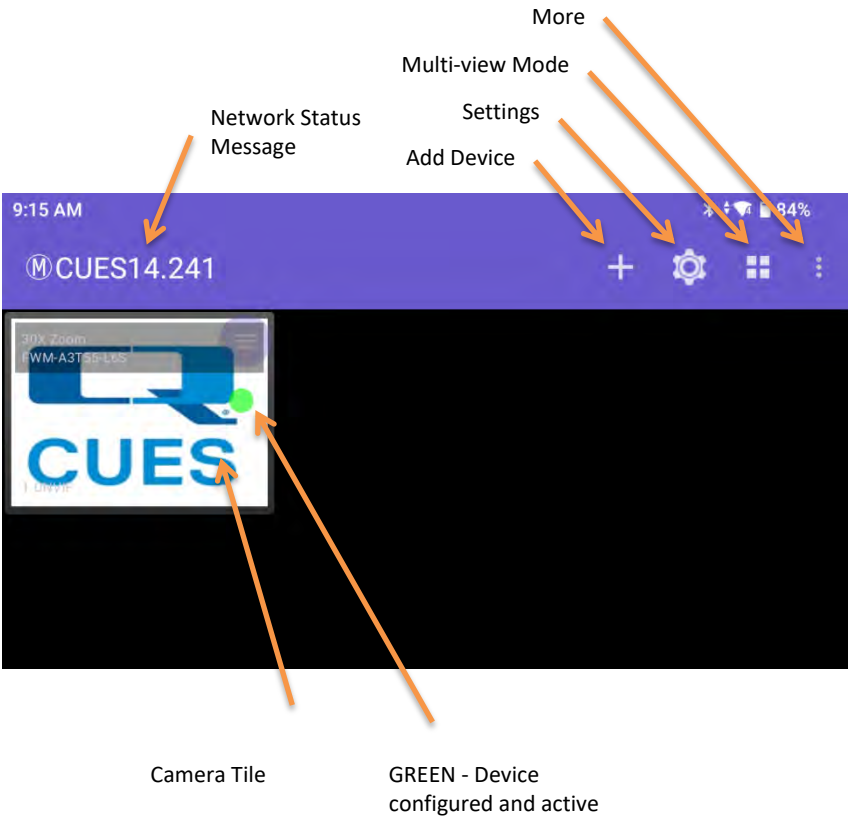
All CUESrecon kits supplied from the factory will have all associated cameras pre-configured to automatically connect and display video on the included System Display.

Note: In order for the CUESrecon App to display and control the System Camera video, the associated System Display must have an active network connection to the CUESrecon Handle. The Handle must be on and the System Display must be connected to the CUESrecon Handle. All CUESrecon Displays included with the CUESrecon system are **pre-configured** from the factory to automatically connect to the associated CUESrecon Handle and do not require additional configuration.

Running the app

All CUESrecon Video Systems are preconfigured to Autostart the CUESrecon application when first powering ON the Tablet display. If for any reason the Tablet Home screen is showing, touch the CUESrecon icon to start the application.

Application Home Screen Icons



Network Status – Displays the following status messages:

Connected network SSID (in the example above, CUES14.241)

"Not Connected" Wi-Fi network configured but not connected

"Wi-Fi disabled" the Wi-Fi is turned off on the TABLET

"Wired" the device is using the wired connection

Add Device - To add a camera see section, *Add New Camera*

Settings - Enters settings menu. See section, Settings

Multi-view Mode - Allows viewing of two or more connected and active devices. Refer to options, Multi-network and Bridged Network mode

More…

Sequence View – sequences through all the configured cameras. Must be in Multi-Network or Bridged Network Mode

Arrange Tiles – Allows tiles to be sorted differently on the Home screen

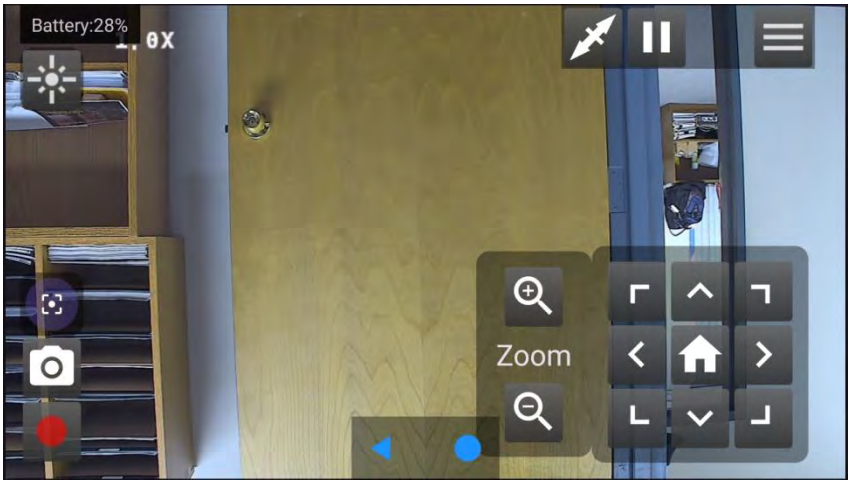
Media Files – Shortcut to file storage area

Help – PDF help file

About – provides application firmware information along with debugging and crash report log files.

Camera Tiles -In the upper right hand corner of each Camera Tile, the red or green light will indicate if the camera is 'live'. Live cameras are currently connected to the handle and are ON. Any camera that has a green indicator (live) is actually showing a live capture of the area where the camera is facing. The thumbnail will update every 10 seconds.

Clicking on a Camera Tile will display the selected camera full screen.



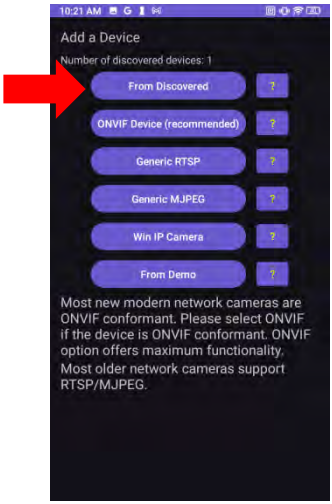
Adding a New Camera

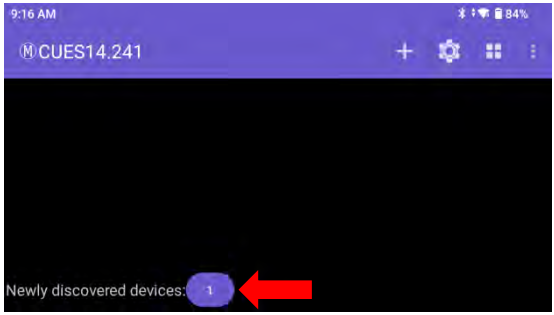
When using a new camera with the system and it has not been configured in the app, you must add a camera to the app so you can see the video.

> Note: All complete CUESrecon Kits have the included System Display pre-configured for all cameras supplied with the kit. The step is shown only to add a new camera or to re-configure a camera deleted from the system.

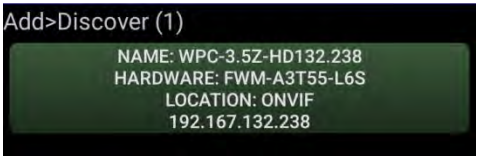
To add the new camera:

1. Make sure the camera is connected to the Pole, and the Pole is connected to the Wireless Handle.
2. Make sure the Wireless Handle has been on for at least 2 minutes.
3. When on the home screen, click on the + symbol or the newly discovered device button on the bottom left of the home window.
4. The + symbol will bring you to a menu where a selection of "From Discovered" will bring you to discoverable cameras.
5. The Newly Discovered Devices button will bring you directly to the discoverable camera.



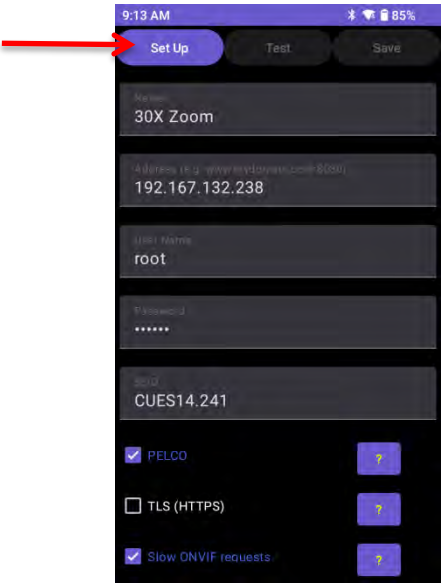


6. Click on 'From Discovered' or the Newly Discovered Devices button

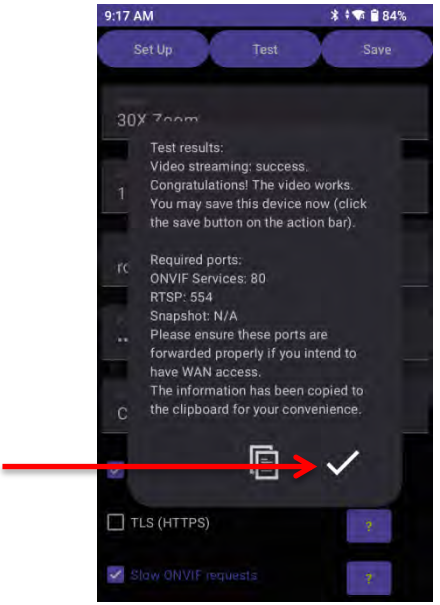


7. Click on the discovered device. Verify the last three numbers of the IP address match the serial number shown of the camera label.

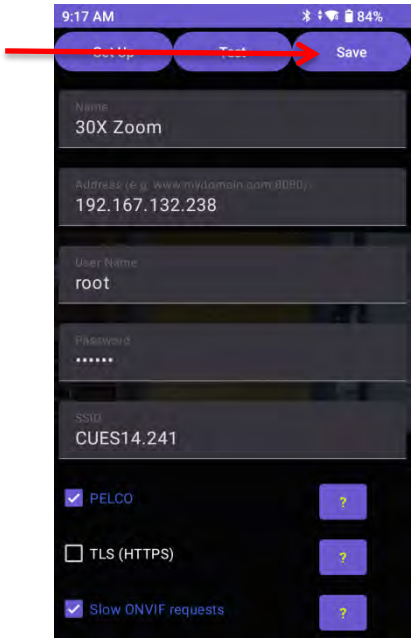
8. The system will recognize the camera and automatically name it. This field can be edited at any time to give the device a desired name. Select set up if your desired name is entered.

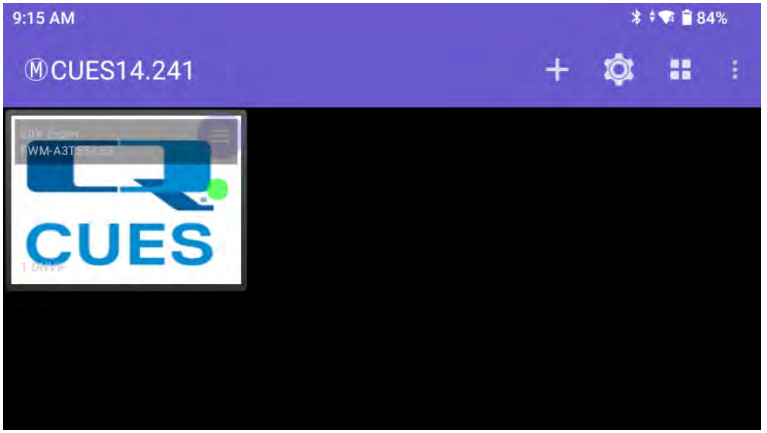


9. Camera parameters will be reported in the results window. Click the checkmark to return to the camera device set-up window



10. Click on ‘Save’ in the upper right hand corner. The camera will then auto launch and be operational. The green dot in the window indicates the camera is connected and ready for use.





Application Settings Menu

Preferred Wi-Fi Network - select one of the saved networks to have Connect Priority. For example, having two networks configured on the TABLET; the CUESrecon Handle as one network and a Headquarters wireless network with internet as the other. Select the CUESrecon Handle as the priority network. When the Handle is turned off, the TABLET will connect to the Headquarters network for downloading images, etc. As soon as the CUESrecon Handle is turned back on, the TABLET will automatically reconnect to the Handle

File Prefix - type in a prefix to append as a prefix to file names of captured media. Clicking on the icon to the left of the name field opens the Barcode Scanner. For inspection scenarios that have barcode identifiers, scan the barcode to automatically input the barcode data into the File Prefix field.

Rangefinder – Enable to connect optional CUESrecon Rangefinder accessory for use with CUESrecon Zoom Cameras.

> Refer to the Section, **"Using the Laser Rangefinder"** for instructions on use. (Page 68)

EXPORT DEVICE LIST – saves a configuration file for all currently configured devices on the Tablet

IMPORT DEVICE LIST – allows loading previously saved device configuration files.

Must have a Google Account configured and active on the Tablet to utilize the following Google account options

EXPORT TO GOOGLE DRIVE -saves a configuration file for all currently configured devices on the Table

IMPORT TO GOOGLE DRIVE - allows loading previously saved device configuration files.

EXPORT MULTI_VIEWS TO GOOGLE DRIVE - saves a configuration file for all Multi-view layouts.

IMPORT MULTI-VIEWS TO GOOGLE DRIVE - allows loading previously saved configuration files for previously saved multi-view layouts.

Media File Saving Location – The default file save location is set to ***Internal***. If desired, the *Custom* directory can be specified where media files from the CUESrecon app will be recorded. Note that the Application will create a new CUESrecon media folder and sub folders inside whatever Custom Folder is specified.

Maximum recording length – move the slider to set the maximum time (in minutes) a video recording file will be.

Video File Retention Time – move the slider to select how many days a video file will remain in memory before being automatically deleted by the application. Set the slider to 0 (zero) to retain the video files forever.

Control Overlay display time – move the slider to set the amount of seconds the overlay controls (record, pan, zoom, snapshot, etc.) will stay visible on the screen before going away. This allows non obstructed view of the video image once the overlay controls disappear. To regain visibility of the controls, touch the video screen.

Checkboxes…

Show snapshot timestamp -

Show ONVIF device model – (*not required for CUESrecon*)

Auto-start Multi-View – this auto starts any Multi-view device configurations that have been saved.

Set brightness to maximum for video streaming – if the Tablet display brightness is turned down for normal use, checking this box sets the video stream to full brightness when viewing.

Open App on reboot – Auto starts the App when turning the Tablet on or re booting

Start recording automatically – Video recording will start automatically whenever a device window has been selected. If the recording is stopped, the recording will not start again unless manually started or closing and re-opening a device window. Once the Maximum Recording Time of the video segment has been reached, the Application will start recording a new segment. The recording will continue until manually stopped.

Send GPS Info – For cameras equipped with GPS, the GPS coordinates are shown on the camera viewing window.

Record Video – Normally checked. Uncheck this option to only record the audio portion of a video recording.

Record Audio – Normally checked. Uncheck this option to only record the video portion of a video recording.

Disable camera microphone – Uncheck this box to turn the microphone of the selected camera OFF when recording a video segment. This is useful when doing a voice over annotation during an inspection.

Auto-connect – The Auto Connect feature allows the CUESrecon app to automatically connect to the installed camera. With Auto Connect on, configured cameras can be physically switched and the CUESrecon app will automatically connect to it with no user action necessary on the tablet.

Note: When the Auto Connect feature is enabled and a camera is being viewed, touching the Back button and confirming it with an OK will return the CUESrecon app to the home screen with Auto Connect temporarily off. This action is required if the user wishes to discover another camera, edit an existing camera, or view/edit any settings in the main setup. When the user exits any editing screen or if the user launches a camera by pressing any camera tile, the Auto Connect feature resumes.

The Auto Connect feature can be used in conjunction with Multi-Network mode. Note that the Auto Connect feature does not switch networks looking for cameras; it will only look for cameras on the current network. So if the supervisor is connected to a certain Handle and the camera is switched on that Handle, the CUESrecon app will automatically connect to it.

The Auto Connect feature should not be enabled in a bridged network configuration because multiple cameras exist simultaneously. If the Auto Connect feature *were* enabled, it would connect to the first camera is finds - which may not be desirable.

CUESrecon Application

Multi-network – Enabling this feature allows a supervisor or command station tablet to easily select cameras on multiple System Handles without having to first switch networks.

Setting up Multi-network-

Connect to each Handle's Wi-Fi in Android prior to launching the CUESrecon app. Select each Handle as the Preferred network in the Main Setup menu and discover all cameras that will be used on that Handle. Do the same of all the other Handles. Then enable Multi-Network feature in the Main Setup menu

How it works-

The CUESrecon app stores the network for each camera. Each of these networks can be viewed and/or edited in the camera's edit menu. Selecting any camera tile now causes the CUESrecon app to switch to that stored network and then connect to that camera. This makes it extremely easy to switch between Handles/cameras. The user should name each camera so that they are easily recognizable, such as Team 1/Team 2, Bay 1/Bay 2, or etc.

Special notes regarding Multi Network Wired Mode-

- Wired mode is only used by the Handle's operator and is not used by a supervisor, therefore Multi-Network more would be off.
- When discovering cameras wirelessly, the Network field is always populated with the current network, even if Multi-Network is off. When discovering cameras in wired mode, the Network field is always populated with "<no ssid>".
- When connecting to cameras wired after discovering them wirelessly, the network field is ignored. When connecting to cameras wirelessly after discovering them wired, the network field is updated with the current network.

Matrix for network related settings based on configuration

Configuration	Preferred Network	Multi-Network	Auto Connect
Systems as shipped	Set to the Handle	OFF[1]	ON
Alternate Tablet Viewer in a single system	Set to the Handle	OFF[1]	ON
Supervisor on a bridged network (Alternate Tablet Viewer in a multiple Handles system)	Set to the Bridged Network	OFF	OFF
Supervisor without a bridged network	Automatically set to the current camera	ON	OFF

Using the Laser Rangefinder

Setup

In order to connect to the Laser Rangefinder, it must be enabled and turned on with its Bluetooth enabled. Pairing is only done once, or again if the Laser Rangefinder is changed.

Bluetooth Pairing

1. On the Laser Rangefinder, press and hold the Bluetooth button until the “Bluetooth ON’ indicator is displayed on the Meter display screen.
2. Assure that the Tablet Bluetooth is ON.

Connecting the Laser Rangefinder

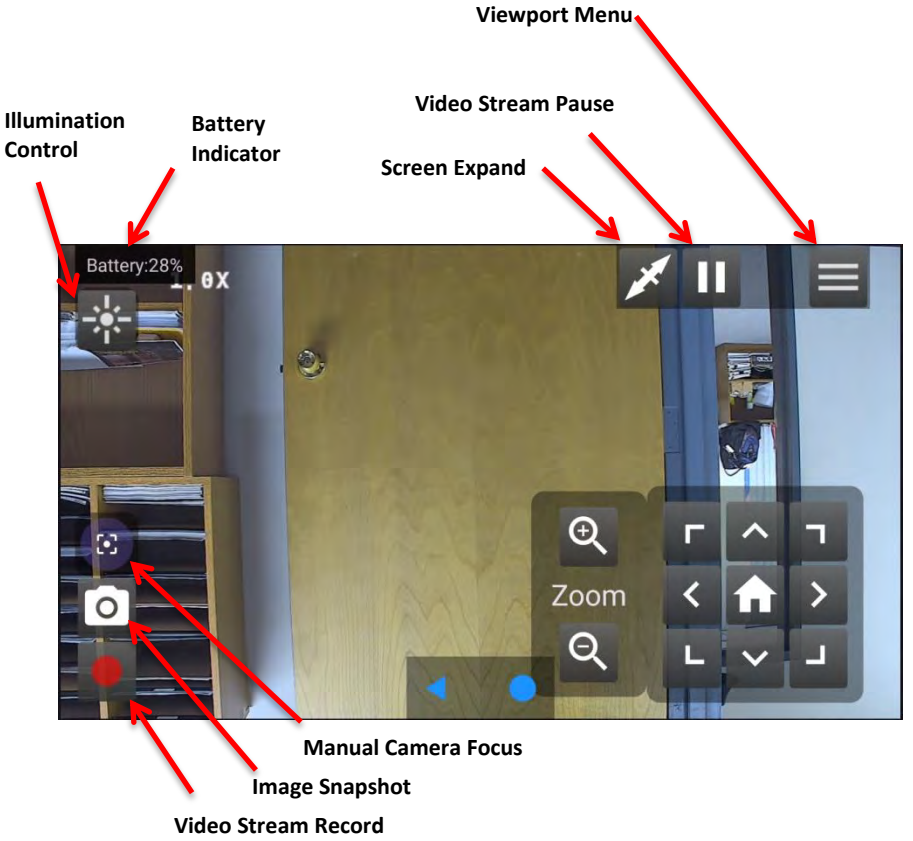
1. In the CUESrecon App, select the Settings icon.
2. Check the box, “Enable Rangefinder” in the Settings on the Tablet.
3. Click on “Searching…”. The application should find and report found device, for example :DISTO 12345678
4. For continuous measuring operation, click “Continuous Operation”

If the Laser Rangefinder has been properly paired, is powered on and is connected via Bluetooth, the app displays the Bluetooth symbol towards the right side of the Tablet display when you are viewing the live Camera image.

To view the Laser Rangefinder readings on screen, tap the blue Bluetooth symbol, it should then turn red and display the Rangefinder reading in the bottom left of the Camera display.

Camera Viewport

Viewport Icons



Battery Indicator– If the Tablet is configured in the network as the "Master" tablet, this message will display the HD Handle battery level. If the Tablet is only a secondary viewing display in the system, this message will display the "Name" of the current camera. If no name was entered when setting up a new device, this will display, "My Device"

Screen Expand – If the camera resolution aspect ratio does not match that of the viewing tablet, clicking this icon will expand the image to fit the screen. CUESrecon cameras are true HD so this function will not be necessary in most case.

Camera Viewport

 **Video Stream Pause** – pauses the video stream. When pause is active, the  (pause) icon changes to a  (play) icon. Pressing the  icon will resume the active video stream.

 **Image Snapshot** – Pressing on this icon records a snapshot of the current image showing in the viewport.

 **Video Stream Record** – Press this icon to record the current video stream.

 **Manual Camera Focus** – Tapping this icon will expand the menu. Select and hold the left option to focus near, and the right option to focus far.

 **Viewport Menu -**

Select profile – allows selection of view modes

H264 1920x1080 ; H264 1920x1080 ; H264 320x240

Media Files – opens recorded files on selected location of device. Can be sorted by Album, Location, or Time

Video Information – shows detail information for troubleshooting if required

Video ON – always leaved this checked (enabled)

Always ON - always leaved this checked (enabled)

Hide PT controls – hides the virtual joystick icon located on the lower right position on the screen

Hide Zoom controls – hides the Zoom control icon in the lower right section of the screen and the focus icon just below the LED intensity icon on the upper left section of the screen

Hide Mic – hides the microphone viewport icon

Disable gesture for PTZ – disables swipe to PAN control of touchscreen

Orientation – for setting screen orientation styles

Default – allows screen to flip portrait or landscape

Landscape – forces landscape orientation and locks in this mode

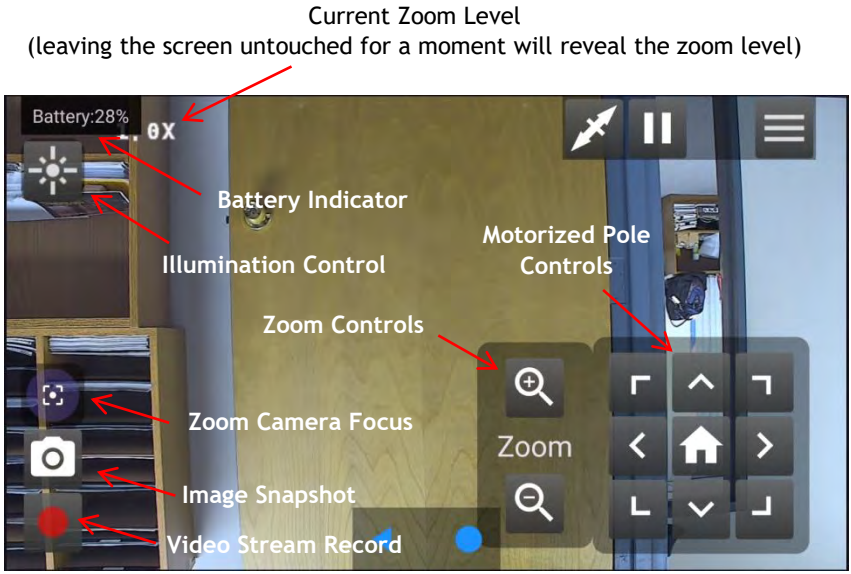
Reverse landscape – Flips landscape position

Debugging log – parameter logs for troubleshooting

Camera Viewport

Camera and Pole Control Functions

Camera and motorized head movement controlled by the CUESrecon Handle can be remotely controlled from the CUESrecon App when the camera configuration is properly configured.



Illumination Control

1. Camera Illumination can be controlled by pressing the illumination icon on the top left area of the display screen
2. Once pressed, the Icon will change to an UP / DOWN arrow.
3. Press on the X to close the illumination controls.

Zoom Control

Press on the + or the – icon of the Zoom Control to zoom in or zoom out. The current zoom level is displayed in the image window as shown above.

Manual Focus Control (for systems with Zoom Cameras)

When viewing areas that contain objects in foreground and background, sometimes the autofocus can focus on an object that is not the point of interest. Pressing the Manual Focus icon changes the control to a-Portrait / Mountain icon representing near and far focus as shown.

Video & Snapshot Size / Capacity

Video & Snapshot Size

	Video			Snapshots		
	MB per minute	**Minutes per GB**	**Hours per 32GB**	**KB per snapshot**	**Snapshots per GB**	**Snapshots per 32GB**
CMA00015 (1920X1080 30FPS)	36MB	27min	14hrs	570KB	1754	56K

Tablet Storage Capacity

Description	Model Number	Internal	uSD supplied	uSD limit
5" Rugged Tablet (R2)	ELE00024 (R2)	64GB	32GB	128GB
10" Rugged Tablet	ELE00028	32GB	32GB[3]	1TB

Transferring Photo and Video Captures

Reviewing images and video on the tablet

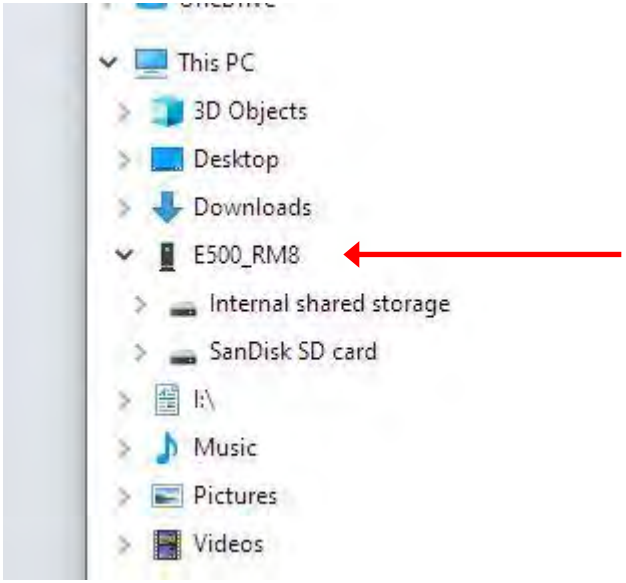
The Gallery app can be used to view captured images and video. Also, there are many additional apps that may be installed to view the photos and video captured on the Tablet.

Transferring to PC via USB

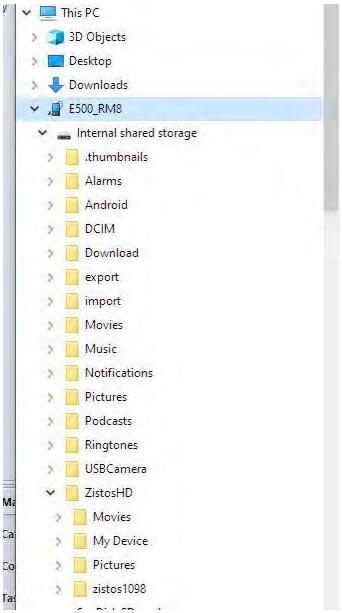
Recorded video and photos may be transferred to a computer for viewing and archiving using a standard micro USB cable.

To transfer photos and videos:

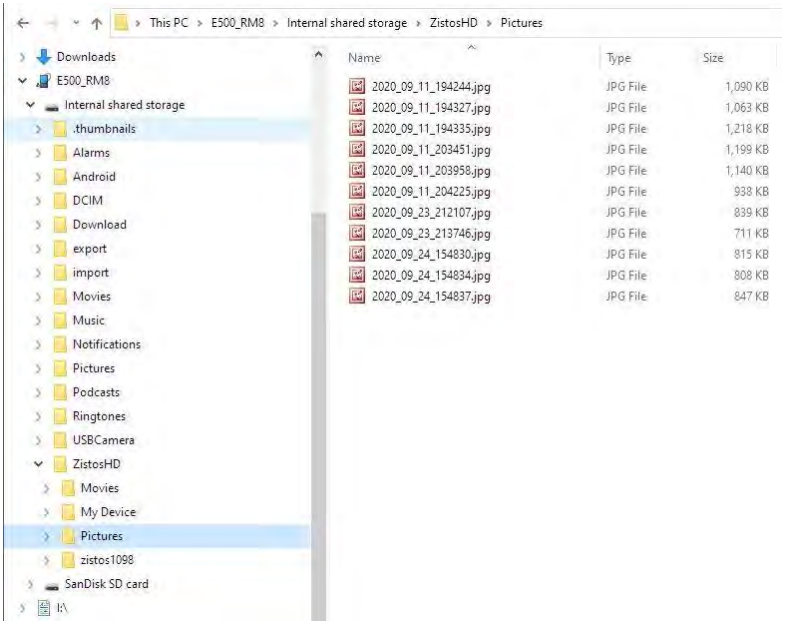
1) Connect the tablet to the computer using the micro usb cable.
2) Make sure the Tablet is ON
3) Open File Explorer on the PC and browse for the connected device.



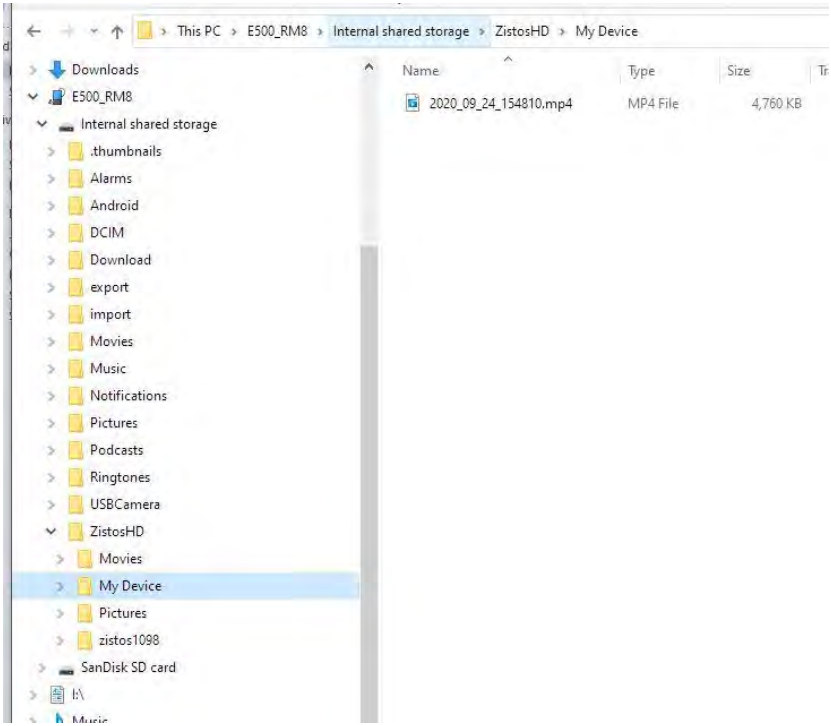
4) Click on the Folder 'Internal shared storage' and locate the folder, "CUES'



5) Digital photo captures are stored in the 'Pictures' folder.



6) Digital video captures are stored in the ‘My Device’ folder.



7) These photo and video files can be moved or copied onto any location in the computer using typical *click-and-drag*, or *copy-and-paste* operation.
8) The files may be viewed using a standard computer Media Player and Photo Viewer.

Auto upload to Google Photos

If there are no user company restrictions, it is highly recommended to setup a Google account on the tablet. Google photos can be set to automatically mirror the photos on the tablet to the Google account in the cloud. Once the Tablet is connected to an internet connection, the photos will be automatically synced.

Note: remember to reconnect the Table to the CUESrecon ELE00028 handle WiFi to resume normal CUESrecon ELE00028 operation.

Copying to remote flash drive

Using a USB mini to USB female adapter (not included), a USB flash drive can be connected to the tablet. Once connected, the Tablets File Explorer utility can be used to copy or move files onto the remote flash drive.

Media captured on uSD card

Recording video and photo onto a resident uSD card will allow the user to later remove the card and transfer the media onto a remote PC. The uSD compartment is located under the battery, inside the battery compartment. A uSD adapter (not included) is required. Note: the Media File Saving Location will need to be set to 'SD Card' – setting located in the main screen 'settings' menu.

Troubleshooting

Handle will not power on

Upon turning on the Handle, LEDS sequence one a time quickly, followed by a bargraph showing the battery level, followed by just the PWR ON LED.

1) If it does not do this, then check if the battery shows at least 2 bars on its built in LCD. If not then either charge this battery or switch to a charged battery.
2) Check if the battery is fully seated and the latches lock into place.
3) Disconnect any pole and camera, then cycle power.
4) If the Handle LEDS still do not sequence, then the Handle needs to be repaired. Contact the factory.

Pole problems

Motorized Pole does not move when the PAN LEFT/RIGHT buttons are pressed

Pressing the **PAN LEFT/RIGHT** buttons on the Handle should operate the motorized head. The motorized head should move and the Angle LEDS should reflect the position of the motorized head. If it does not move, then either the Pole or Handle needs to be repaired.

1) Remove the pole and connect the camera directly to the Handle. Note that it does not thread in, so be careful not to let it fall out. After waiting 3 seconds for the camera to boot (10 seconds for a zoom camera).
2) Press the **ILL+** button on the Handle. The camera LEDS should turn on and the Angle LEDS on the Handle should report the illumination level of the camera.
    a. If the Angle LEDS reports the illumination level, then the Handle is working and the Motorized Pole needs to be returned for repair.
    b. If the Angle LEDS do not report illumination level, then the Handle needs to be returned for repair.

Handle does not report the position of the motorized head

If the motorized head moves when pressing the **PAN LEFT/RIGHT** buttons, but the Handle does not report its position, then either the Pole of Handle could be defective.

1) Remove the pole and connect the camera directly to the Handle. Note that it does not thread in, so be careful not to let it fall out. After waiting 3 seconds for the camera to boot (10 seconds for a zoom camera).
2) Press the **ILL+** button on the Handle. If the Angle LEDS report the illumination level, the Motorized Pole needs to be returned for repair.

Handle does not report the motorized head position correctly

Upon turning on the Handle, LEDS sequence one a time quickly, followed by a bar graph showing the battery level, followed by just the PWR ON LED.

With a Motorized Pole in place, one or two Angle LEDS on the Handle should show the position of the motorized head. The motorized head can be moved by hand and the position should be reported by the Angle LEDS on the Handle.

If the position moves, but is wrong, it can be reset as follows:

1) Position the motorized head, either with the PAN LEFT/RIGHT buttons or manually, to be exactly at the HOME position as best as possible.
2) Press and hold the **PAN LEFT/RIGHT** buttons for 10 seconds. The home position is not set and the HOME LED then turns on.

Handle does not control the camera illumination

This could be caused by a problem with either the Handle, the Pole or the Camera.

1) Change to another Camera if available. If the second Camera works, then the problem is with the first Camera.
2) If the second Camera does not work or if a second Camera is not available, remove the Pole and connect the Camera directly to the Handle. Note that it does not thread in, so be careful not to let it fall out. After waiting 3 seconds for the Camera to boot (10 seconds for a zoom camera), turn on the camera illumination.
3) If Camera illumination works and is reports on the Angle LEDS, the Pole needs to be returned for repair.
4) If the camera illumination still does not work, then it could be a problem with the Camera or Handle. If the Motorized Pole works properly (moves and reports its position), then it is a problem with the Camera.

Handle does not control the camera zoom

This could be caused by a problem with the Handle, the Pole, or the Camera.

Does the camera illumination work and is it reported on the Angle LEDS of the Handle?

1) If illumination works, then the zoom problem is with the camera and it needs to be returned for repair.
2) If the illumination does not work, follow the steps in the section above.

Cannot connect to the camera in the CUESrecon App

Is the Handle powered on?

1) Verify that the Handle, Pole and Camera are assembled securely.
2) Verify the Handle is on. Its PWR LED should be on or blinking fast (1 sec on 1 sec off, which indicates a low, but usable battery). A slow blink (one blink every 5 seconds) indicates the battery is too low to use and the Handle is off.
3) Allow 45 seconds for the Handle and Camera to fully boot from the time it is turned on.

Was the installed camera tile selected in the CUESrecon App?

1) Verify that the PN listed in the camera tile selected matches the camera connected. The PN in the camera tile will be the concatenation of the model number and serial number, as per the camera's label. For instance, model CMA00015 and SN 128.3 will be listed as **CMA000128.3**.
2) If a camera has just been added to the system, then it is necessary to Discover it. Every camera, even the same model, has a unique serial number and must be discovered.

Is the Tablet connected to the Handle's Wi-Fi?

1) Return to the CUESrecon App home menu and verify the network reported in the upper left-hand corner of the screen is that of the Handle. The SSID is reported as **CUESX.Y**, where X.Y is the serial number on the Handle. For instance, CUES0.115 would be reported for Handle SH 0.115. Note that if the tablet is wired to the Handle, then the home screen reports **Wired**, and not the SSID.
2) If another network is connected and therefore reported, as is the case if the user has temporarily connected to another network to access the internet, then this network should be "forgotten". Go to **Settings**->**Wi-Fi**, then press and hold the connected network SSID until a menu is displayed, then press **Forget Network**. Android will then connect to the Handle's Wi-Fi after a delay, or to speed things up, the Handle's SSID can be selected manually.

Still not connected to the camera?

If the Handle, Pole and Camera are assembled properly and have been powered on for 45 seconds AND if the proper camera tile is selected AND if the tablet is connected to the Handle, then proceed as follows:

1) **Reselect the camera** - Return to the camera home screen by pressing the BACK button on the tablet, then press the camera tile again.
2) **Cycle power** - Turn the Handle off, then on again and wait 45 seconds.
3) **Reselect the camera** - Return to the camera home screen by pressing the BACK button, then press the camera tile again.
4) **Try another camera** - If another camera is available, then switch the Camera on the Pole and wait another 45 seconds. Return to the camera home screen by pressing the BACK button. Then press the proper camera tile.
5) **Rediscover the camera** – Return to the camera home screen and follow the instructions in the User Manual to discover a camera. If the camera is not reported in the list of discovered it means either the camera or Handle needs to be repaired. Having a second camera is the only way to determine if it is the first camera or the Handle, but first eliminate the pole in the next step.
6) **Eliminate the pole** - Remove the Pole and connect the Camera directly to the Handle. Note that it does not thread in, so be careful not to let it fall out. Allow 45 seconds for the Camera to boot.
7) **Reselect the camera** - If it does not connect, return to the camera home screen by pressing the BACK button. Then press the proper camera tile.
8) **Try the wired connection** - Connect the ELH00034 Wired Adapter into the bottom of the Handle and to the tablet. Return to the camera home screen by pressing the **BACK** button. Verify the home screen reports **Wired** instead of the Handles SSID. Select the proper camera tile. If it works, there is an issue with the Handle Wi-Fi or the Tablet and its Wi-Fi/settings.
9) **Try a second tablet** - If a second tablet is available, turn off the first tablet and power on the second tablet. Launch the CUESrecon App and verify it connects to the Handles Wi-Fi. If this second tablet has never been used is this system, it will be necessary to connect to this Handle's Wi-Fi. If the Camera is not already available, it will be necessary to discover it.
10) If it is still not working, then it could be the Handle. If a second camera is not available, it is possible it is the first and only camera.

Tablet camera controls not working

Only the *Main tablet* can control the camera. *Alternate viewers* cannot. The Handle has a communication port, which has its own IP address. This port is paired with the IP address of the *Main Tablet*.

The Handle uses this communication port to send the battery level to the tablet upon selecting the camera and whenever the battery level changes. The Handle also uses this port to send commands to control SNAPSHOT, VIDEO and talk mode functions on the tablet when the user presses the corresponding button.

The tablet uses this communication port to send commands to the Handle/Camera to control camera illumination, camera zoom/focus (zoom cameras only) and pan left/right (motorized poles only).

If the camera image is working, but these controls are not working, then proceed with this section.

1) Verify that the *Main tablet* is being used. It will have the Handle's serial number on a sticker on the rear of the tablet.
2) While viewing the camera on the *Main tablet*, tap the camera screen. The Handle's battery level should be reported in the upper left had corner of the display. If it does not, then reselect the camera by returning to the camera home screen by pressing the BACK button. Then press the camera tile again.
3) Verify the *Main tablet* is setup correctly. Go to **Settings**->**Wi-Fi,** then press and hold the Handle's network SSID until a menu is displayed, then press **Modify Network**. Under **Advanced settings:**
    a. Verify it is set to **Static**
    b. Verify the IP address is set to "192.167.X.Y+3", where X.Y is the serial number on its label.
    c. Verify the **Gateway** is set to "192.167.X.Y".
    d. Verify the **Network prefix length** to "8".
4) Turn off any *alternate viewers*. Then cycle power on the Handle.
5) If it is still not working, then contact the factory.

Specifications

CMD00060

CUESrecon HD Handle

PHYSICAL SPECS

Construction:		Lightweight impact resistant enclosure with internal aluminum frame
	(*with ELE00023)*	17.3in (l) x 3.6in (h) x 2.5in (w) 43.9cm (l) x 91cm (h) x 64cm (w)
Weight:	(*with ELE00023)*	2.7lbs (1.2 kg)

ENVIRONMENTAL SPECS

Operating Temp Range	-4° to +122°F (-20° to +50°C)
IP Rating	IP65 (dustproof & water resistant)
Storage Temp Range	-4° to +140°F (-20° to +60°C)

ELECTRONIC SPECS

Indicators:	Power LED, Illumination LED, 17 LED circular array for motorized articulation angular position (15° per LED which provides for a 7.5° resolution)
Power Switch:	Recessed alternate action push button switch
Keypad:	9 buttons – Illumination Up, Illumination Down, Zoom in, Zoom Out, Tilt Up, Tilt Down, Enter, Snapshot and Video Start/Stop
Connector:	Allows for hardwired connection to either a tablet/computer or wired network
Radios:	802.11 b/g/n, 25mw, dual internal antennas
Range:	30ft (10M) to 100ft+ (30M+) depending upon tablet performance
BAT-15:	Compact battery with molded battery cap, Lithium-ion Smart Battery with built-in fuel gauge and LCD, 10.8V, 3.4Ah; 3.5in (l) x 3.6in (h) x1.6in (w) (89mmx 91x 40mm); .53lbs (.24kg)
ELE00023:	Extended battery with molded battery cap, Lithium-ion Smart Battery with built-in fuel gauge and LCD, 10.8V, 6.8Ah; 6.1in (l) x 3.6in (h) x1.6in (w) (155mmx 91x 40mm); .98 lbs (.44kg)

Specifications

CMA00015

-30x Zoom HD Color Camera with Illumination

PHYSICAL SPECS	
Dimensions:	3.5 dia x 4.9 long (89mm x 124mm)
Weight:	1.59lbs; (.72kgs)
ENVIRONMENTAL SPECS	
Operating Temp Range:	14° to 122°F (-10° to +50°C)
IP Rating/Submersibility:	IP68 (33ft/10M)
Storage Temp Range:	-4° to +140°F (-20° to +60°C)
CAMERA SPECS	
Sensor Type:	2MP Panasonic CMOS
Sensor Size:	1/3in
Lux:	0.5 (.125 DSS)
Resolution:	1920 (h) x 1080 (v) @30 FPS 1280 (h) x 720 (v) @30FPS
Illumination:	3 White LED with reflectors
LED Wavelength/Power:	White / 280 Lumens
Lens:	4.3mm to 129mm
Field of View – Horizontal:	2.11° to 58.9°
PERFORMANCE SPECS	
Effective Viewing Distance	
in typical ambient light:	1ft to 200ft + (.3m to 60m+)
in complete darkness:	1ft to 100ft + (.3m to 30m+)
Runtime (*w/ELE00023*):	5hr 35mn (illumination ON) 7hr 15mn (illumination OFF)

Specifications

ELE00024

-5 Inch Video Display Tablet

TECHNICAL SPECS	
Operating System:	Android 13
Memory:	4GB Onboard, removable 32GB uSD card
Battery:	4500mAh rechargeable Li-ion
PHYSICAL SPECS	
Dimensions:	6.0in (L) x 3.0in (W); 152mm (L) x 76mm (W)
Weight:	9.8oz; .280kg
Display:	5.0” High Definition (720x1280) TFT-LCD with Corning® Gorilla Glass® 3
Touch Panel:	Capacitive touch screen
ENVIRONMENTAL SPECS	
Operating Temp Range:	14° to 122°F (-10° to +50°C)
Water & Dust:	IP65
Humidity:	Non-condensing, 95%
Storage Temp Range:	-4° to +158°F (-20° to +70°C)
INTERFACE	
Audio:	3.5mm headset jack, speaker
Alerts:	Vibration, LED indicators
External Buttons:	Volume Up/Down, Power, Function

ELE00028

-10 Inch Video Display Tablet

TECHNICAL SPECS	
Operating System:	Android 9
Memory:	3GB Onboard, removable 32GB uSD card
Battery:	5900mAh rechargeable Li-Polymer, replaceable
PHYSICAL SPECS	
Dimensions:	10.7in (w) x 7.8in (h) x 0.83in (d)
	(271.9 x 197.3 x 19.5mm)
Weight:	2.65lbs (1.2kg) with battery installed
Display:	10.1” High Definition (1920 x1200) 800 NIT
Touch Panel:	Capacitive multi-touch screen
ENVIRONMENTAL SPECS	
Operating Temp Range:	14° to 122°F (-10° to +50°C)
Water & Dust:	IP65
Storage Temp Range:	-22° to +158°F (-30° to +70°C)
INTERFACE	
Audio:	3.5mm headset jack, speaker
Alerts:	Vibration, LED indicators
External Buttons:	Volume Up/Down, Power, Function

Record of Revisions

This Record of Revision page is designed to ensure that users have access to the most up-to-date information regarding CUES's products. As CUES's products evolve over time, updates to procedures, specifications, and features may be necessary. These changes will be updated in each user manual, as needed. This revision page serves as a record of these changes, allowing users to track modifications and ensure they are following the latest instructions. The latest change level and the rationale for any change(s) will be explained in tabular format on this page to allow users to be better equipped should the need arise to call CUES regarding technical information.

Original Manual	Date	Revision / Details
CUESrecon Pole Camera User Manual	03.2026	Original Release - Rev.3

CUES's equipment is designed to be easy to use during day-to-day operation. However, it is powered electrically and thus must be operated with care and safety. Do not attempt to operate any CUES equipment without having thoroughly read through the appropriate operating instructions and/or been through training by authorized CUES personnel.

Care was taken in the design of this product and in the production of this document and related materials. However, CUES makes no warranty for the use of its products and assumes no responsibility for any errors or omissions in this document or for incidental or consequential damages resulting from the use of the products or the information contained in this document. Specifications may change without notice.

Styles and specifications are subject to change without notice. Printed in the United States of America.