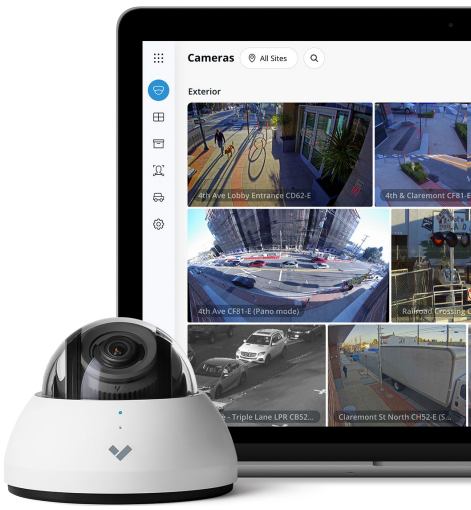
Deploying Verkada Solutions with SpaceX Starlink

Who is Verkada?

Verkada specializes in cloud-based security systems, offering integrated solutions that combine hardware, software, and cloud services for enterprise customers. Unlike many traditional security systems that require local servers and separate software, Verkada's systems are designed with a hybrid-cloud approach. This allows for easy scaling, remote access, and simplified management through a single pane of glass.



Today Verkada is deployed across tens of thousands of global customers from a wide variety of industries, including healthcare institutions, retail operations, hospitality venues, banks, school districts, local municipalities, and corporate offices. While Verkada customers often have reliable access to a high-bandwidth internet connection, at times they are looking to deploy our products and conduct surveillance in areas with limited to no bandwidth connectivity, such as a large parking lot or a distant or highly remote location.

Combining the fast, reliable internet connectivity of SpaceX's Starlink with the cloud-based security systems of Verkada allows customers to have a powerful solution for surveillance and security in any location. This guide offers a walkthrough on deploying Verkada systems using Starlink's satellite internet service.

What is Starlink

Starlink, developed by SpaceX, is a satellite internet service that relies on a constellation of low Earth orbit satellites to deliver internet connectivity to areas where standard internet isn't readily available. A satellite dish, provided by Starlink, is typically installed at a high point (roof, pole, etc.) with a direct line of sight to the sky.

Who can use Starlink?

Starlink is available to both residential and commercial customers. It can be deployed on buildings, poles, boats, airplanes, and vehicles in remote areas. Please visit this URL and enter the service address to see if your location has coverage to use Starlink.

How does Verkada work with Starlink?

Verkada's security solutions can easily be deployed in remote or hard-to-reach locations where traditional internet service providers might not offer coverage or where the available broadband service is insufficient or of poor quality. With Starlink's global internet coverage, Verkada's systems are now able to stay connected in these areas. And because both the Verkada as well as Starlink systems are designed with simplicity in mind, integrating the two involves only a straightforward network setup process, making it feasible even for non-technical users.

Additional information

For more information on designing your network with Verkada products, please refer to the Verkada networking best practices guide.

Other helpful links:

- Getting Started with Starlink
- Starlink Speed Specifications
- Powering a Verkada Camera with a Solar Panel

Considerations before ordering and installing Starlink

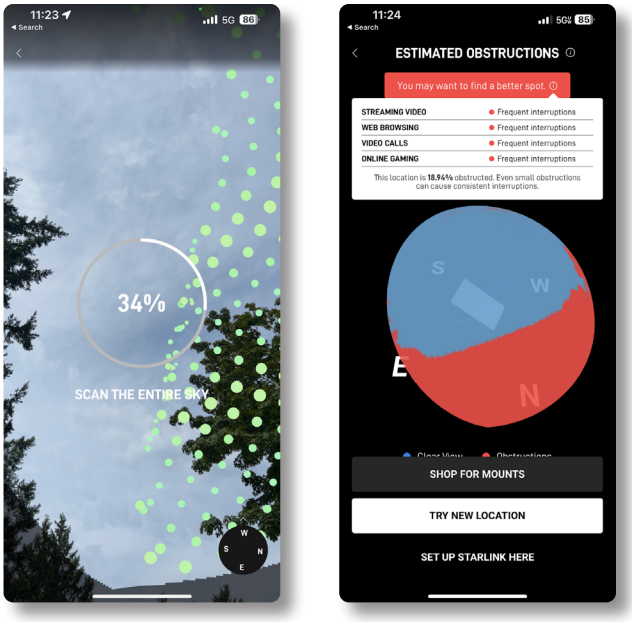
A direct line of sight from Starlink's satellite dish to the sky is critical for a successful Verkada/Starlink deployment. Before installing the satellite dish, use the Obstruction Check Tool on the Starlink app, which will help determine if the planned location is a good spot. If there are obstructions between the satellite dish and the sky, it could result in poor network performance. You can use the Obstruction Check Tool before purchasing Starlink to confirm that the location you are planning to install the satellite dish is optimal.

Powering Verkada and Starlink

Verkada security systems and Starlink satellite dishes both require electrical power to operate. This power can come from a standard electrical grid (which powers most homes and businesses) or alternative sources, such as solar panels. This can be particularly advantageous in remote or off-grid locations.

Upload/Download speeds and latency

Connectivity speeds can range from 2 - 25 Mbps upload and 5 - 220 Mbps download, depending on where Starlink is deployed. Latency ranges between 25 and 60 ms on land and 100+ ms in certain remote locations (e.g. Oceans, Islands, Antarctica, Alaska, Northern Canada, etc.). These speeds and latency make Starlink suitable for streaming video. Please consult Starlink directly to confirm expected speeds, depending on where the system is deployed and the selected plan. Enterprise bandwidth manager can also be utilized to help limit the upload speed of Verkada Cameras. Note that the available bandwidth over Starlink will determine how many concurrent video streams can be viewed remotely. See the table below for the bandwidth requirements by Verkada device.



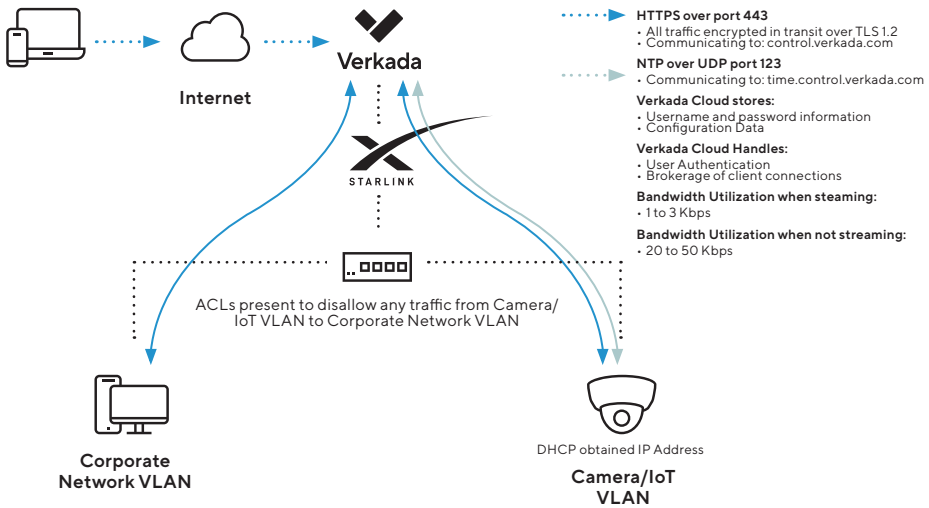
Starlink's Obstruction Check Tool helps determine the suitability of a location for a Starlink satellite dish.

	CAMERAS	ALARMS	ACCESS CONTROL	INTERCOM
UPLOAD*	5 MP: 1.5 Mbps / camera 8 MP+: 3 Mbps / camera	5 MP: 1.5 Mbps / camera 8 MP+: 3 Mbps / camera	20 Kbps / panel	1.5 Mbps / camera
LATENCY*	<99 ms	<99 ms	<99 ms	<99 ms

*Upload bandwidth requirements for streaming video and recommended latency by Verkada device.
When a Verkada camera is not being viewed, it operates at rest at only 20-50 Kbps.

Hardware requirements

- Starlink satellite w/ router kit and mount
- Active Starlink plan
- Starlink Ethernet adapter (some models include an Ethernet port)
- Dish mount (roof, pole, etc)
- Power-over-Ethernet source such as a PoE Switch or PoE Injector
- Verkada devices
- Power source (standard or solar)
- Ethernet cables



Starlink delivers internet seamlessly to power Verkada's cloud-based solutions.