



RF SYSTEM FIELD DEPLOYMENT GUIDE

1. SITE INFORMATION

SITE DATA	
Site ID / Name	
Location (City / State, Lat, Lon)	
Install Date	
Technician Name	
System Type	
Mount Height	
Mount Type	
RF Cable (Type / Length)	
Camera IP(s)	
Trailer VIN (if trailer-mounted)	
Modem Serial Number	
Modem WAN IP (Static Y/N — record only if static)	

2. SITE NOMENCLATURE

Each site is identified using a standardized code string. Use the tables below to build the site name.

DIRECTIONALITY / LANE COUNT	
U1	One-way, 1 lane, undivided
U1x1	Two-way, 1 lane each direction, undivided
1x1	Two-way, 1 lane each direction, divided (median / barrier)
2x2	Two-way, 2 lanes each direction, divided
U3x3	Two-way, 3 lanes each direction, undivided
1x2	Two-way, 1 lane one direction / 2 the other, divided





SPEED ZONE	
S1	Low-Speed (≤ 25 mph)
S2	Arterial (30–45 mph)
S3	High-Speed Arterial (50–60 mph)
S4	Freeway (≥ 65 mph)

ROAD GEOMETRY	
G1	Straight
G2	Curved
G3	Dip / Hill
G4	Intersection
G5	Merge / Diverge

SURFACE / TRIGGER TYPE	
ST0	Free Roll – smooth, no braking or turning
ST1	Vertical Shock Events – cracks, speed bumps, potholes
ST2	Sustained Rough Surface – grooved pavement, brick roads
ST3	Braking / Acceleration – stop signs, traffic signals
ST4	Turning / Curvature – turn lanes, tight curves, roundabouts

ANTENNA CONFIGURATION	
Y	Yagi
O	Omni
RM	RF-Max

EXAMPLE

usbp-mip-trailer-rfdk2394 | Ocala, FL | Drop-In | 6'4" OVR | U2D | 2x2 | S4 | G1 | ST0 | Y+RM | PT195/LMR240 (15ft)

3. REQUIRED PHOTOS

Capture the photos listed below and upload them to the appropriate Jira card for this site.

REQUIRED PHOTOS — UPLOAD TO JIRA	
Photo 1 — Interior Box: RF Cable Routing	All RF cables routed and seated inside enclosure.
Photo 2A — Road View: Direction 1	
Photo 2B — Road View: Direction 2	
Photo 3 — Omni / Yagi (from 20+ ft back)	Capture the full antenna and mount — step back at least 20 feet.

4. ANTENNA HEIGHT MEASUREMENT

Measure from the ground up to the specified point — not the top of the antenna.

OMNI ANTENNA

Measure to the ground plane disk (where it meets the antenna element).

Height — ground to ground plane	_____ ft	_____ in
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YAGI ANTENNA

Measure to the Yagi boom.

Height — ground to Yagi boom	_____ ft	_____ in
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Omni/Yagi Antenna Height — Measure from ground up to the antenna ground plane (**where the ground plane disk meets the antenna element**). NOT the top of the antenna (see Figure 1).



Figure 1.

5. HARDWARE & SOFTWARE VALIDATION

ANTENNA PLACEMENT

- Mount antennas 10–15+ ft in the air when possible. Exception: ORV hitch mount.
- There should be a radius of 1.5ft around the antenna where there is no metal around it. Avoid having antennas close to trees, cameras, or anything within this vicinity.

YAGI AIMING

- Start parallel to the road, then angle slightly toward traffic to target a point ~1,400 ft down the road (see Figures 2 and 3).
- Aim in the direction of traffic traveling toward the system.

- There should be a radius of 1.5ft around the antenna where there is no metal around it. Avoid having antennas close to trees, cameras, or anything within this vicinity.

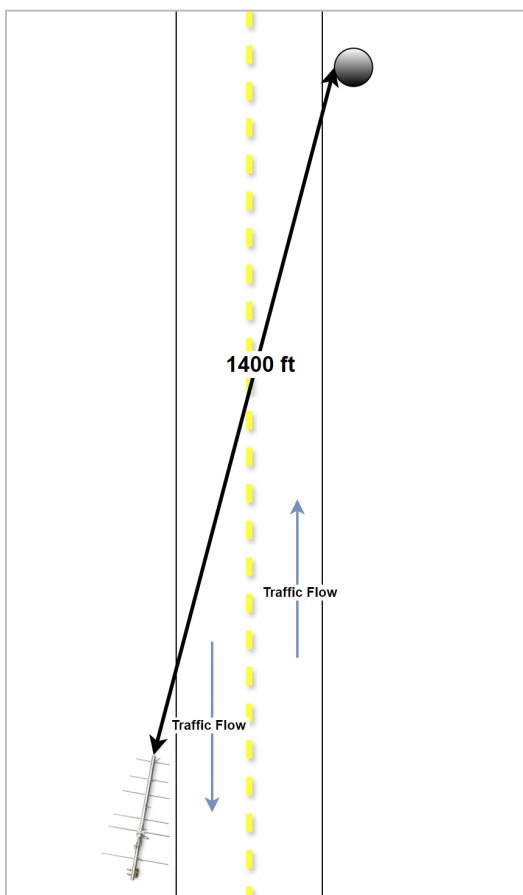


Figure 2.

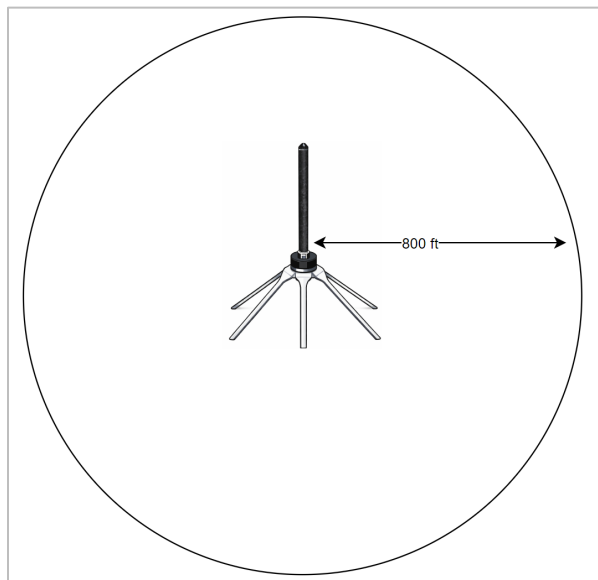


Figure 3.

DETECTION RANGE & NOMENCLATURE

- Omni range: ~850 ft. Do not include road events (bumps, crosswalks, etc.) that fall outside this range in the site name.
- Yagi range: ~1,400 ft. Same rule — if nothing notable is within range, do not note it in the nomenclature.

RF CONNECTORS

- SMA connectors (on SDRs): hand-tighten (Standard SMA 3-4 in-lbs), then snug slightly with a wrench — do not overtighten (see Figure 4).
- N-type connectors (on antennas): hand-tight is sufficient (see Figure 5).

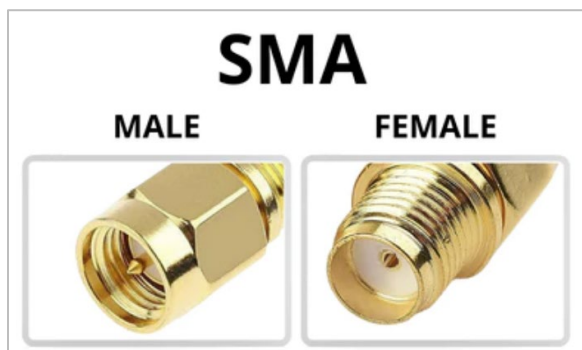


Figure 4.



Figure 5.

6. SOFTWARE VALIDATION

1. KISMET

- Open a browser and navigate to: <http://<tailscale-ip>:2501> (see Figure 6).

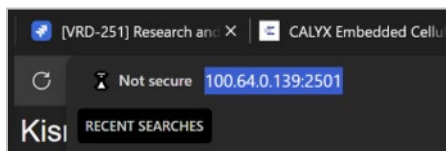


Figure 6.

- Confirm the Kismet interface loads.
- Log in — User: **admin** / Pass: **admin**
- Verify active reads for Wi-Fi, BLE, and TPMS in the Kismet dashboard (see Figures 7–9).

Kismet										
Devices Alerts SSIDs ADSB Live										
Name	Type	Encryption	Last Seen	Packets	Signal	Channel	Manufacturer	Clients	Uptime	
PMV-107J-0fab011a	Sensor	n/a	Mar 15 2026 09:42:33		n/a	315.026 MHz	RF Sensor	0	n/a	
Toyota-de39caf1	Sensor	n/a	Mar 13 2026 19:25:13		n/a	315.003 MHz	RF Sensor	0	n/a	

Figure 7.

Devices

Alerts

SSIDs

ADSB Live

All devices

Filter...

	Name	Type	Encryption	Last Seen	Packets	Signal	Channel
✂	FA:0D:AC:D9:65:26	BTLE Device	n/a	Jan 06 2026 13:47:41		-70	2.4
✂	D7:A6:6E:88:61:F4	BTLE Device	n/a	Jan 06 2026 13:47:41		-73	2.4
✂	ALPHA 2 PRO	BTLE Device	n/a	Jan 06 2026 13:47:41		-73	2.4
✂	ALPHA 2 PRO	BTLE Device	n/a	Jan 06 2026 13:47:41		-74	2.4
✂	ALPHA 2 PRO	BTLE Device	n/a	Jan 06 2026 13:47:41		-73	2.4
✂	ALPHA 2 PRO	BTLE Device	n/a	Jan 06 2026 13:47:41		-82	2.4

Figure 8.

Unknown
Unknown

Devices	Alerts	SSIDs	ADSB Live	Wi-Fi Access Points		Filter...
:	Name	Type	Encryption	Last Seen	Packets	Signal
	Vetted AP Ir	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-62
	Vetted AP Ir	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-73
	venus-HQ2521PW...	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-70
	venus-HQ24516FJ...	Wi-Fi AP	WPA WPA-P...	Jan 06 2026 13:45:39		-69
	SONOS-AyQBCAA...	Wi-Fi AP	Open	Jan 06 2026 13:45:39		-66
	venus-HQ2508T39...	Wi-Fi AP	WPA WPA-P...	Jan 06 2026 13:45:39		-69
	venus-HQ2505AP6...	Wi-Fi AP	WPA WPA-P...	Jan 06 2026 13:45:39		-71
	CC:CF:83:94:1C:7A	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-54
	Vetted Orbi-IoT	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-73
	venus-HQ2508UQ4...	Wi-Fi AP	WPA WPA-P...	Jan 06 2026 13:45:39		-82
	72:A7:41:91:BC:BE	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-57
	Vetted Orbi-IoT	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-56
	Vetted AP Ir	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-56
	PEPLINK_7CA5	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-63
	72:A7:41:91:E7:96	Wi-Fi AP	WPA2 WPA2...	Jan 06 2026 13:45:39		-59

Figure 9.

2. 4DV DATA VALIDATION

- Log into 4DV.
- Pull data from the last 10 minutes.
- Confirm **Wi-Fi, Bluetooth, TPMS and LPR** (if applicable) data are all flowing correctly.

7. AXIS LICENSE PLATE VERIFIER INTEGRATION SETUP

1. Open the AXIS camera IP address in a browser. Enter the username and password, then select **Applications** (see Figure 10).

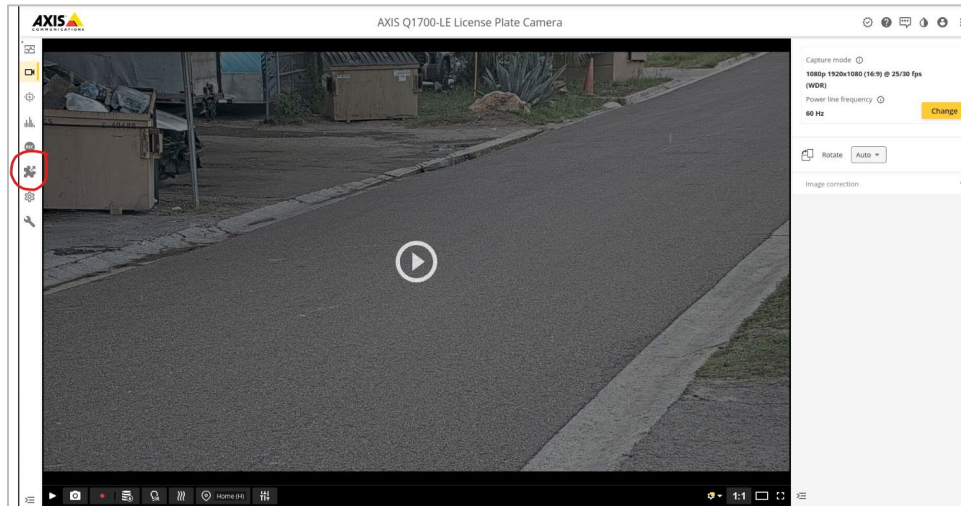


Figure 10.

2. Select **AXIS License Plate Verifier** and click **Open**. Ensure that the ALPV application is enabled (see Figure 11).

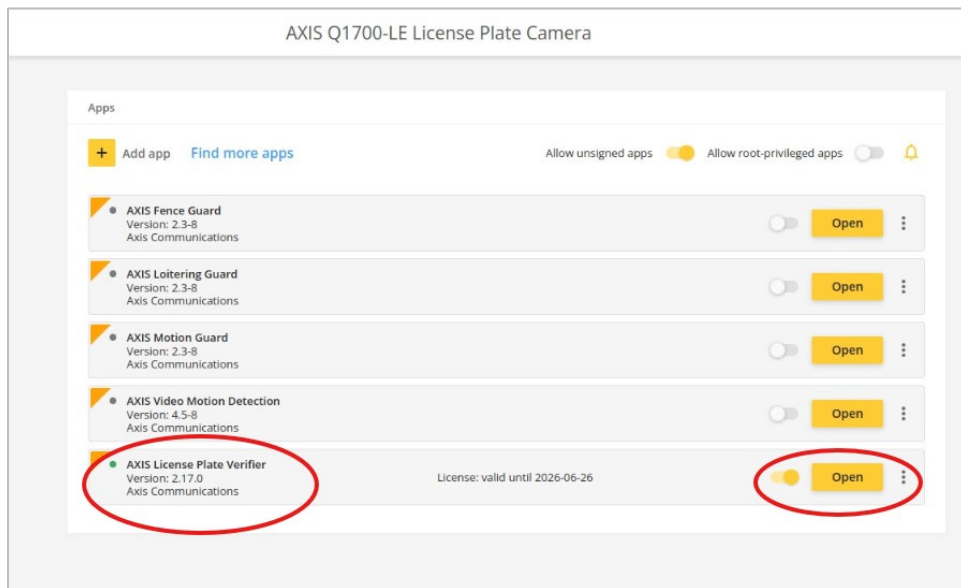


Figure 11.

- Go to the **Integration** tab to configure the endpoints (see Figure 12).

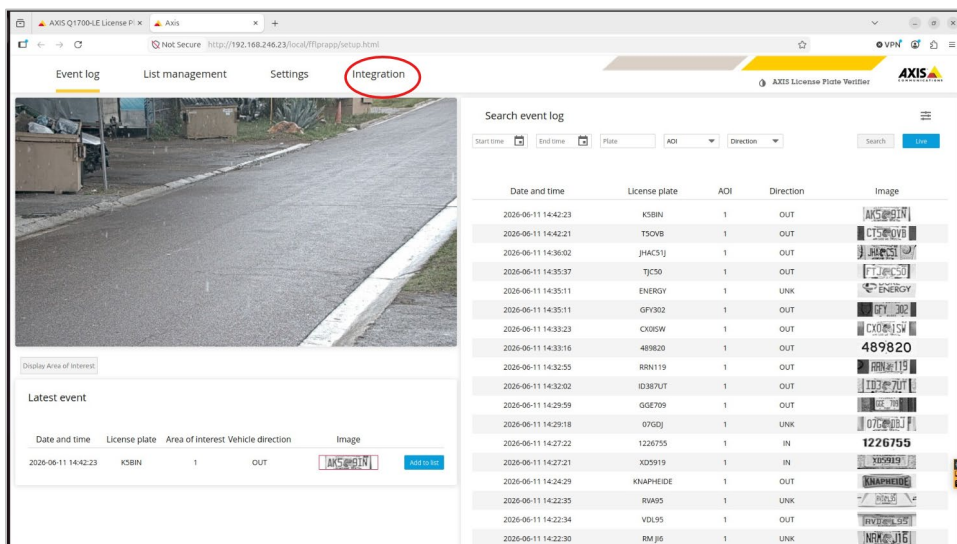


Figure 12.

- Set up the actual camera coordinates. These coordinates determine how the LPR camera location will appear on the geo map.
- In the **Integration** section, there are three available profiles that can be configured. Select any unused profile and configure it as follows:
Protocol: HTTP POST
Server URL: http://<RAS-PI IP>:3888/vol/lpr
Refer to the steps below to locate the Raspberry Pi IP address.
- Under **Event Types**, select **Send two images** and enable **Multipart**.
- Enable **START**, then click **Save** (see Figures 13 and 14).

```

root@4185-rf-dk:~# ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 2c:cf:67:b7:d1:17 brd ff:ff:ff:ff:ff:ff
    inet 192.168.44.145/24 brd 192.168.44.255 scope global dynamic noprefixroute eth0
        valid_lft 34672sec preferred_lft 34672sec
    inet6 fe80::2c:cf:67:b7:d1:17/64 scope link noprefixroute
        valid_lft forever preferred_lft forever

```

Figure 13.

Not Secure http://192.168.246.23/local/fflprappo/setup.html#

Profiles: Profile 1

Network settings

Protocol: HTTP POST

Server URL: http://192.168.241.108:301

User:

Password:

Auth-Header:

Proxy:

Push Conditions

Direction: Any In Out

LPR Event types

Select event types for push

New: ☒ Update: ☒ Lost: ☒

Do not send images

Send two images: ☒ Multipart: ☒ Event buffer: ☒ START to send event data to server

Device location

Latitude: 27.8000284 Longitude: -82.5684936 Device ID: defaultID

Authentication: Auto Basic Digest

Naming and Path

Test integration

AXIS1234 Test

Save

Figure 14.

8. If Scout has already been deployed on the Raspberry Pi from the 4DV, go to **TechAlert**.
9. Navigate to **Latest Data** and look for a **4DV endpoint summary**.
10. Confirm that at least one **vsol.lpr** is visible (only available when at least one LPR read happens), as shown in the example images below (see Figures 15 and 16).

Host	Name	Last check	Last value	Change	Tags
4185-rf-dk	4DV endpoint summary	1m 50s	Working pipelines: ws.bluetooth - 0s ago		
4185-rf-dk	Available Host memory	1m 51s	2992.42		
4185-rf-dk	Available Host RAM	1m 50s	574		
4185-rf-dk	Available memory	2m 12s	2.94 GB		
4185-rf-dk	Available memory in %	2m 11s	38.0456 %		
4185-rf-dk	Bluetooth Last Sensor Read	1m 51s	2026-06-11 19:25:32		
4185-rf-dk	Bluetooth RF status	1m 51s	OK		
4185-rf-dk	Camera Detection Error				

Figure 15.

Working pipelines: ws.bluetooth - 0s ago	
2992.42	Working pipelines:
574	ws.bluetooth - 0s ago (2026-06-11 19:25:55)
2.94 GB	ws.tpms - 22s ago (2026-06-11 19:25:34)
38.0456 %	ws.wifi_ap - 8s ago (2026-06-11 19:25:48)
2026-06-11 19:25:32	ws.wifi_device - 9s ago (2026-06-11 19:25:47)
OK	ws.wifi_probes - 17s ago (2026-06-11 19:25:39)
	vsol.lpr - 2m 33s ago (2026-06-11 19:23:23)
	vsol.lpr - 24s ago (2026-06-11 19:25:32)
	Not working:
	vsol.fl_lpr

Figure 16.



8. SUPPORT

SUPPORT LINE (727) 977-9005	SUBMIT A TICKET https://sigilitetech.com/support	QR CODE 
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