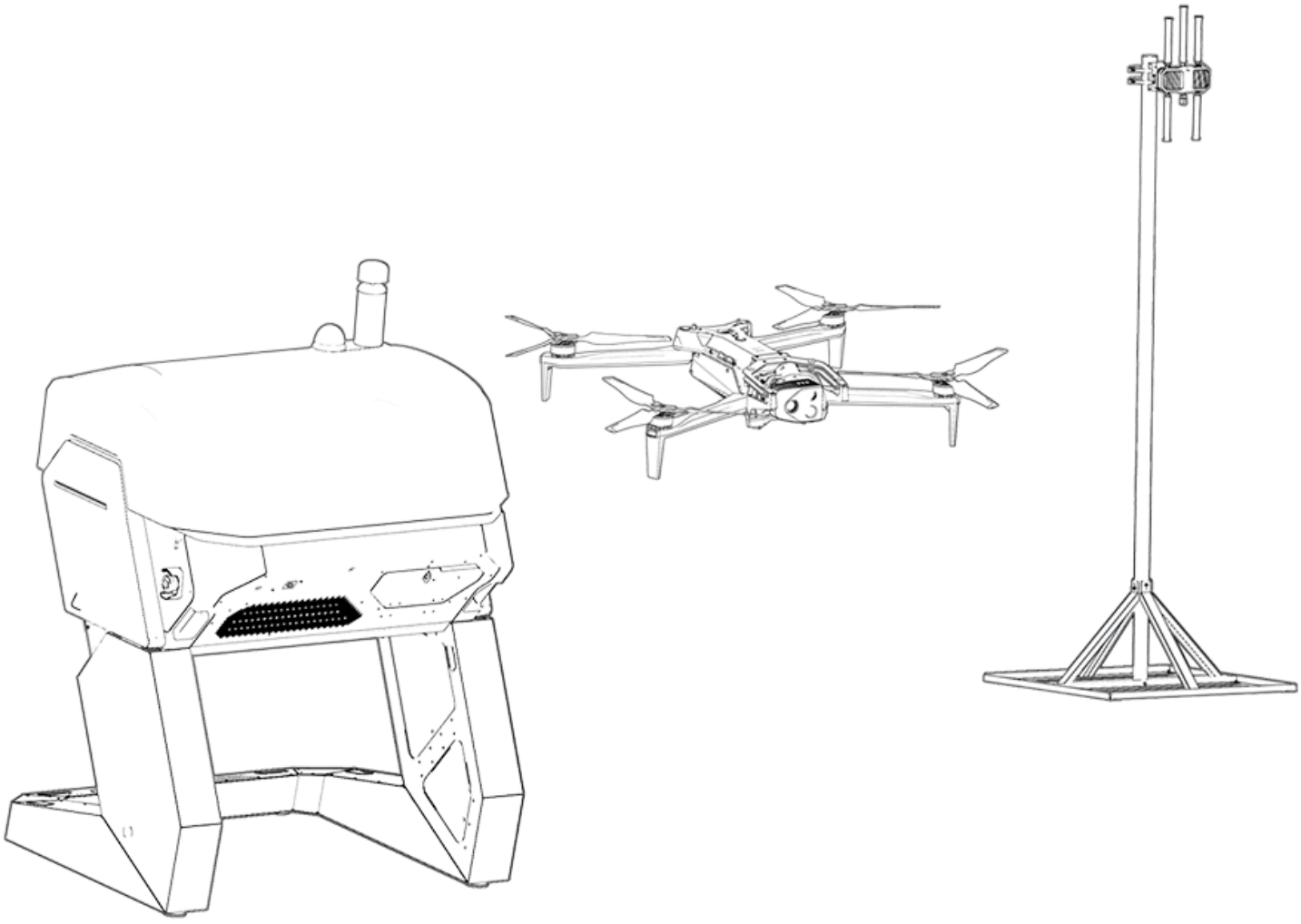
Skydio

Skydio Dock for X10 Networking Guide



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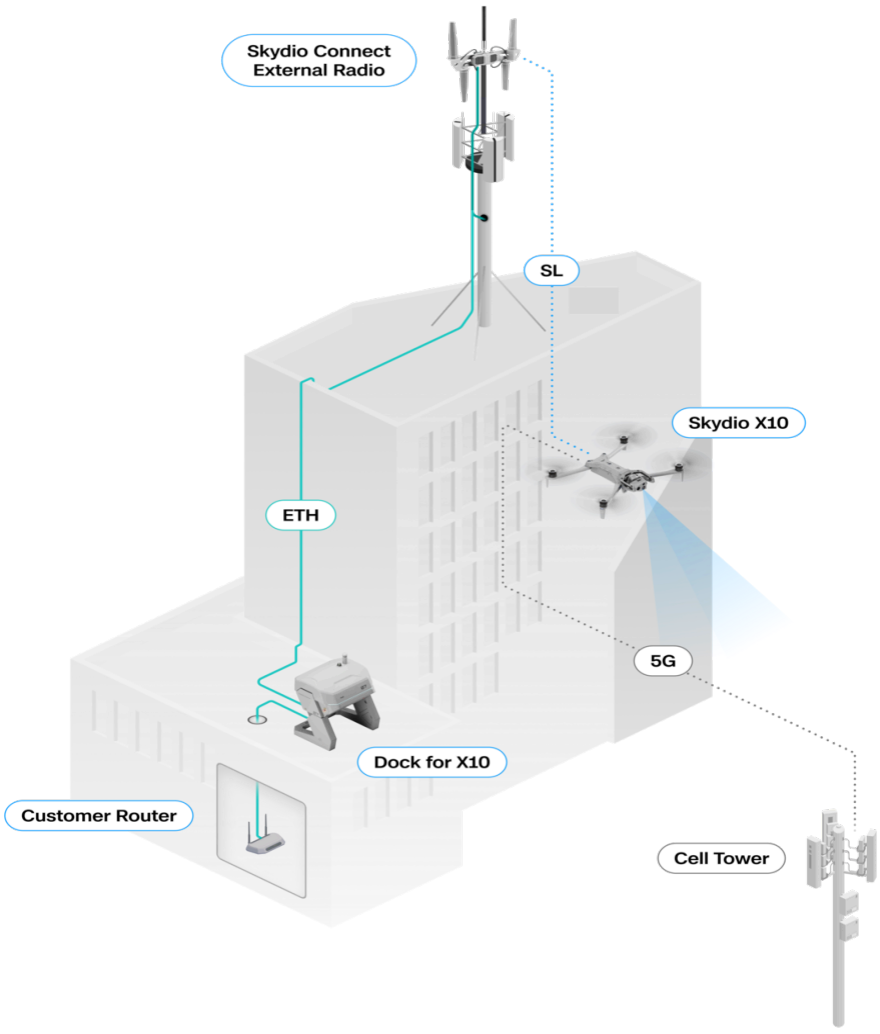
Dock for X10 Networking Guide

This document outlines the networking planning and configuration requirements, including port mapping and protocols, security, and connectivity for single and multiple Skydio Dock for X10 Flight System locations.

Remote Pilots operate the X10 Drone by logging in to Remote Flight Deck (RFD). Using high-quality video feeds from the flight system, the pilot can launch, navigate to the mission site, monitor events, and return to the Dock. During flight, the X10 drone sends high-quality video over cellular and Skydio Link (SL). SL runs in the unlicensed 2.4 and 5 GHz spectrum that is also used by WiFi networks. To ensure an optimal flight experience, the system requires high throughput and low latency.



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Revision History

Revision	Description	Date
1	Initial Release (Archived)	November 14, 2025
2	Updated the following: • Removed non-technical information. • Updated layout and Firewall settings.	January 8, 2026
3	Updated Rule 12 and Rule 15 port IDs..	January 14, 2026
4	Added computer system requirements.	March 17, 2026
5	Updated Data Requirements topic to Network Capacity Requirements. Updated upload/download speeds, and included monthly data transfer information.	July 16, 2026
6	Updated Computer Systems Requirements.	July 30, 2026
7	Added Firewall settings for Canada.	August 26, 2026

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Computer System Requirements

Remote Flight Deck/DFR Command System Requirements

For optimal performance with **Remote Flight Deck**, and **DFR Command**, ensure the computers used with the Dock for X10 Flight System meet the requirements below.

> **Note:**
> Skydio does not support accessing Remote Flight Deck from Virtual Desktop Infrastructure (VDI). Remote Flight Deck must be flown on a local machine.

System Performance Requirements

Category	Minimum	Recommended
CPU	Intel Core i5-8400 or AMD Ryzen 5	Intel Core i7-12700 or AMD Ryzen 7
RAM	32 GB DDR4	32 GB DDR4 or greater
GPU	**Desktop**: NVIDIA GeForce RTX 4060 (8 GB VRAM) **Laptop**: NVIDIA GeForce RTX 4070 Laptop GPU (8 GB VRAM)	**Desktop**: NVIDIA GeForce RTX 4070 (12 GB VRAM) **Laptop**: NVIDIA GeForce RTX 4080 Laptop GPU (12 GB VRAM)
Network	100 Mbps sustained with latency under 50 ms	1 Gbps Ethernet preferred, or Wi-Fi 6E with minimum 300 Mbps sustained with latency under 30 ms

Display

Category	Minimum	Recommended
Resolution	1920 × 1080 (Full HD)	2560 × 1440 on a 30-inch Ultrawide Display
Screen width	1200 pixels	1600 pixels
Screen height	1024 pixels	Not Specified

Operating System and Browser Support

> **Note:**
> Keep supported browsers up to date.

A 64-bit Operating System is required.

Supported	Not Supported
Windows 10 or later, macOS 10.12 or later	Linux
Google Chrome, Microsoft Edge	Apple Safari, Mozilla Firefox, Microsoft Edge (not based on Chromium), Microsoft Internet Explorer

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DFR Command Operator Suggested Equipment List

For a DFR Command Operator, Skydio suggests the following equipment:

- A PC meeting all system requirements
- Monitor
- Monitor Stand
- Lighting
- Temp Keyboard
- Chairs
- Desk

Optional Accessories

- Desk Phone
- Walkie Talkie

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Cable Installation

This section contains information about cable installations.

Preparation

Before the Flight System can be installed, the customer must have the following infrastructure in place:

- Ethernet cables
- Outdoor surge protection
- Power and ground
- Configured Firewall or open network for necessary ports/sites

External Radio RJ45 Requirement

> **Note:**
> The Dock for X10 Installation Manual includes all required physical preparation.

The External Radio uses a weather-resistant connector designed to fit over most RJ45 cable connectors. If the RJ45 connector does not fit through the weather-proof seal, the cable will need to be terminated with a compatible RJ45 connector.

RJ45 cable connector requirements:

- No boot or jacket on the locking tab
- Minimal strain relief to avoid blocking the adapter
- Cable outer dimensions must be **5.3 mm to 6.5 mm**.

Outdoor Surge Protection

Outdoor Surge Protection is optional.

The External Radio and Dock for X10 have no unique outdoor surge protection requirements. The need for outdoor surge protection will vary based on local weather conditions and risk profiles. Follow established best practices for surge protection. Any standard surge protector that allows gigabit throughput and supports **802.3af** power will work with the Dock for X10 and External Radio.

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Network Capacity Requirements

This section contains information about the network requirements to support a Dock for X10 or Hive configuration.

To ensure predictable service with low latency, Skydio recommends connecting Docks to a Gigabit Ethernet with a fixed-line Internet connection of at least 100 Mbps for both the upload and download directions. For reliable flight operations, video, and data transfers, Skydio recommends providing the following network capacity to the Dock for X10 Flight System.

For multiple Dock for X10 deployments at a single location, Skydio recommends the following capacity. An X10 flight generates approximately 50 GB of data per flight hour. The following table shows a total data transfer for an average flight use rate of 10 hours per month:

Dock for X10 Count	Recommended Network Speed		Minimum Network Speed		Total Monthly Data Transfer
	Download (Mbps)	Upload (Mbps)	Download (Mbps)	Upload (Mbps)	
1	90	90	30	30	500 GB
3	150	150	60	60	1.5 TB
6	300	300	100	100	3.0 TB

Recommended data speeds for pilot work stations on the same network:

Active Pilots	Recommended Network Speed		Minimum Network Speed	
	Download (Mbps)	Upload (Mbps)	Download (Mbps)	Upload (Mbps)
1	30	10	20	7
3	90	30	60	21
5	150	50	100	35

All traffic from the flight systems will pass through the Skydio Cloud before reaching pilots. If there will be pilots on the same network as the Flight Systems, throughput requirements will need to be added together.

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Remote Flight Deck (RFD) Latency Requirements

This section contains information about latency thresholds for supporting different levels of Remote Flight Deck performance, ranging from basic to optimal experiences

All components of the flight system and Remote Flight Deck (RFD) should support these latencies. Skydio recommends testing latency via https://cloud.skydio.com/.

Latency

Performance in Remote Flight Deck	Latency
Basic	< 100 ms
Good	< 50 ms
Optimal	< 20 ms

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General Networking Requirements

This section contains information about general networking requirements.

All traffic from the Flight System travels through the Skydio Cloud before reaching pilots in Remote Flight Deck (RFD). The X10 Flight System can be completely separated from corporate or secure networks. All components of the Flight System require DHCP, DNS, and NTP.

- **DHCP**: The Flight System does not support static IP assignment. DHCP reservations may be configured on the server if static addresses are preferred.
- **DNS and NTP**: Public DNS and Skydio-provided NTP endpoints are used by default:
  - DNS to `8.8.8.8`
  - NTP to `time.skydio.com`

  If customers choose to provide local DNS or NTP services, these must be supplied through DHCP. Skydio systems do not support manual configuration of DNS or NTP on the Dock or External Radio.
- **Traffic Inspection**: Not supported. Skydio traffic is encrypted end to end to ensure data privacy and security. To maintain low latency and optimal performance, Skydio traffic must not be intercepted, decrypted, or inspected.
- **Certificates**: Man-in-the-middle (MITM) interception that replaces Skydio certificates is not supported. Drones connect only through secure, trusted Skydio certificates.
- **MTU size**: The Skydio-required MTU size is **1500 bytes**. Smaller MTUs (common with some VPNs and older circuits) can cause the flight system to become inoperable. If the network cannot be configured to meet these requirements, contact Skydio for guidance.
- **MAC Address Filtering**: If enabled, allowlist the Dock and External Radio MAC addresses before Deployment Engineering arrives. These addresses can be viewed in Skydio Cloud or provided in advance.
- **Flow Control**: Enable flow control (also called “pause frames” on some hardware) on all customer routers and switches connected to Skydio systems. This prevents dropped packets and ensures stable video performance, especially when the customer WAN link is slower than the Dock uplink.

Firewall Requirements

Related information

United States Firewall Requirements *(on page 11)*
Canada Firewall Requirements *(on page 18)*

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United States Firewall Requirements

This section contains information about firewall requirements for Flight Systems and RFD.

Skydio Remote Ops uses several domains and ports for real-time visibility and live streaming. Please ensure the following domains and ports are allowed by the firewall.

Skydio recommends using DNS names for firewall rules where possible. Any listed IP addresses will remain consistent.

Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description

1	`44.237.178.82`
	`52.39.114.182`
	`35.84.246.249`
	`52.89.241.109`
	`35.84.174.167`
		`TCP 443`	`*.skydio.com`	**Client Workstations to Skydio Cloud**
				The Client workstation that will be logging into Skydio Cloud will need access to the Skydio Cloud, API, and WebRTC components in order to manage, launch, and view missions.
				*From Workstations segments, Unrestricted outbound internet to endpoint.

2	`52.89.241.109` `35.84.174.167`	`TCP 322`	N/A	**Client Workstation to Livestreaming Services** The Client Workstation needs access to WebRTC components in order to launch missions, conduct manual flights via Remote Flight Deck, and send live video streams.

15	`34.208.18.168`
	`50.112.181.82`
	`34.214.163.204`
	`54.190.113.196`
	`35.155.8.20`
	`52.40.22.162`
		`TCP/UDP 443`	N/A	

3		`TCP 7881`	N/A	
4		`UDP 50000-60000`	N/A	

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description

5	`44.237.178.82`
	`52.39.114.182`
	`35.84.246.249`
	`52.89.241.109`
	`35.84.174.167`
		`TCP (HTTPS) 443`	`*.skydio.com`	**Dock to Skydio Cloud**
				The Dock needs access to Skydio Cloud.

6	`44.237.178.82`
	`52.39.114.182`
	`35.84.246.249`
		`TCP 51334`		

7	`35.166.132.69`
	`34.214.68.80`
	`100.20.220.165`
	`35.85.110.98`
	`35.164.30.49`
	`52.32.44.190`
		`UDP/QUIC 443`	N/A	**Dock to Livestreaming Services**
				The Dock needs access to WebRTC/QUIC components in order to launch missions, conduct manual flights via Remote Flight Deck, and send live video streams.

9	`34.208.18.168`
	`50.112.181.82`
	`34.214.163.204`
	`54.190.113.196`
	`35.155.8.20`
	`52.40.22.162`
		`TCP/UDP 40000-41000`		

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description

11	N/A	`TCP 443`	`skydio-vehicle-data.s3-accelerate.amazonaws.com`
			`skydio-vehicle-data.s3.amazonaws.com`
			`skydio-vehicle-data.s3-us-west-2.amazonaws.com`
			`skydio-vehicle-data.s3-fips.us-west-2.amazonaws.com`
			`skydio-vehicle-data.s3-fips.dualstack.us-west-2.amazonaws.com`
				Dock to S3
				The Dock needs access to specific AWS S3 bucket endpoints over HTTPS. This includes both regular and S3 Accelerate endpoints. These S3 buckets are for downloading software updates and uploading media.

			`skydio-flight-data.s3-accelerate.amazonaws.com`
			`skydio-flight-data.s3.amazonaws.com`
			`skydio-flight-data.s3-us-west-2.amazonaws.com`
			`skydio-flight-data.s3-fips.us-west-2.amazonaws.com`
			`skydio-flight-data.s3-fips.dualstack.us-west-2.amazonaws.com`	

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description

			`skydio-organization-files.s3-accelerate.amazonaws.com`
			`skydio-organization-files.s3.amazonaws.com`
			`skydio-organization-files.s3-us-west-2.amazonaws.com`
			`skydio-organization-files.s3-fips.us-west-2.amazonaws.com`
			`skydio-organization-files.s3-fips.dualstack.us-west-2.amazonaws.com`	

			`skydio-ota-diff-updates.s3-accelerate.amazonaws.com`
			`skydio-ota-diff-updates.s3.amazonaws.com`
			`skydio-ota-diff-updates.s3-us-west-2.amazonaws.com`
			`skydio-ota-diff-updates.s3-fips.us-west-2.amazonaws.com`
			`skydio-ota-diff-updates.s3-fips.dualstack.us-west-2.amazonaws.com`	

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description

			`skydio-ota-updates.s3-accelerate.amazonaws.com`
			`skydio-ota-updates.s3.amazonaws.com`
			`skydio-ota-updates.s3-us-west-2.amazonaws.com`
			`skydio-ota-updates.s3-fips.us-west-2.amazonaws.com`
			`skydio-ota-updates.s3-fips.dualstack.us-west-2.amazonaws.com`	

			`skydio-controller-ota-updates.s3-accelerate.amazonaws.com`
			`skydio-controller-ota-updates.s3.amazonaws.com`
			`skydio-controller-ota-updates.s3-us-west-2.amazonaws.com`
			`skydio-controller-ota-updates.s3-fips.us-west-2.amazonaws.com`
			`skydio-controller-ota-updates.s3-fips.dualstack.us-west-2.amazonaws.com`	

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description

			`skydio-media-thumbnails.s3-accelerate.amazonaws.com`
			`skydio-media-thumbnails.s3.amazonaws.com`
			`skydio-media-thumbnails.s3-us-west-2.amazonaws.com`
			`skydio-media-thumbnails.s3-fips.us-west-2.amazonaws.com`
			`skydio-media-thumbnails.s3-fips.dualstack.us-west-2.amazonaws.com`	

			`skydio-media-sync-test-files.s3-accelerate.amazonaws.com`
			`skydio-media-sync-test-files.s3.amazonaws.com`
			`skydio-media-sync-test-files.s3-us-west-2.amazonaws.com`
			`skydio-media-sync-test-files.s3-fips.us-west-2.amazonaws.com`
			`skydio-media-sync-test-files.s3-fips.dualstack.us-west-2.amazonaws.com`	

12	N/A	`TCP 443`	`online-live1.services.u-blox.com` `offline-live1.services.u-blox.com`	**Dock to Ublox AssistNow** The Vehicle accesses an online service to download additional data to improve time to acquire a GPS fix.

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description
13	`8.8.8.8`	`UDP 53`	N/A	**DNS** If the network does not provide DNS over DHCP, then this firewall rule is required.

14	`35.162.55.206`
	`44.237.178.82`
	`52.39.114.182`
	`35.84.246.249`
		`UDP 123`	`time.skydio.com`	**NTP**
				The Dock and Vehicle use either DHCP provided NTP or the `time.skydio.com` NTP server to set the system clock to the correct time.
				If using a self-hosted NTP server that is not configured by DHCP, contact Skydio Support.

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Canada Firewall Requirements

This section contains information about firewall requirements for Flight Systems and RFD deployed against the Skydio Cloud Canada (`ca-central-1`) region.

Skydio Remote Ops uses several domains and ports for real-time visibility and live streaming. Please ensure the following domains and ports are allowed by the firewall.

Skydio recommends using DNS names for firewall rules where possible. Any listed IP addresses will remain consistent.

Rule ID	IP Address	Protocol/Port	Destination	Description
			DNS Name	

1	`15.157.148.0`
	`15.223.164.7`
	`3.96.120.143`
	`15.156.134.201`
	`16.54.158.220`
	`15.156.41.177`
		`TCP 443`	`*.ca.skydiocloud.com`	**Client Workstations to Skydio Cloud**
				The Client workstation that will be logging into Skydio Cloud will need access to the Skydio Cloud, API, and WebRTC components in order to manage, launch, and view missions.
				Standard HTTPS traffic.
				*From Workstations segments, Unrestricted outbound internet to endpoint.

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description

2	`15.156.134.201`
	`16.54.158.220`
	`15.156.41.177`
		`TCP 322`	N/A	**Client Workstation to Livestreaming Services**
				The Client Workstation needs access to WebRTC components in order to launch missions, conduct manual flights via Remote Flight Deck, and send live video streams.
				Rule 2 carries RTSPS traffic. Rule 15 uses the STUN protocol to establish the livestreaming connection. Rule 3 carries livestreaming (WebRTC) traffic.

15	`3.96.231.78`
	`15.157.95.123`
	`15.156.2.114`
	`3.99.18.166`
	`3.98.250.67`
	`3.97.86.111`
		`TCP/UDP 443`	N/A	

3		`TCP 7881`	N/A	
4		`UDP 50000-60000`	N/A	

5	`15.157.148.0`
	`15.223.164.7`
	`3.96.120.143`
	`15.156.134.201`
	`16.54.158.220`
	`15.156.41.177`
		`TCP (HTTPS) 443`	`*.ca.skydiocloud.com`	**Dock to Skydio Cloud**
				The Dock needs access to Skydio Cloud.
				Standard HTTPS traffic.

6	`15.157.148.0`
	`15.223.164.7`
	`3.96.120.143`
		`TCP 51334`	N/A	**Drone debug and health traffic**

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description

7	`52.60.50.108`
	`16.54.174.199`
	`3.97.254.112`
	`16.54.113.180`
	`15.156.144.74`
	`16.54.181.174`
		`UDP/QUIC 443`	N/A	**Dock to Livestreaming Services**
				The Dock needs access to WebRTC/QUIC components in order to launch missions, conduct manual flights via Remote Flight Deck, and send live video streams. Carries livestream traffic (QUIC).

9	`3.96.231.78`
	`15.157.95.123`
	`15.156.2.114`
	`3.99.18.166`
	`3.98.250.67`
	`3.97.86.111`
		`TCP/UDP 40000-41000`	N/A	**Network performance testing utility (iperf)**
				Not covered by the on-device networking test.

11	N/A	`TCP 443`	`skydio-production-cac1-vehicle-data.s3-accelerate.amazonaws.com`
			`skydio-production-cac1-vehicle-data.s3.amazonaws.com`
			`skydio-production-cac1-vehicle-data.s3.ca-central-1.amazonaws.com`
			`skydio-production-cac1-vehicle-data.s3.dualstack.ca-central-1.amazonaws.com`
			`skydio-production-cac1-vehicle-data.s3-fips.ca-central-1.amazonaws.com`
			`skydio-production-cac1-vehicle-data.s3-fips.dualstack.ca-central-1.amazonaws.com`
				Dock to S3
				The Dock needs access to specific AWS S3 bucket endpoints over HTTPS. This includes both regular and S3 Accelerate endpoints. These S3 buckets are for uploading media and log data and downloading device updates.

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Rule ID	IP Address	Protocol/Port	Destination	Description
			DNS Name	
			skydio-production-cac1-flight-data.s3-accelerate.amazonaws.com skydio-production-cac1-flight-data.s3.amazonaws.com skydio-production-cac1-flight-data.s3.ca-central-1.amazonaws.com skydio-production-cac1-flight-data.s3.dualstack.ca-central-1.amazonaws.com skydio-production-cac1-flight-data.s3-fips.ca-central-1.amazonaws.com skydio-production-cac1-flight-data.s3-fips.dualstack.ca-central-1.amazonaws.com	

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Rule ID	IP Address	Protocol/Port	Destination	Description
			DNS Name	
			skydio-production-cac1-organization-files.s3-accelerate.amazonaws.com skydio-production-cac1-organization-files.s3.amazonaws.com skydio-production-cac1-organization-files.s3.ca-central-1.amazonaws.com skydio-production-cac1-organization-files.s3.dualstack.ca-central-1.amazonaws.com skydio-production-cac1-organization-files.s3-fips.ca-central-1.amazonaws.com skydio-production-cac1-organization-files.s3-fips.dualstack.ca-central-1.amazonaws.com	

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Rule ID	IP Address	Protocol/Port	Destination	Description
			DNS Name	
			skydio-production-cac1-media-thumbnails.s3-accelerate.amazonaws.com skydio-production-cac1-media-thumbnails.s3.amazonaws.com skydio-production-cac1-media-thumbnails.s3.ca-central-1.amazonaws.com skydio-production-cac1-media-thumbnails.s3.dualstack.ca-central-1.amazonaws.com skydio-production-cac1-media-thumbnails.s3-fips.ca-central-1.amazonaws.com skydio-production-cac1-media-thumbnails.s3-fips.dualstack.ca-central-1.amazonaws.com	

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description

			`skydio-production-cac1-media-sync-test-files.s3-accelerate.amazonaws.com`
			`skydio-production-cac1-media-sync-test-files.s3.amazonaws.com`
			`skydio-production-cac1-media-sync-test-files.s3.ca-central-1.amazonaws.com`
			`skydio-production-cac1-media-sync-test-files.s3.dualstack.ca-central-1.amazonaws.com`
			`skydio-production-cac1-media-sync-test-files.s3-fips.ca-central-1.amazonaws.com`
			`skydio-production-cac1-media-sync-test-files.s3-fips.dualstack.ca-central-1.amazonaws.com`	

12	N/A	`TCP 443`	`online-live1.services.u-blox.com` `offline-live1.services.u-blox.com`	**Dock to Ublox AssistNow** The Vehicle accesses an online service to download additional data to improve time to acquire a GPS fix.

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Rule ID	IP Address	Protocol/Port	Destination DNS Name	Description
13	`8.8.8.8`	`UDP 53`	N/A	**DNS** If the network does not provide DNS over DHCP, then this firewall rule is required. If the organization requires using internal DNS servers, those need to be provided over DHCP with a corresponding firewall rule.

14	`15.157.148.0`
	`15.223.164.7`
	`3.96.120.143`
		`UDP 123`	`time.skydio.com`	**NTP**
				The Dock and Vehicle use either DHCP provided NTP or the `time.skydio.com` NTP server to set the system clock to the correct time.
				If using a self-hosted NTP server that is not configured by DHCP, contact Skydio Support.

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