CuddeLink Introduction Manual

Manual Number 10.0.1

*Stop checking multiple trail cameras.*

With CuddeLink, you check one,

you checked them all!

What CuddeLink Does

Hunters are aware of the benefits of using multiple trail cameras. But checking these cameras can be a time consuming task that takes away from hunting time and pollutes the area with human scent. The fact that multiple cameras can take hours to check also means that cameras are not checked as often as hunters may like. The result is conventional trail cameras are scouting 24 hours a day but hunters don't have enough time to retrieve the information the trail cameras provide.

Cuddeback's patent pending *CuddeLink* eliminates checking multiple cameras. CuddeLink is a wireless network of trail cameras that transmit their images to 1 camera. The image collection camera is called the *HOME* camera, and the transmitting cameras are called *REMOTE* cameras. So instead of checking all your cameras, you only check one.
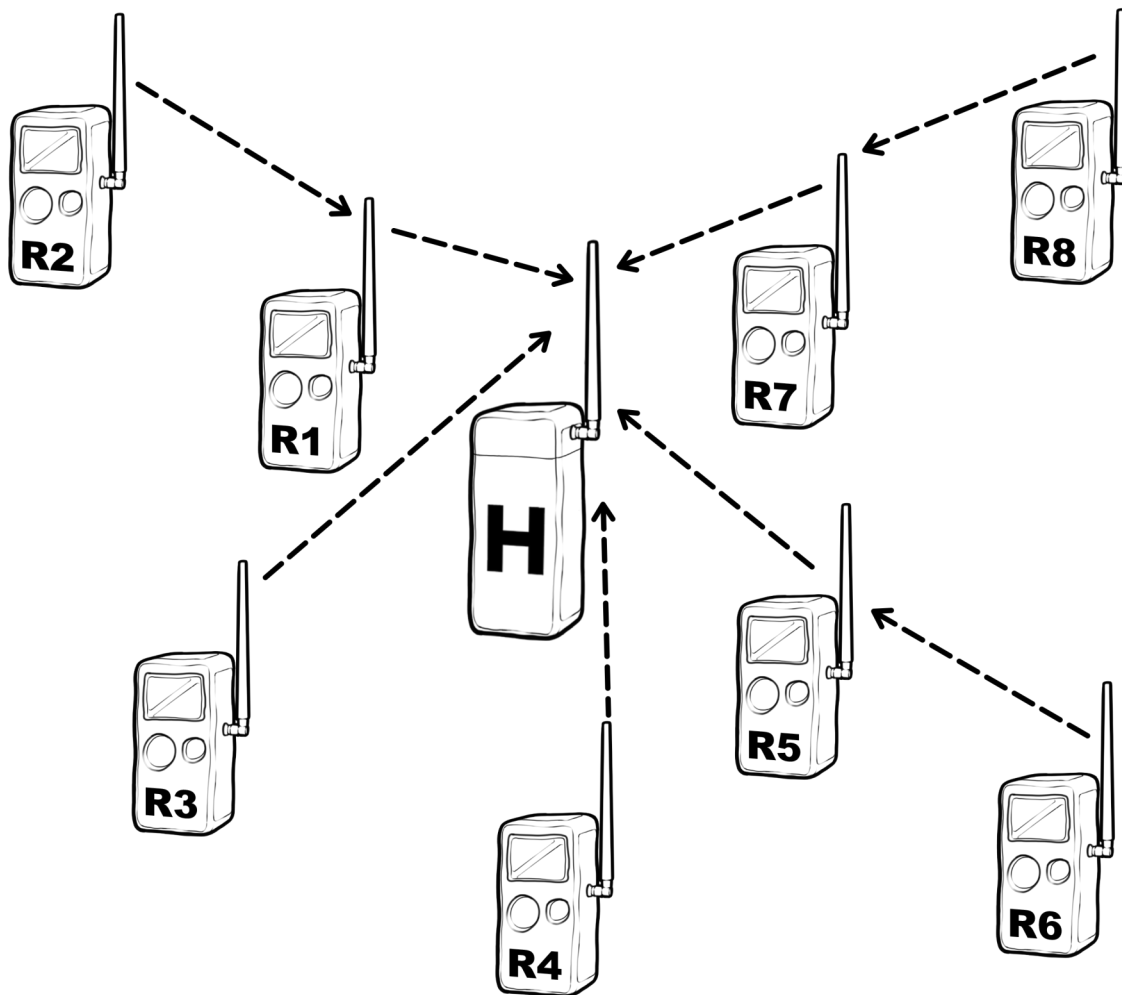
CuddeLink Network

This diagram shows a simple CuddeLink network.   Home camera (1) collects images from the 5 Remote cameras (2 thru 6) . The images taken by the Remote cameras are wirelessly sent to the Home camera.   So instead of checking all 5 cameras you only check the Home camera.
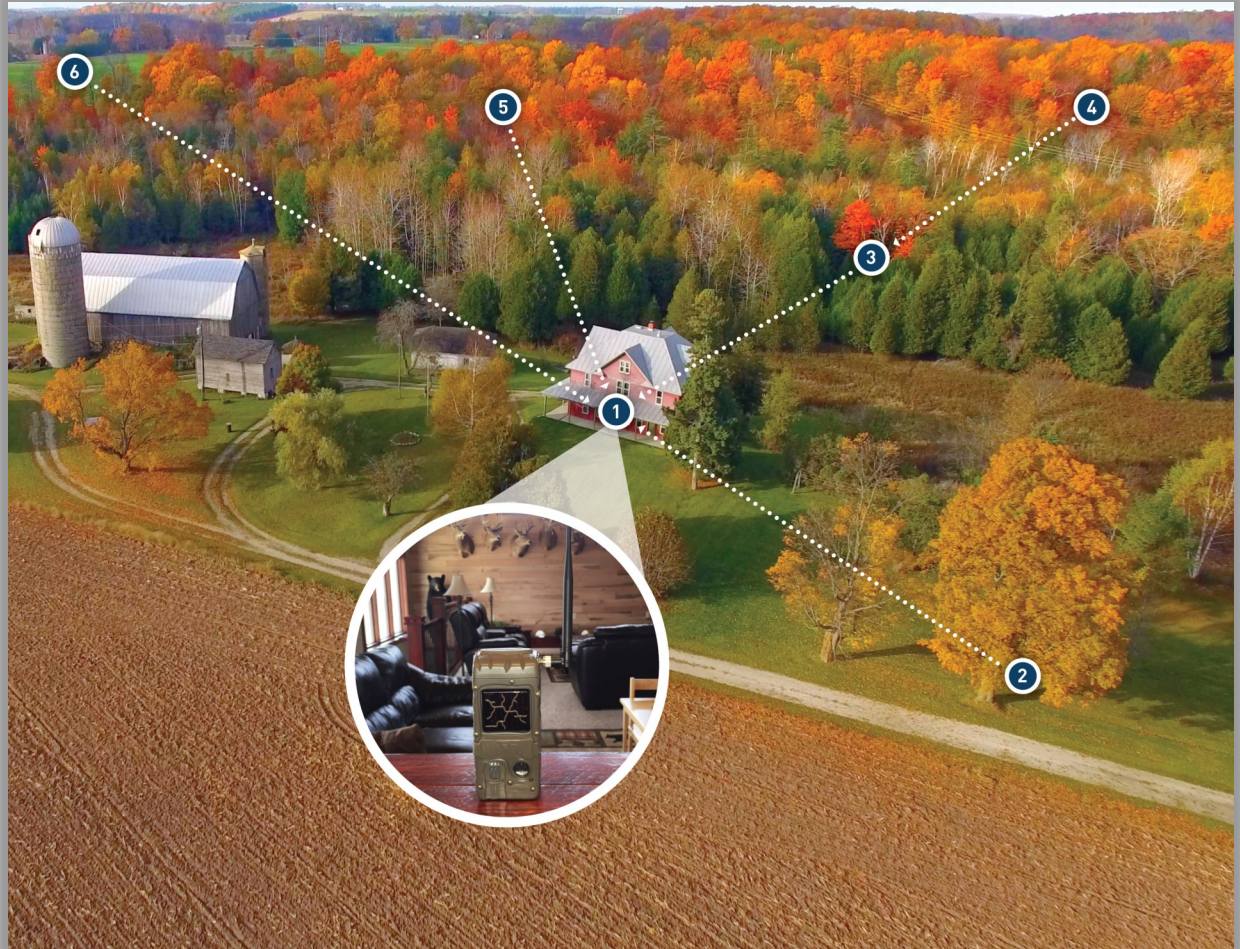
The CuddeLink Home can be placed in the most convenient location:

- Vehicle parking spot

- In tree stand or blind

- In a building, cabin, home, or garage, as shown in this example

- Anywhere you would place a conventional trail camera

You check the Home camera the same way you check a conventional trail camera. Pull the SD card and view the images, or swap out the card for viewing later.

CuddeLink Advantages

CuddeLink allows you to use your trail cameras to scout more effectively without alarming animals:

- **Easy to Use** - CuddeLink is cutting edge technology but using it is not difficult. Deploying CuddeLink cameras is very much like deploying conventional trail cameras.

- **More Convenient** – check your cameras more conveniently by placing the Home camera in the most convenient location, such as a vehicle parking spot, tree stand, blind, or in a building.

- **More Often** – because you only check 1 camera and this camera can be conveniently placed, you can check your cameras more often, even numerous times per day such as before you hunt, mid-day, nights, or anytime you desire.

- **No Intrusion** – allows you to check trail cameras without intruding on the animals.

- **No Sound** – if you don't intrude, you don't startle the animals with sound.

- **No Human Scent** – if you don't intrude, you don't leave any human scent. When human activity is removed animals move more naturally and potentially move more in daylight.

- **No Fees** - CuddeLink proprietary wireless technology does not have a monthly fee.

- **Cell Remote Access*** - CuddeLink allow images to be accessed remotely via cell service *(fees apply)*. But instead of multiple cell phone service fees you only need 1 service for up to 16 cameras.

- **Internet Access*** - In some situations CuddeLink images can be remotely accessed over the internet.   No fees apply.

*Explained later in this manual.

Wisconsin deer season 2016. One unlucky hunter decided to check his Cuddeback midday. He ended up spooking the very buck he was chasing. He now uses CuddeLink and checks this camera some distance from the buck's bedding area.

TERMS

CuddeLink is Cuddeback's trademark name for Cuddeback's network enabled trail cameras.

CL is an abbreviation for CuddeLink.

Network refers to a collection of CuddeLink cameras that are in radio contact with each other.

Home refers to the camera or device that collects all images.

Remote refers to cameras that transmit images to the HOME.

Repeater refers to a device that acts as a relay station on a CuddeLink network. The REPEATER does not take pictures, it only transmits images from one node to the next node.

Node is a general name for any home, remote and repeater on the network.

Daisy Chain is 2 or more cameras that are linked together via the CuddeLink network.

Link is 1 connection from 1 camera to the next camera.

Full Resolution Image is the full size image recorded by the camera. These images are saved on the Remote camera's SD card.

Thumbnail Image is a compressed image that is much smaller than the original image taken by the camera. These are the images transferred to Home. The full resolution image is available on the Remote camera so you do have access to it if needed.


4/16/2017   9:04 AM   BOBCAT PASS - 120

CuddeLink thumbnail images are smaller than the full resolution saved on the Remote camera's SD card. The thumbnail images are still high quality and look great, especially on a smart phone or tablet.

How far can CuddeLink go?

Your first question is mostly likely *how far can a CuddeLink camera talk*? The easy answer is 1/4 to 1/3 of a mile camera-to-camera.   However, the cameras will automatically daisy chain to extend range.
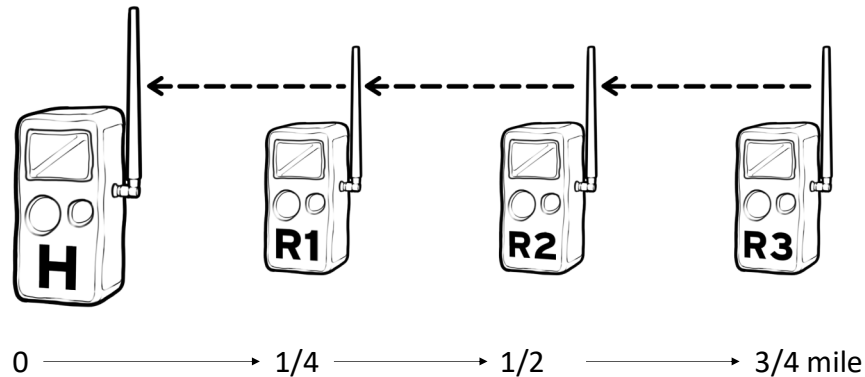
Typical camera-to-camera range is 1/4 mile in a forest.
Range can be much further in a some terrain & conditions.

With 16 cameras the theoretical range is 4 miles from Home to the furthest remote. However, a more reasonable deployment scenario is 2 to 3 miles in a forest, allowing CuddeLink cameras to be deployed on properties from a back yard to over 2000 acres. In open terrain void of hills and dense forest the camera-to-camera range is much further, perhaps over 1 mile and can daisy chain for many miles.

How do I connect cameras?

Next, you may ask *how do I connect the cameras to each other and how do I create the daisy chain?* The good news is CuddeLink does all the connecting for you. All you need to do is deploy the cameras and verify you have a signal. Connectivity is verified much like on a cell phone, you look at a signal strength meter and if a signal is present you can deploy the camera. On average, it takes about 1 minute longer to deploy a CuddeLink camera versus a conventional trail camera.

How long does it take for Remote images to get Home?

Wireless data transferring is not instantaneous, as you are no doubt aware from your experience with Wi-Fi and cell phone. CuddeLink images are transferred to Home in the order in which they are taken. Images can get Home as fast as a few minutes after being taken to as long as hours depending upon how many images the Remote cameras are transmitting and how many links the Remote is from Home.
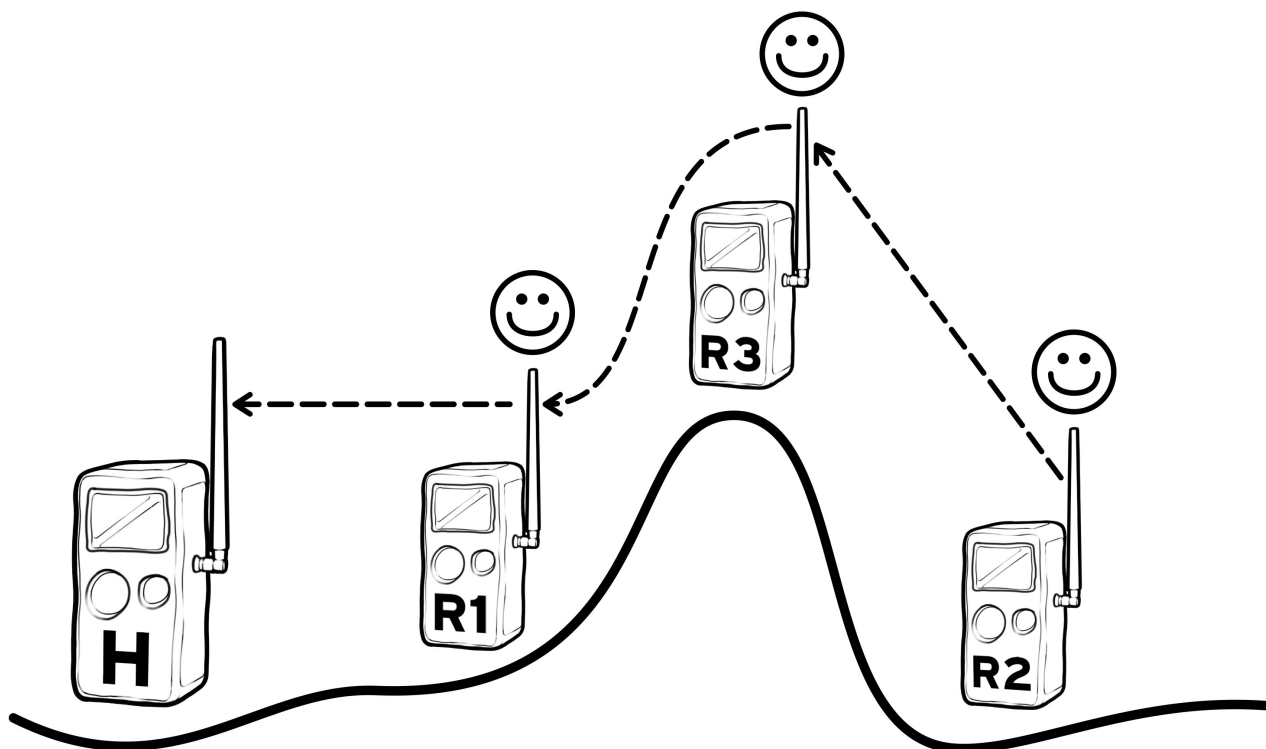
What About Hills?

Radio signals cannot travel through earth so hills will block the CuddeLink signal.   The solution is to put a CuddeLink camera on top the hill to relay the images.
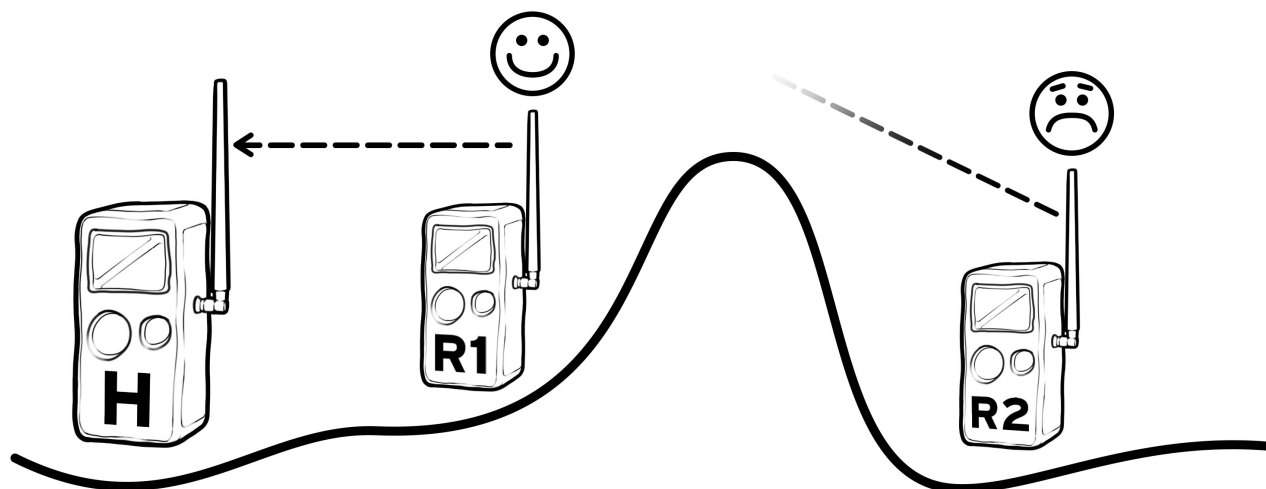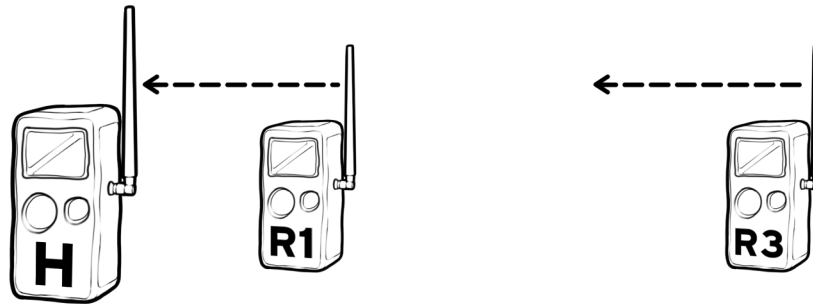
The hill is blocking R2 from talking to R1

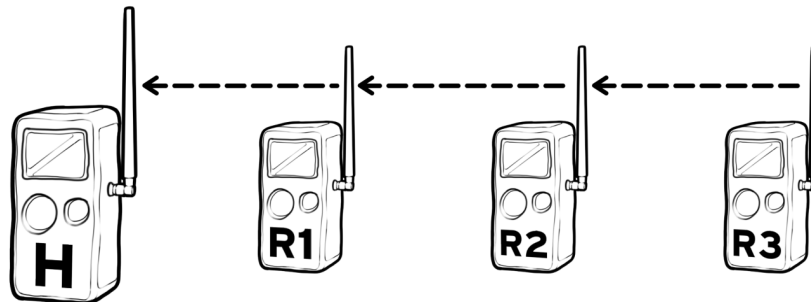*R3 is added to relay the signals from R2 to R1*

What if my remote cameras are too far apart?

Lets suppose you want to deploy Remote 1 and Remote 3 as shown below.

The cameras are too far apart to connect. What do you do? In this situation you install another camera between Remote 1 & 3 to relay the images from R1 to R3.

Ideally this would be a place where you want a camera. But lets assume you did not want a camera in this location. You have 3 options:

1. Use a camera anyway.

2. Use a camera in REPEATER mode. In repeater mode the camera will act as a CuddeLink relay but will not record any images.

3. Use a CuddeLink Repeater. This is a lower cost solution that solves the problem without wasting a camera in an undesired location.

How long do the batteries last?

CuddeLink cameras do require more power than conventional trail cameras. Power usage will increase as more images are taken and transferred. To extend battery life all CuddeLink cameras have the ability to operate from external battery power or solar power. Depending upon the camera model batteries can last for many months. With solar power the cameras may run indefinitely. See each camera's specifications for estimated battery life. Refer to Appendix A for specifications.

Images on SD Card

The CuddeLink Home camera will save the images from the Remote cameras on the SD card. Images are sorted and saved in folders for each camera.
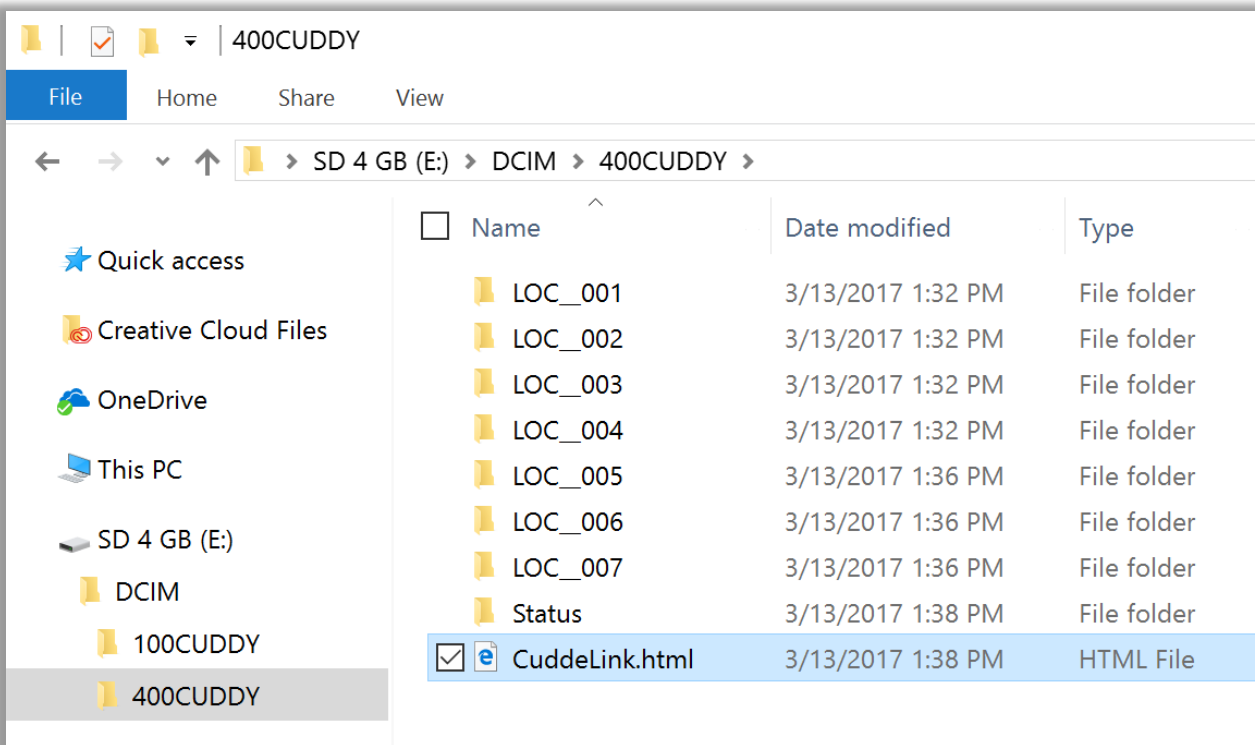

In the above screen shots there are folders named LOC__001 thru LOC_007. These folders correspond to remote cameras 1 thru 7. Within these folders are the images from the Remote cameras. (*The Status folder & CuddeLink.html file is explained on the next page*).

Stay informed about your Remote Cameras

With CuddeLink you won't be checking your cameras very often.   To keep you informed of camera status CuddeLink Remote cameras will send a status update to the Home camera. These status updates are saved in the Status folder and are also tabulated in an easy to read report. These reports will let you know when it is time to visit cameras to change batteries or SD card.
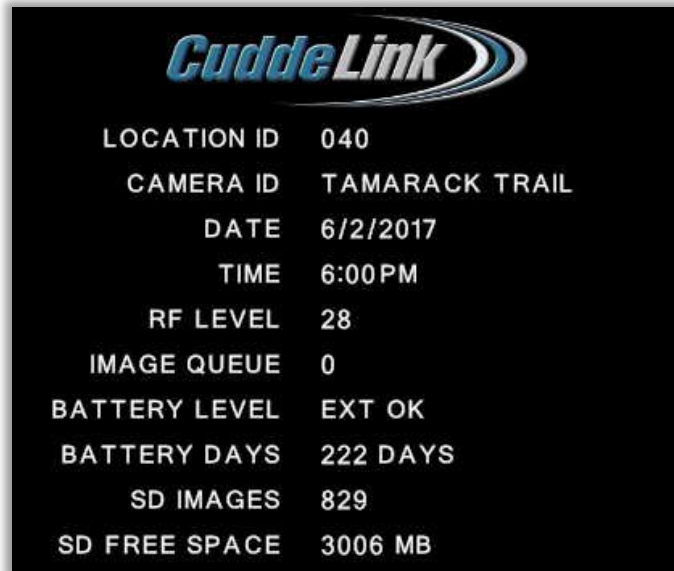
Status Image.
Each camera sends a status image which is saved in each remote camera's LOC__ folder.   This image contains vital stats about the camera.

CuddeLink.html - The data in all the Remote camera's Status images are also summarized in the CuddeLink.html report as shown below. A **!** is used to indicate a warning for SD & battery problems, or duplicate IDs as show below.

| #	Mode	Location ID	Camera ID	Level	Links	Battery	Image Queue	SD Images	SD Free Space	HW Version	FW Version	CL Version
							Date: 6/17/2017					
1	Home	001	CELL HOME	-	-	Ext. OK	0	6725	3473 MB	G23	6.0.37	1.0.3
2	Camera	010	DRIVEWAY	99	1	OK	10	670	3341 MB	G23	6.0.0	1.0.0
3	Camera	020	FIRST CORNER	40	1	OK	0	461	3232 MB	G23	6.1.0	1.0.0
4	Camera	030	TRACTOR ROAD	46	2	OK	0	289	2985 MB	G23	6.1.0	1.0.0
5	Camera	050	POPLE TREE	18	3	OK	0	906	1938 MB	G23	6.1.0	1.0.0
6	Camera	060	VISION CORNER	38	4	OK	0	378	2889 MB	G23	6.1.0	1.0.0
7	Camera	070	VISION TRAIL	18	5	OK	0	1535	2193 MB	G2+	5.0.62	5.0.42
8	Camera	080	HILL TOP	58	6	OK	0	89	1796 MB	G23	6.1.0	1.0.0
9	Camera	090	GRAVEL PIT	20	7	OK	0	401	1215 MB	G23	6.0.0	1.0.0
10	Camera	100	COUNTY PARK	20	8	OK	0	78	14736 MB	J2	6.1.0	1.0.0
11	Repeater	110 !	MAIN ROAD PINCH	56	5	OK	Repeater	293	1547 MB	G23	6.1.0	1.0.0
12	Camera	110 !	TWIN ROADS	10	8	OK	3	466	3233 MB	G2+	6.0.23	1.0.3
13	Camera	120	BOBCAT PASS	56	9	OK	0	447	3186 MB	G23	6.1.0	1.0.0
14	Repeater	130	MILLER PARK	Good	9	OK	Repeater	1064	2888 MB	G23	6.1.0	1.0.0
15	Camera	140	POND FIELD	24	9	OK	0	3468	714 MB	G2+	6.0.23	1.0.3
16	Camera	150	FLAMBEAU FIELD S	22	10	OK	0	270	3198 MB	G23	5.0.62	5.0.42

IMAGE COLLECTION METHODS

There are 4 ways to retrieve and view CuddeLink images.

Image Collection - Home Camera SD Card

The easiest way to retrieve CuddeLink images is from the Home camera's SD card. This is the standard method of image viewing. Images from Remote cameras are transferred to the Home camera and stored on the Home camera's SD card. To view the images from all your Remote cameras all you do is visit the Home camera and pull the SD card and view as if it were a conventional trail camera.

Pull the Home camera's SD card and view the images they way you normally would
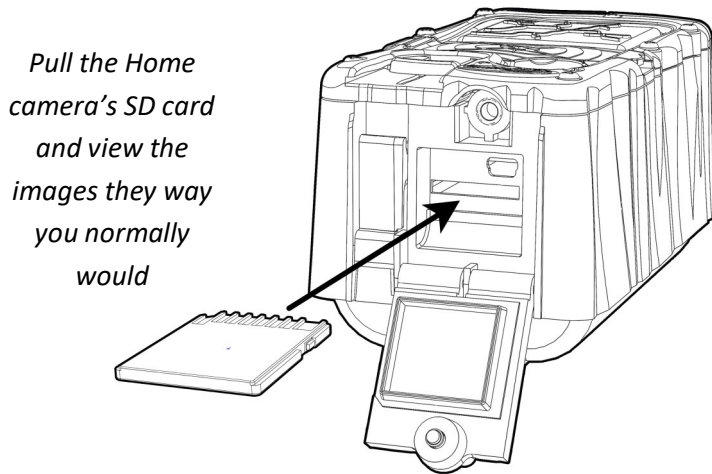
This viewing method is very simple and is very much like viewing a conventional trail camera. This is a great time saver and allows you to check all your cameras by only checking one.

We recommend placing this camera in a easy to check location, such as your vehicle parking spot, near your stand, or even in your home or cabin if your property has that.

Image Collection - Cell Service

Cuddeback offers the **CuddeLink Cell-Cap** that attaches to select CuddeLink cameras and Home units which allows images to be emailed or texted to a cell phone or computer. This method requires a cell phone service contract with additional cell connection fees, but only 1 cell phone connection is required to transmit images from up to 16 cameras.
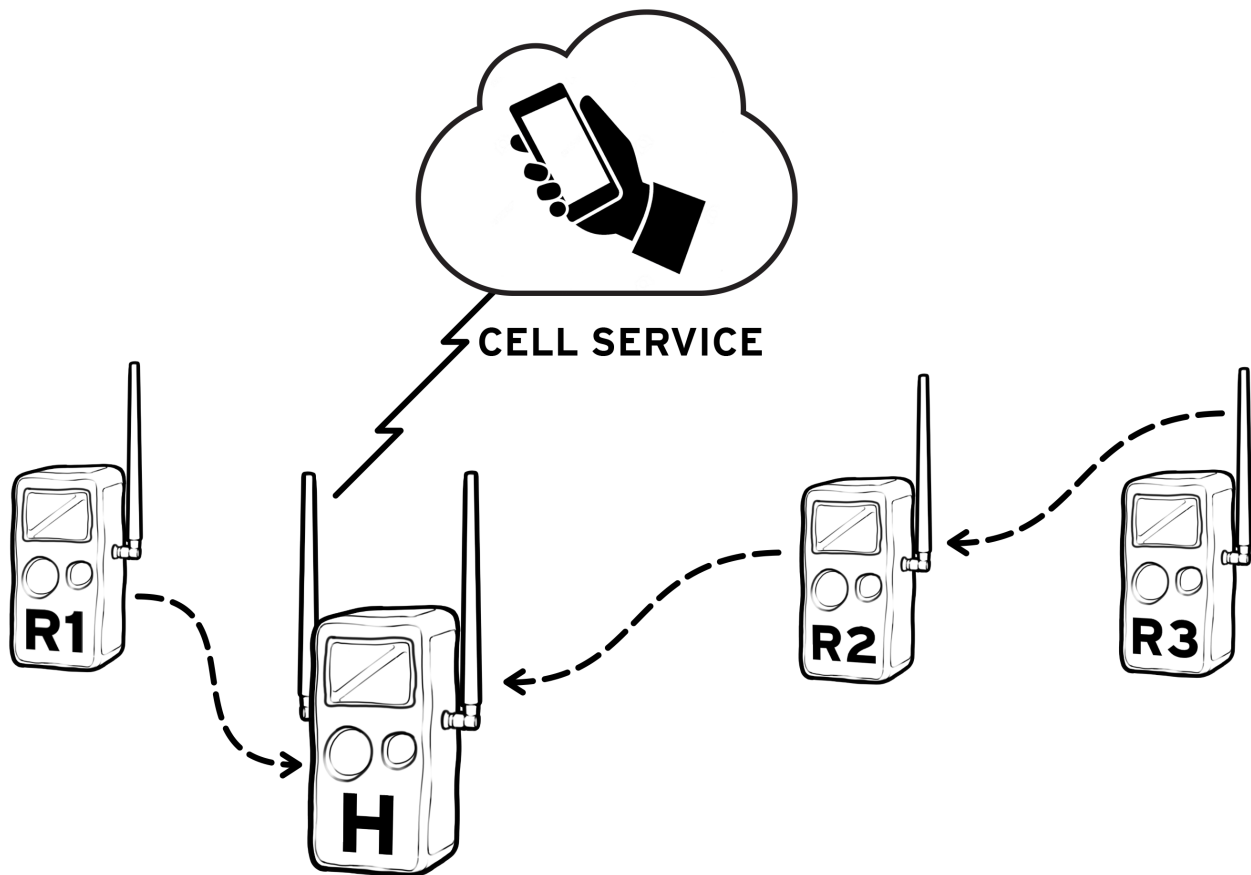

1. *Image from Remotes R1, R2, and R3 are sent to Home camera H.*

2. *The cell modem in H will email the images to your email address or send them via text to any cell phone.*

Note—see Appendix A for current list of Cuddeback cell products.

Image Collection - Windows PC

If your home camera can be located in a building with access to AC power you have to option to have CuddeLink transfer all images directly to a Windows PC. Instead of pulling the SD card from the Home camera all you do is view the images on your PC.
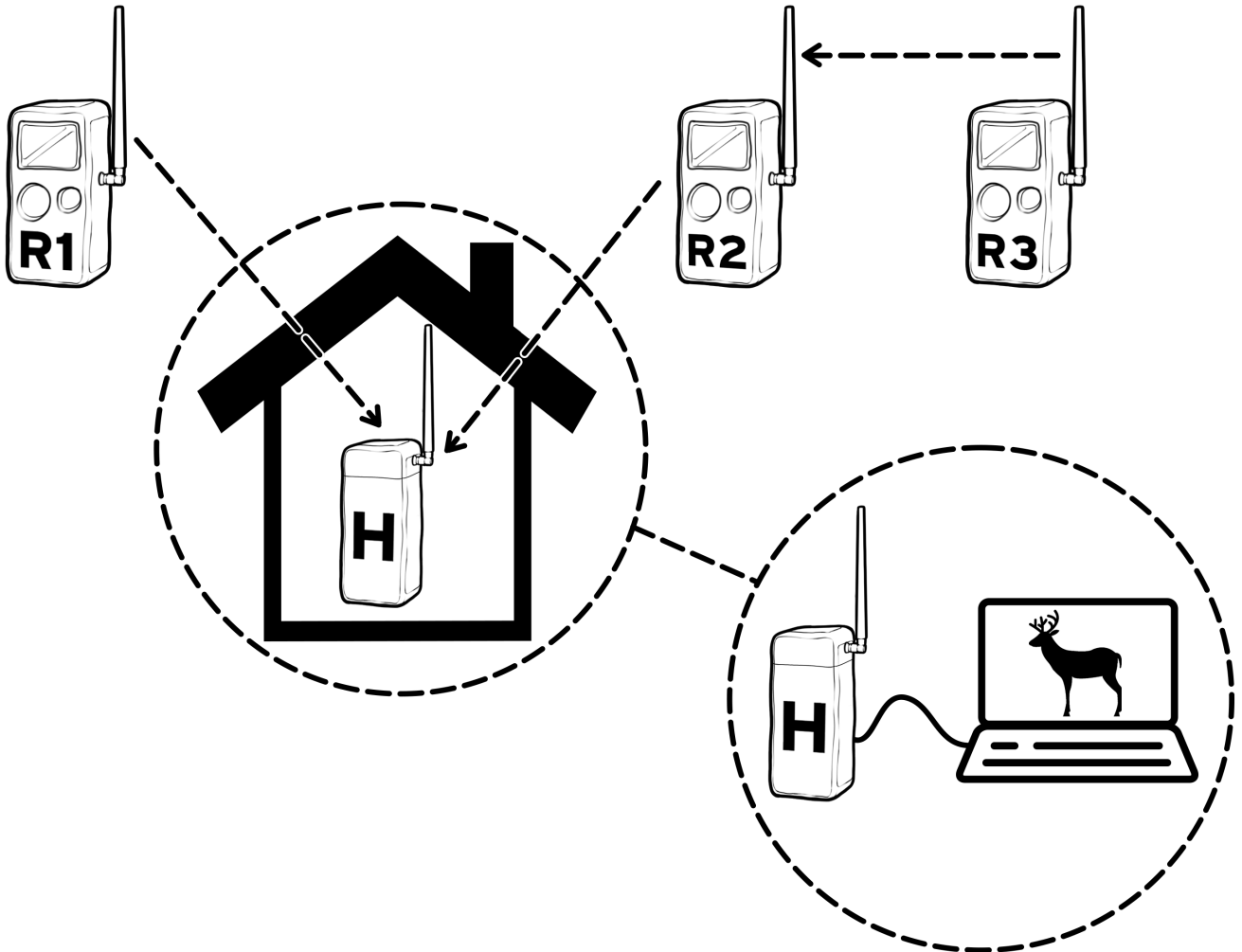
This is accomplished by using a CuddeLink Home Only or Home Plus product as the CuddeLink Home. The Home connects to a Windows PC via USB cable and the PC will copy images from the Home SD card and save them on the PC's hard drive.

1. *Images from R1, R2, and R3 are sent to Home Plus H.*

2. *Images are then automatically transferred to the Windows PC via a USB cable.*

3. *To view images use a Windows image viewing program or Cuddeback's Trophy Room program. Windows will have a default viewer to view the images. Trophy Room will simplify the process and provide many benefits.*

Image Collection - Internet Connected Windows PC

If you use the PC Image Collection method described on the previous page you may be able to access the images over the Internet with a phone, tablet, or any computer.

If this PC is connected to the Internet via any standard method (Cable, Cellular, DSP, etc.) then your CuddeLink images can easily be accessed via the Internet. You will be required to install Microsoft One Drive (free download). One Drive will do all the work for you and allows you to access the CuddeLink images saved in the One Drive folders.

You can use any type of device to access the images over the Internet: Apple, Windows, or Android devices.

INTERNET
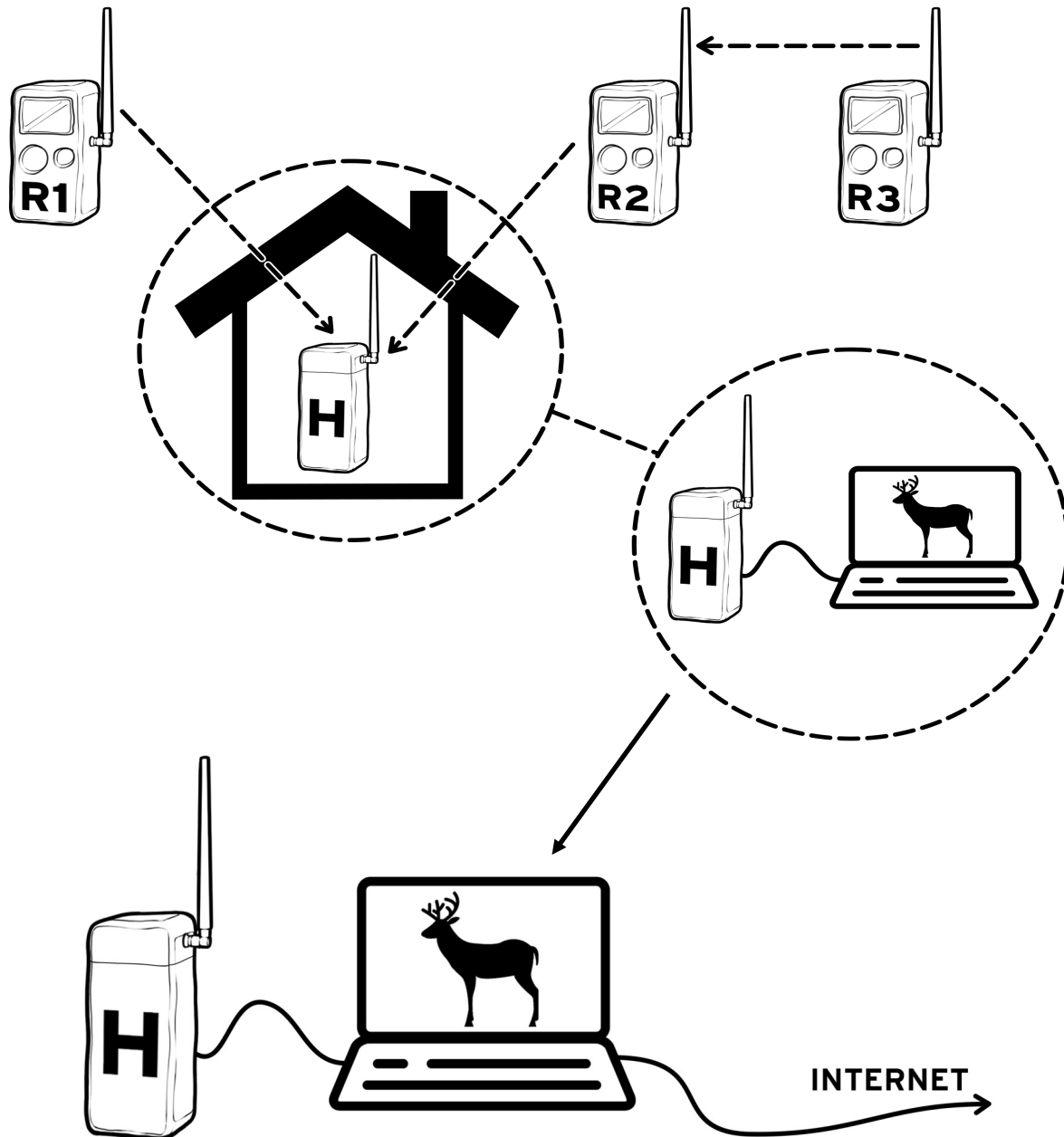
What if I want more than 16 cameras?

CuddeLink is limited to 1 Home and 15 Remote cameras. If you want to use more than 15 remotes cameras you will need to setup a second CuddeLink network.
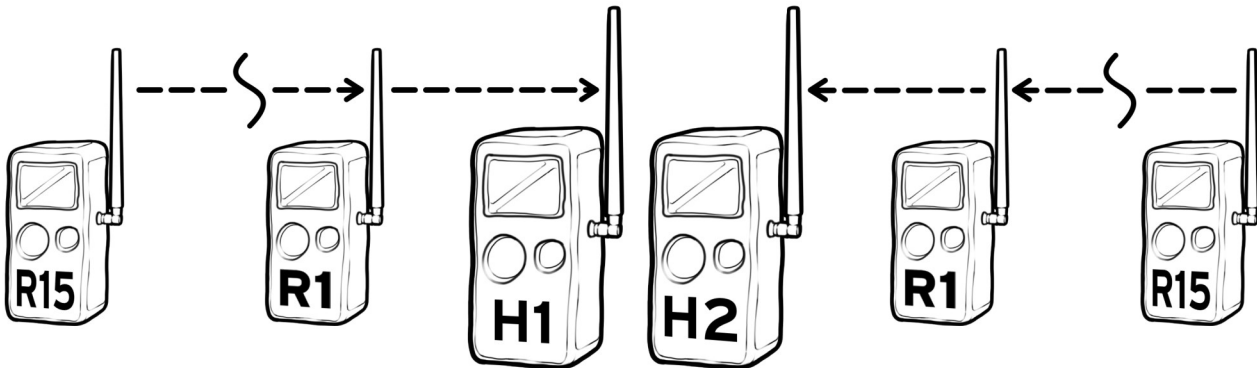
- *Each network must be assigned a unique CL CHANNEL. CuddeLink has 16 channels to choose from.*

- *The Home cameras can be next to each other or apart. The Remote camera can be near each other or apart. There isn't any restrictions on camera placement.*

- *If you want Cell connectivity each Home will need a cell cap. This will require 2 cell service fees.*

Large Properties

If you have a very large property you can use multiple CuddeLink networks. For example, say you have a large piece of property which would require too many cameras to connect end to end. Break the property into smaller areas and deploy a network in each area. You will be required to check multiple cameras, but far less than if you had to check all the cameras.   You can also use multiple cell cameras to prevent having to check the Home cameras.
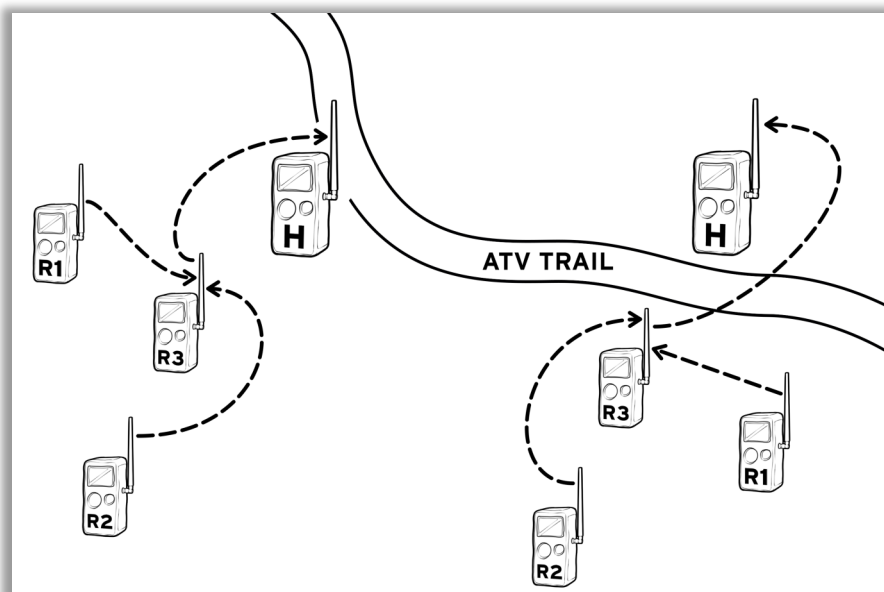
On large properties you can deploy multiple networks.

Tree Stand Use

Checking cameras before a hunt can waste time and spook game. With CuddeLink you can deploy the Home camera near your stand allowing you to check your CuddeLink trail cameras without disturbing your hunting area.

This hunter has his CuddeLink Home strapped to the tree above his stand. Now he can check his trail cameras from the comfort of his stand without alarming game or leaving human scent around his food plot.

Appendix A - CuddeLink Products

You will need a least 2 CuddeLink cameras to build a network. You can have up to 16 cameras on a network (1 Home and 15 Remotes).

Home Camera - any CuddeLink camera can be a Home camera. A setting is used to tell the camera it will be Home. Only 1 camera is Home.

Remote Camera - any CuddeLink camera can be a remote camera. A setting is used to tell the camera it will be a Remote. You can have 1 to 15 Remote cameras connected to Home.

Repeater - A Repeater is used to reply images from 1 Remote camera to the next Remote. A Repeater does not take pictures.   A camera can be deployed as a Repeater, or you can use a dedicated Repeater.   Dedicated Repeaters are lower cost than CuddeLink cameras.

Home Plus - Home Plus is a multi-functional product that can work as Home or as a dedicated Repeater. Home Plus is lower cost than a CuddeLink camera.   Home Plus can serve as Home, as a cellular service Home, as Home connected to a PC/Internet, or as a Repeater.

CuddeLink Cell - CuddeLink Cell Caps allowing receiving images over cellular networks. The CuddeLink CELL-CAP installs onto the CuddeLink Dual Flash camera or Home Plus.   The CELL-CAP also has the CuddeLink radio built in.   Only one CELL-CAP is needed per CuddeLink network.

CuddePower - Cuddeback has a selection of power options that allow CuddeLink cameras to run for many month, or indefinitely, between battery changes.

CuddeLink Products (June 2017)

Model	Name	Notes	Remote	Home	Repeater	PC / Internet Compatible	Cell Compatible
1361	CuddeLink Dual Flash	Requires CuddeLink Cap	Yes	Yes	Yes	No	Yes
2092	CL-CAP	Adds CuddeLink to Model 1361	—	—	—	—	—
*	Home Only	Not a camera	No	Yes	No	Yes	Yes
*	Home Plus	Not a camera	No	Yes	Yes	Yes	Yes
*	CC-CAP	Adds Cell Service to Dual Flash & Home products. Includes CuddeLink radio.	—	—	—	—	—

Products will be available in late 2017 or early 2018. All currently sold CuddeLink products will be compatible with these forthcoming products.
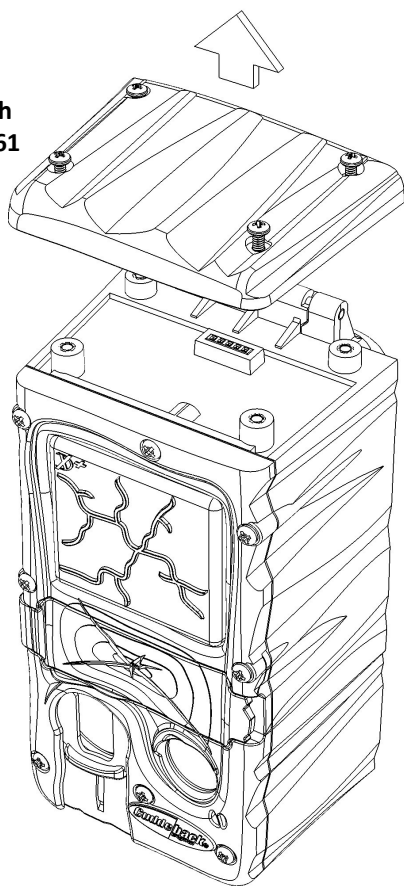
The CuddeLink Dual Flash Camera

The CuddeLink Dual Flash camera is sold as a kit or without the CuddeLink radio. This allows you to choose between the CuddeLink CL-CAP or the CuddeLink CELL-CAP module. This also allows you to change any CuddeLink Dual Flash to cell capability.
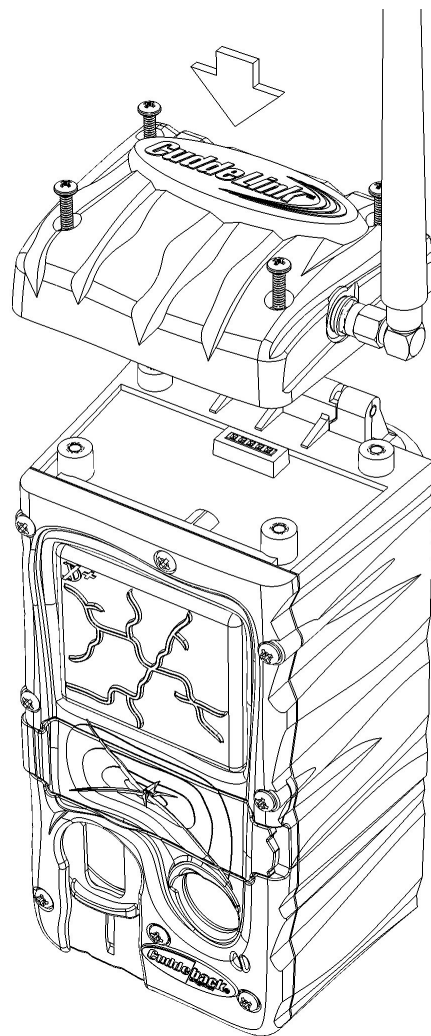
You build a CuddeLink camera by purchasing a Cuddeback Dual flash and a CuddeLink CL-CAP. Remember, this camera can be a Remote or Home by simply programming a setting.

Dual Flash model 1361

CuddeLink CL-CAP model 2092

STEP 1 - Remove Cap

STEP 2 - Install CuddeLink Radio

Install CuddeLink radio by removing the dummy cap and attaching the CuddeLink cap.

CuddeLink Dual Flash Battery Life Estimates

With Camera's 4 D batteries—typical 60 to 90 days of battery life.

With CuddePower (6 D batteries) - The *external* 6 batteries will have a battery life of 3 to 6 months.   After the external batteries are depleted the camera D batteries can operate the camera for an additional 2 to 3 months for a combined battery life of up to 6 to 9 months depending upon use.

The CuddeLink status reports will inform you which batteries are powering the camera and their condition.

External Batteries
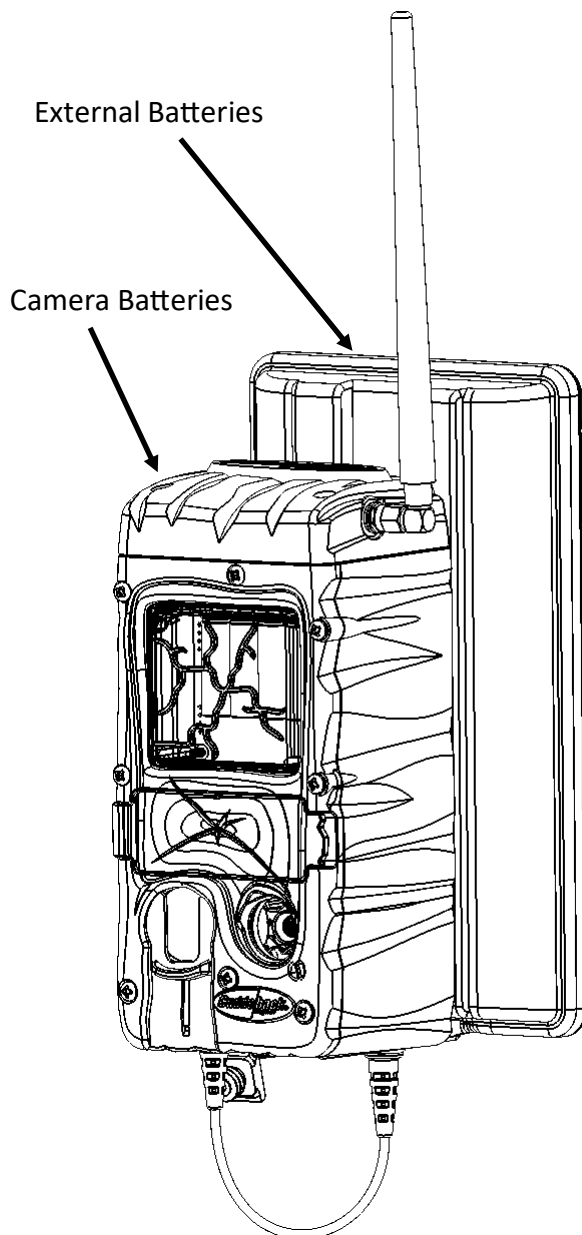
Camera Batteries

The CuddePower battery pack is the primary battery source and is used first. When the external batteries are depleted the camera batteries take over.

We recommend replacing the external batteries as soon as the externals are depleted. This allows the camera batteries to perform as backup-power and are only used when the externals are depleted.

Coming Soon

CuddeLink Cellular - The CuddeLink CELL-CAP adds cell service to a CuddeLink network.

Home Plus - Home Plus functions as a Home, repeater, and is cellular compatible.

Home Plus with Cell - Use Home Plus with Cellular for a low cost and effective way to add cellular to a CuddeLink network. Home Plus is not a camera. It can be placed where cell signal is strongest