2026 EDITION

INSTALLATION GUIDE · OSPREY PLATFORM

LIVE CAMERA INSTALLATION REQUIREMENTS

& DEPLOYMENT OPTIONS



A tall wooden pole with the nest platform on top and diagonal camera arms

A reliable live nest cam needs two things at the nesting platform: **power** and an **internet connection**. How you get them there depends on what's already on site. This guide covers the basics, helps you pick the right setup, and shows each option step by step.

15 YEARS

We know what works for a successful nest season. HDOnTap has been doing this for 15 years, and we've learned what works and what doesn't. Getting it right the first time is critical: you can't service the cameras once the ospreys are on the nest.

FIVE WAYS TO GET YOUR PLATFORM ONLINE

01 DIRECT ETHERNET

02 WIRELESS BRIDGE

03 STARLINK SATELLITE

04 SOLAR + RADIO LINK

05 SOLAR + STARLINK

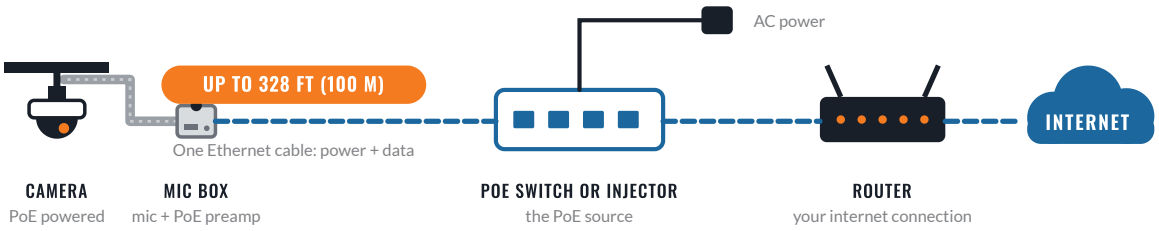
START HERE

A THE BASICS

POWER + INTERNET, OVER ONE CABLE

Every live camera needs **power** and an **internet connection**. With **Power over Ethernet (PoE)**, both travel over a single Ethernet cable, so there's just one cable to run to the camera.

328 ft **Maximum PoE cable run: 328 ft (100 m)**
Measured from the PoE source (a network switch or PoE injector) to the camera.



NEED TO GO FARTHER?

A **PoE Ethernet extender** can add another 328 ft. That can mean more trenching and conduit, so at some point **off-grid solar with a wireless radio link** makes more sense. We'll help you choose.

DON'T FORGET AUDIO

Live audio lets viewers hear the **osprey calls, even when the birds are off-camera**. The camera's Ethernet cable runs into a small grey **mic box** near the camera; from there, Ethernet and audio run together in grey conduit to the camera. No extra cable or injector.

TELL US ABOUT YOUR SITE

- [ ] Is there grid power at or near the nesting platform?
- [ ] How far is the nearest internet connection?
- [ ] Is there a clear line of sight from the platform to a building with internet?
- [ ] Does the site have an unobstructed view of the sky?
- [ ] For solar: how much southern sun does the site get?
- [ ] A few photos of the nesting platform and its surroundings

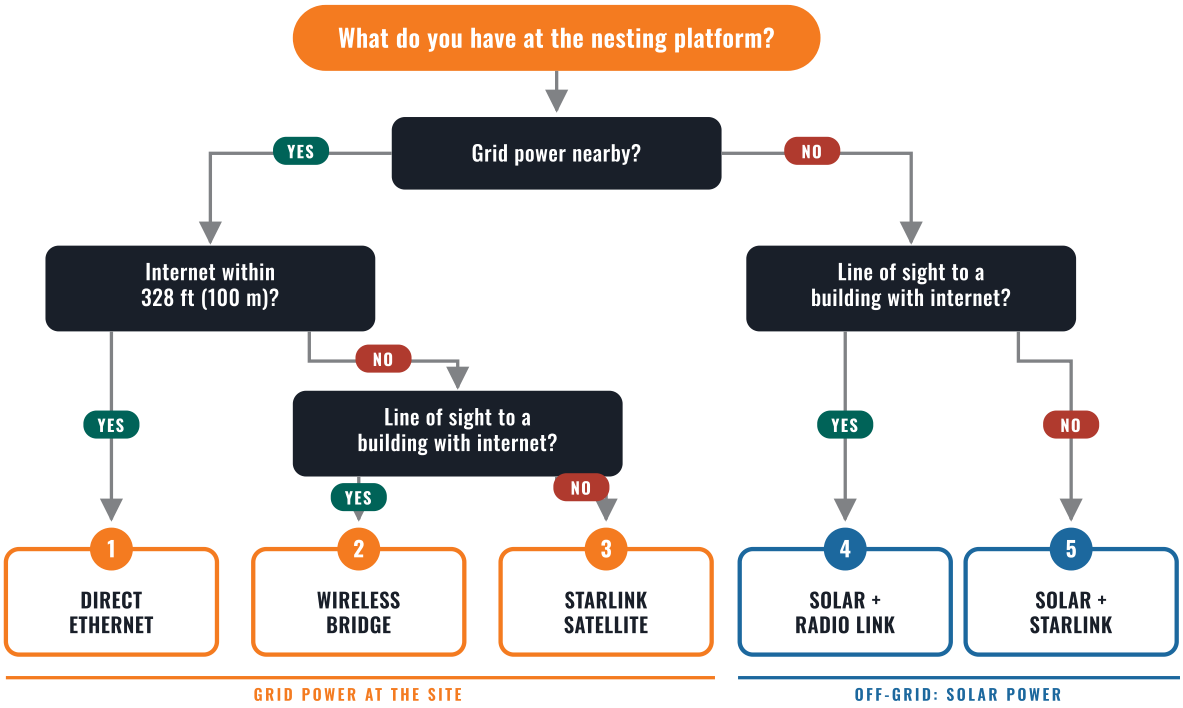


Grey PVC electronics boxes on the pole, near the ground

CHOOSE YOUR SETUP

B WHICH OPTION FITS?

START WITH WHAT'S AT THE CAMERA LOCATION



#	AT THE PLATFORM	SOLUTION	PAGE
1	Power and internet nearby	Direct Ethernet connection	4
2	Power nearby; internet more than 328 ft away or not feasible	Wireless bridge Or a PoE extender, if trenching that far is an option. Cellular works too, but isn't ideal.	5
3	Power nearby; internet too far and no line of sight	Satellite internet (Starlink)	6
4	No grid power or internet; line of sight to internet	Off-grid solar + wireless radio link	7
5	No grid power or internet; no line of sight	Off-grid solar + Starlink	8

NOT SURE? ASK US

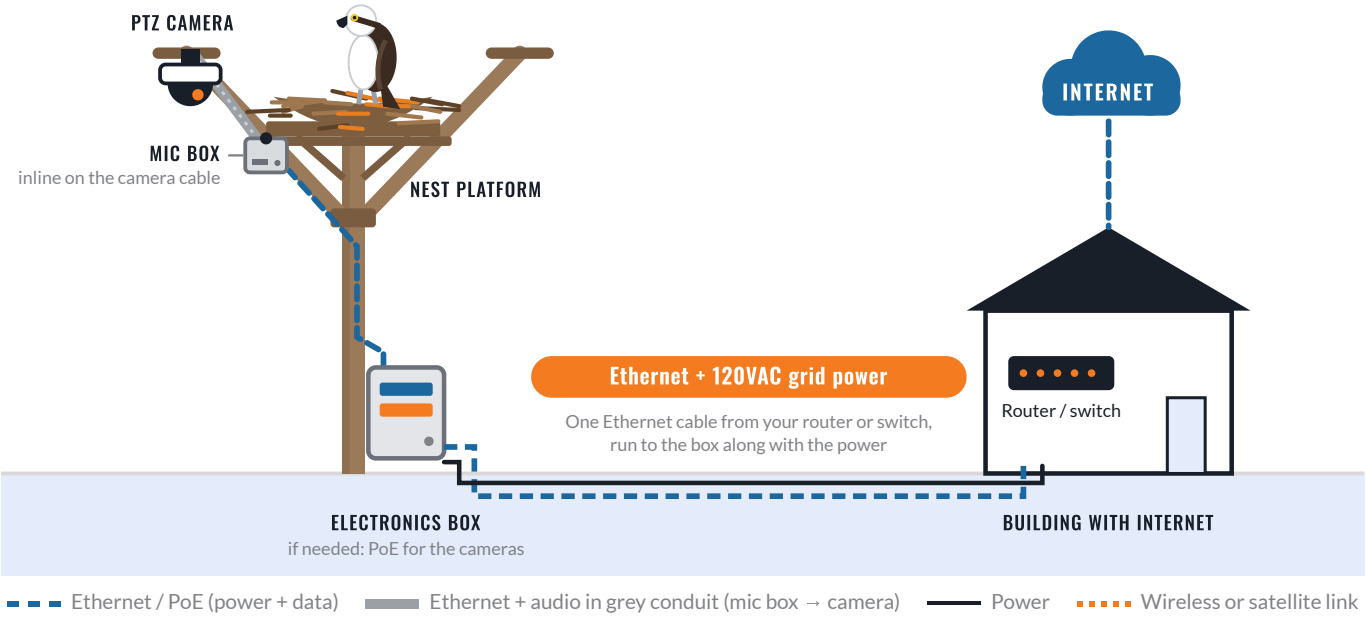
Every site is a little different. Send us the answers from the basics page and we'll recommend a setup, then supply it pre-configured and tested.

DEPLOYMENT SCENARIO 1

1 POWER & INTERNET NEARBY

SOLUTION: DIRECT ETHERNET CONNECTION

WHEN THIS FITS ✓ Grid power near the platform ✓ Internet within 328 ft (100 m)



WHAT GETS INSTALLED

- ☑ An electronics box (if needed), typically on the platform pole, near the ground.
- ☑ A single Ethernet cable from your internet router or network switch to the electronics box, run along with 120VAC grid power.
- ☑ PoE from the electronics box powers and connects the camera(s).
- ☑ A **mic box** for live audio, inline on the camera's Ethernet cable (no extra cable).

GOOD TO KNOW

- This is the **simplest and most reliable** setup.
- Wired is the most dependable choice for 24/7 streaming.
- **You may not need an electronics box.** If the total cable length is within 328 ft (100 m), or twice that with a PoE extender, the cameras can run straight from your PoE switch.

JUST PAST THE LIMIT?

If your internet connection is a little beyond 328 ft, a **PoE extender** can carry power and data farther. Each cable segment still follows the 328 ft (100 m) rule. Ask us if it fits your site.

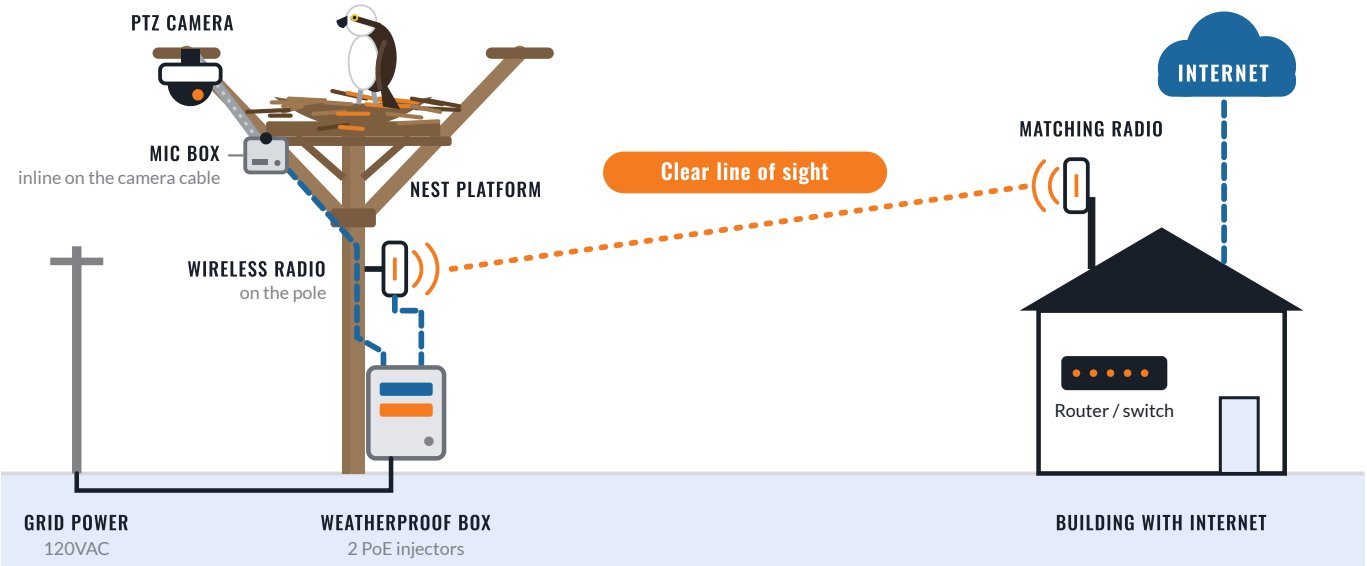


DEPLOYMENT SCENARIO 2

2 POWER NEARBY, INTERNET FAR

SOLUTION: WIRELESS BRIDGE

WHEN THIS FITS ✓ Grid power near the platform × Internet 328+ ft away or not feasible ✓ Line of sight



Ethernet / PoE (power + data) · Ethernet + audio in grey conduit (mic box → camera) · Power · Wireless or satellite link

WHAT GETS INSTALLED

- ☑ A weatherproof electronics enclosure on the platform pole, near the ground with **2 PoE injectors**:
  · 1 for the camera
  · 1 for the wireless radio
- ☑ A matching wireless radio installed at a location with internet access.
- ☑ A **mic box** for live audio, inline on the camera's Ethernet cable (no extra cable).

GOOD TO KNOW

- A **clear line of sight** between the two radios is required.
- Minor foliage may be acceptable with 2.4 GHz radios.
- We supply fixed wireless radios pre-configured and tested, ready to install.
- A **cellular** router and data plan is another option, but it isn't ideal.

WE SUPPLY THE COMPLETE SETUP

Pre-configured and fully tested as one site solution

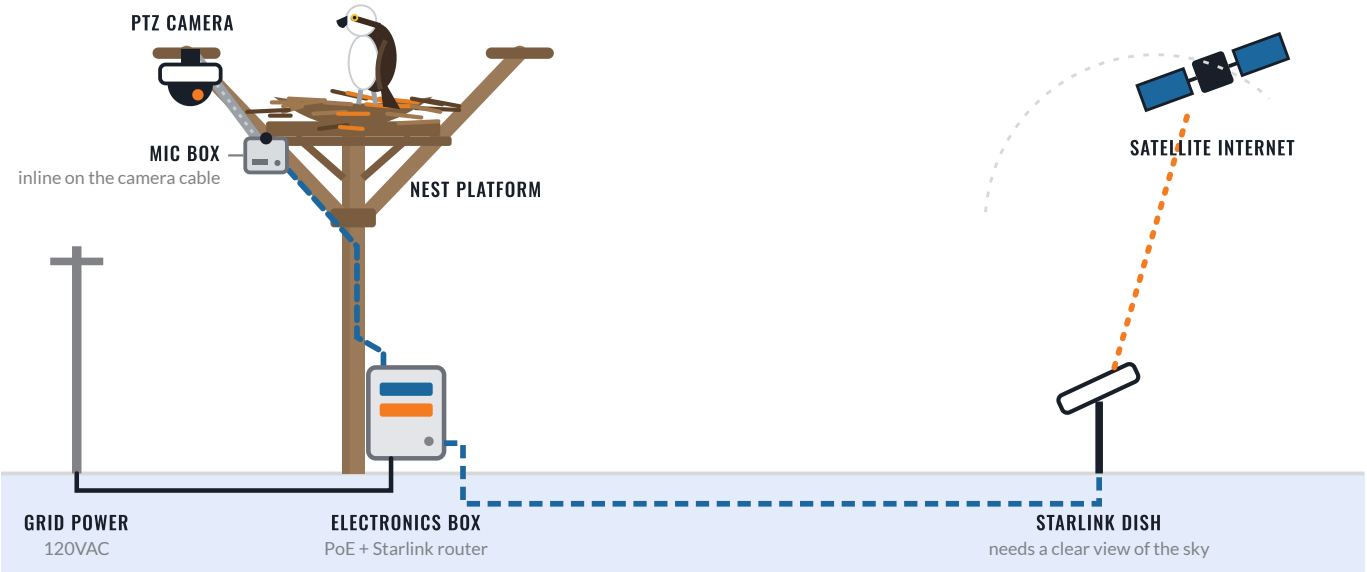
CAMERA · MIC BOX · ELECTRONICS BOX · POE INJECTORS · WIRELESS RADIOS · CABLING

DEPLOYMENT SCENARIO 3

3 NO LINE OF SIGHT

SOLUTION: SATELLITE INTERNET (STARLINK)

WHEN THIS FITS ✓ Grid power near the platform × Internet too far × No line of sight for a wireless bridge



WHAT GETS INSTALLED

- ☑ An electronics enclosure on the platform pole, near the ground with:
  · a PoE injector for the camera
  · a router and equipment to support Starlink satellite internet
- ☑ A Starlink dish in a location with a clear view of the sky.
- ☑ A **mic box** for live audio, inline on the camera's Ethernet cable (no extra cable).

GOOD TO KNOW

- Ideal for remote locations with no wireless options.
- **HDOnTap VPN services** allow remote access to your cameras, even on Starlink residential service, saving hundreds of dollars every month.
- Good **cellular** coverage? A cellular uplink is another option, but it isn't ideal.

WE SUPPLY THE COMPLETE SETUP

Pre-configured and fully tested as one site solution

CAMERA · MIC BOX · ELECTRONICS BOX · POE INJECTOR · STARLINK UPLINK · ROUTER

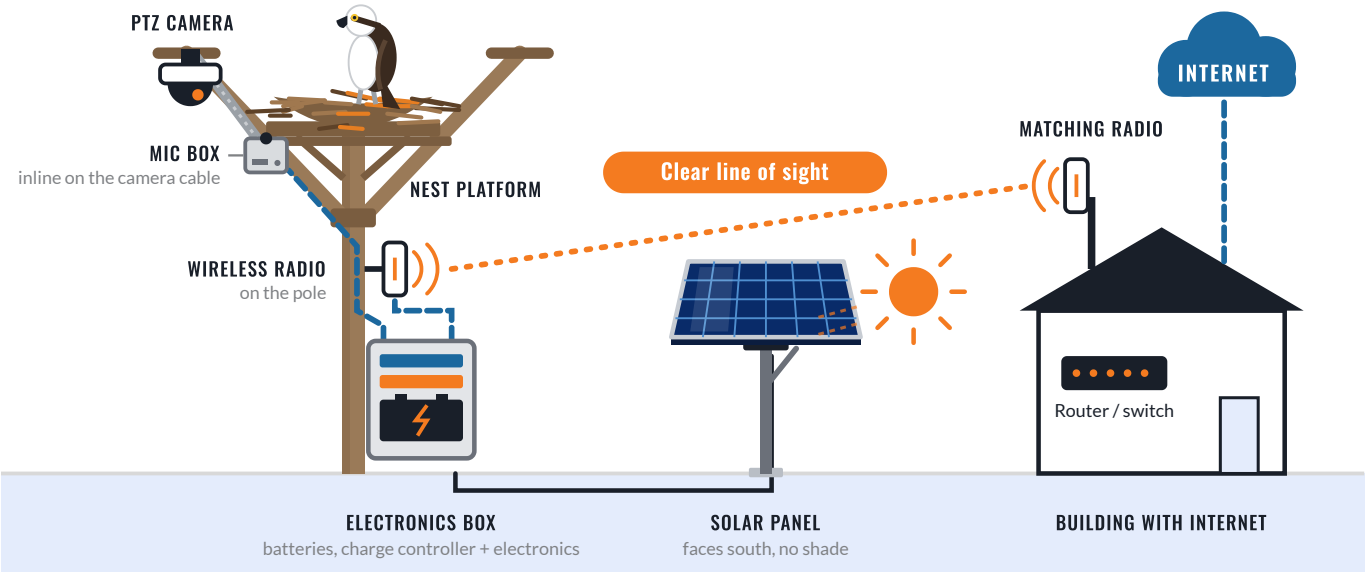
DEPLOYMENT SCENARIO 4

4 OFF-GRID: RADIO LINK

SOLUTION: OFF-GRID SOLAR + WIRELESS RADIO LINK

WHEN THIS FITS

- ✕ No grid power near the platform
- ✕ No internet nearby
- ✓ Line of sight to an internet location



Ethernet / PoE (power + data) · Ethernet + audio in grey conduit (mic box → camera) · Power · Wireless or satellite link

WHAT GETS INSTALLED

- ☑ A solar panel feeding **one electronics box** that holds the batteries, charge controller and all the electronics, including PoE for the camera and the radio.
- ☑ A wireless radio bridge, linked to a nearby location with internet access.
- ☑ A **mic box** for live audio, inline on the camera's Ethernet cable (no extra cable).

GOOD TO KNOW

- Install the solar panel where it gets **good sun exposure to the south**.
- We size the **battery capacity** (energy storage) and **solar panel** (power production) to your site's sun exposure.
- Solar panels need **routine maintenance** to keep charging at its best: clear away any plant growth that could shade them, and regularly wipe off dirt and debris.
- The radio link needs a clear line of sight to the internet location.

WE SUPPLY THE COMPLETE SETUP

Pre-configured and fully tested as one site solution

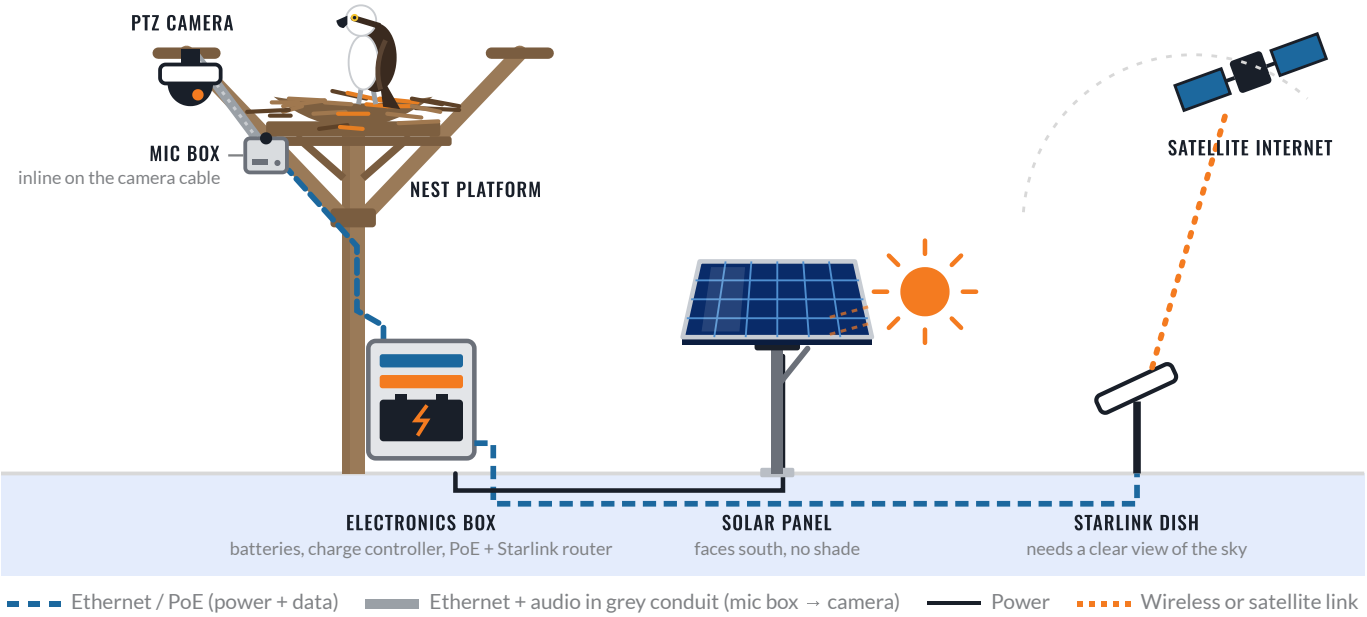
CAMERA · MIC BOX · SOLAR POWER · WIRELESS RADIOS · ELECTRONICS BOX · POE

DEPLOYMENT SCENARIO 5

5 OFF-GRID: STARLINK

SOLUTION: OFF-GRID SOLAR + STARLINK SATELLITE INTERNET

WHEN THIS FITS × No grid power at the platform × No internet × No line of sight



WHAT GETS INSTALLED

- ☑ A solar panel feeding **one electronics box** that holds the batteries, charge controller, PoE and Starlink equipment.
- ☑ A Starlink dish for internet service.
- ☑ A **mic box** for live audio, inline on the camera's Ethernet cable (no extra cable).

GOOD TO KNOW

- Install the solar panel where it gets **good sun exposure to the south**.
- We size the **battery capacity** (energy storage) and **solar panel** (power production) to your site's sun exposure.
- Solar panels need **routine maintenance** to keep charging at its best: clear away any plant growth that could shade them, and regularly wipe off dirt and debris.
- Starlink needs good, **unobstructed exposure to the sky**.

WE SUPPLY THE COMPLETE SETUP
Pre-configured and fully tested as one site solution

CAMERA · MIC BOX · SOLAR POWER · STARLINK UPLINK · ELECTRONICS BOX · POE

INSTALL IT RIGHT

C GET IT RIGHT THE FIRST TIME

TIPS FROM 15 YEARS OF NEST CAMS

MOUNT IT SOLID

Mount the camera at the top end of a rigid diagonal arm that comes off the pole below the platform, so it looks down into the nest from the side and above. If it can sway, viewers will see it when you zoom in.

PROTECT THE CABLING

Run all cabling in **metallic conduit** so squirrels and other critters can't chew through it, and secure it so it can't blow in the wind. Loose cables spook the birds and can get damaged.

BLEND IN

Where you can, paint the conduit and cameras to blend in with the pole and platform.



Arms come off the pole below the platform at 45°



PTZ camera at the top end of an arm, looking down into the nest



The mic box: Ethernet + audio in grey conduit to the camera

BEYOND POWER & INTERNET

D BUILT TO STREAM ALL SEASON

STREAMING & CAMERA CONTROL

PRESETS & LIVE OPERATORS

We may set two or three presets on the nest, but we **never run guard tours**. Any movement is slow and deliberate, through HDOnTap Studio, where volunteer camera operators sign up for time slots on a calendar.

SEE THE NEST AT NIGHT

Infrared (IR) lets viewers keep watching after dark. Check the IR range for your camera model against the distance to the nest.

HEAR THE NEST, NOT THE WIND

Built-in camera mics are usually a pinhole with almost no wind protection. We customize outdoor-ready omnidirectional mics with good wind protection and a PoE-powered preamp, in a small grey PVC **mic box** near the camera. Ethernet runs from the electronics box into the mic box, then Ethernet and audio run together in grey conduit to the camera's line-level input. The camera needs to support the AAC audio codec.

REMOTE ACCESS & PUSH STREAMING

Opening network access so the cameras can be reached remotely is **preferred**, especially if you plan to control the cameras remotely. If that's not possible, cameras can push the stream to HDOnTap over RTMP, RTMPS or SRT with no need to open your network. RTMPS and SRT are encrypted.

MANAGE IT REMOTELY

You can't service the cameras once the ospreys are on the nest. Remote management lets you check settings, update firmware and reboot without a site visit. For Axis cameras, ask about Sertavo.



Live view: profile shot of the nest with a perch in frame (Medina, WA)

SCHEDULE A FREE CONSULTATION CALL

An HDOnTap rep will walk you through the entire process. Call 858.481.4096 or email sales@hdontap.com.

WANT TO GO DEEPER?

Camera choice, lighting, resolution, zoom, audio, codecs and bandwidth are all covered in our companion guide, ***Choosing the Right Webcam Hardware (2026)***.
https://help.hdontap.com/files/choosing-the-right-webcam-hardware-2026.pdf

ONE PARTNER, START TO FINISH

FULL SITE SOLUTIONS

EVERYTHING YOUR PLATFORM NEEDS, FROM HDONTAP.

PRE-CONFIGURED
Equipment arrives set up for your HDOnTap live stream.

FULLY TESTED
We test everything before it ships to your site.

Whichever scenario fits your nesting platform, we can supply the whole thing: the camera, the power and the internet connection that keeps it streaming.

WHAT WE SUPPLY

- CAMERAS
- POE SWITCHES & INJECTORS
- POE EXTENDERS
- ELECTRONICS BOXES
- FIXED WIRELESS RADIOS
- STARLINK UPLINK SOLUTIONS
- OFF-GRID SOLAR POWER
- ROUTERS
- CABLING
- OUTDOOR AUDIO
- HDONTAP STUDIO
- VPN REMOTE ACCESS

TELL US WHAT'S AT YOUR SITE.

We'll recommend the right deployment option and put the complete solution together for you.

READY TO GO LIVE?

LET'S PLAN YOUR PLATFORM

TELL US WHAT'S AT YOUR SITE

We've been doing this for 15 years. Send us a few details and photos of your nesting platform and we'll recommend the right setup, then deliver it pre-configured and tested.

CALL OUR OFFICE
858.481.4096

EMAIL
sales@hdontap.com

VISIT US ONLINE
hdontap.com

IP Video Specialists, Inc. d.b.a. HDOnTap
2120 Jimmy Durante Blvd. #123, Del Mar, CA 92014

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