Site Requirements & Installation Readiness

This document specifies the site conditions required for a PRATA installation. Sections 1 through 4 cover the requirements applicable to all sites. Sections 5 through 9 contain the network and egress specification for sites operating under managed IT, and the pre-installation checklist.

Footprint	Power	Network	Inbound ports	Install
< 1 sq ft	**1 outlet**	**1 LAN port**	**None**	**≤ 7 days**

1. What your site needs

Three site conditions are required. All other equipment is supplied and configured by TanFlag.

REQUIREMENT	SPECIFICATION
One power outlet	Standard 120V grounded outlet, within reach of the placement location. Must not be a switched outlet or a strip that staff power down at close.
One network port	An open LAN port on your router or network switch, with an ethernet run to the placement location. Wired connection is required; Wi-Fi is not used.
A shelf or closet	Under one square foot of flat surface, indoors, with a couple inches of clearance for airflow. Back office, IT closet, or rack shelf. Staff never need to touch it.

Scope of supply
TanFlag supplies the appliance, power protection, cabling, and all configuration. The client supplies power, a network port, and a placement location. Sections 5 through 8 apply to sites with managed firewalls or restrictive egress filtering; single-location sites on standard business internet typically require no action on those sections.

2. What TanFlag delivers

The appliance is assembled, configured, and tested prior to delivery. Hardware is ordered on the client's behalf at cost; TanFlag applies no margin to hardware and is not a reseller for any manufacturer. Hardware is owned outright by the client.

COMPONENT	SPECIFICATION
Compute unit	Raspberry Pi 5 · 8GB LPDDR4X · quad-core 64-bit Arm Cortex-A76 @ 2.4 GHz · Broadcom BCM2712
Enclosure & cooling	Aluminum-alloy case, integrated heatsink, active fan. Sized to prevent thermal throttling under sustained 24/7 load.
Primary storage	512GB NVMe SSD on M.2 HAT, PCIe 2.0. Selected over removable flash media for write endurance under continuous database load.
Recovery media	microSD card holding a recovery image. Not used in normal operation.
Power supply	Official 27W USB-C adapter, 5V / 5A USB-PD. Underpowered supplies cause silent throttling and are not substituted.
Power protection	APC Back-UPS BE425M · 425VA / 255W · line-interactive with surge suppression.
Cabling & mounting	Ethernet patch cable, mounting hardware, and miscellaneous fittings.

Approximate hardware cost: $325 all-in, billed at cost with no markup. Clients may supply their own hardware; minimum specification is 8GB RAM, 64-bit ARM or x86-64 processor, solid-state storage, and gigabit ethernet. Contact TanFlag before purchasing.

3. Placement and environment

PARAMETER	SPECIFICATION
Footprint	Under 1 sq ft including the UPS. Appliance is roughly the size of a paperback book; the UPS is comparable to a shoebox.
Location	Shelf, cabinet, back office, IT closet, or rack shelf. No customer-facing placement required or recommended.
Clearance	Minimum 2 inches on all sides of the enclosure for airflow. Do not enclose in a sealed cabinet.
Ambient temperature	Normal indoor conditions. Away from direct sunlight, heating vents, kitchen equipment, and dryer exhaust.
Humidity & dust	Normal indoor office or retail conditions. Not suitable for wash bays, salon color rooms with airborne product, or unconditioned storage.
Staff access	Not required. The appliance is headless and runs without a monitor, keyboard, or peripheral. TanFlag requires physical access only for installation and hardware service.
Security	Placement out of public reach is recommended. The appliance is not a customer-facing device and should not be reachable from a lobby or sales floor.

4. Electrical requirements

PARAMETER	SPECIFICATION
Service	One standard 120V AC grounded (three-prong) outlet, 60 Hz.
Appliance draw	27W maximum, governed by the supplied USB-PD adapter. Typical continuous draw is substantially lower. Comparable to a single LED desk lamp.
UPS capacity	425VA / 255W. Total connected load is a small fraction of rated capacity, yielding extended runtime.
Circuit impact	Negligible. No dedicated circuit required. No electrical work required.
Battery-backed outlets	Two required: one for the appliance, one for the site router or modem.
Surge outlets	Remaining UPS outlets are available for other site equipment at the client's discretion.

Router or modem must be on the same UPS

If network equipment loses power during an outage, the platform becomes unreachable even while the appliance continues running on battery. Powering both from the same UPS preserves remote access through the outage. Reserve two battery-backed outlets.

The appliance must not be connected to a switched outlet, a timer-controlled outlet, or a power strip powered down at close. Repeated unclean shutdown is a common cause of service interruption on deployments of this type.

Network, Egress, and Review Documentation

The following sections are intended for network administrators and managed IT providers. They specify network requirements, egress rules, and ongoing operational responsibilities, followed by the pre-installation checklist in Section 9.

5. Network requirements

PARAMETER	SPECIFICATION
Connection type	Wired gigabit ethernet (1000BASE-T). Required.
Port	One available LAN port on router or managed switch. Untagged access port; no VLAN tagging required by default.
Wi-Fi	Not used in this deployment. The board supports dual-band 802.11ac; it is disabled in favor of wired connection for stability.
Addressing	IPv4 via DHCP with a static reservation bound to the appliance MAC address. Required.
IPv6	Not required. Dual-stack networks are supported.
Inbound ports	None. No port forwarding, no NAT rule, no DMZ placement, no inbound firewall exception.
Public IP	Not required. Deployment functions behind CGNAT and on networks where port forwarding is unavailable.
VPN	Not required. No VPN concentrator, client, or site-to-site tunnel is used.
Dynamic DNS	Not required.
Certificates	None managed on client equipment. TLS is terminated and renewed at the network edge.
Bandwidth reservation	None required. Traffic is intermittent and low-volume relative to ordinary business use.

DHCP reservation
The appliance requires a fixed address on the local network. A lease that expires and reassigns is a known cause of service interruption. TanFlag configures the reservation during installation and requires either router administrative access or a designated network contact to perform it.

6. Internet service

PARAMETER	SPECIFICATION
Minimum downstream	25 Mbps
Minimum upstream	5 Mbps
Recommended upstream	10 Mbps or better where media publishing volume is high
Latency	No specific requirement. Standard broadband latency is sufficient.
Availability	Always-on connection required. Business-class service recommended but not required.
Static IP	Not required.
Data allowance	Not a practical concern. Normal operation consumes a small fraction of typical business allowances.
Content filtering	Must not block the egress destinations in Section 7. Disclose any managed filter before installation.

Upstream capacity is the governing constraint on this deployment. The appliance transmits more than it receives: publishing media assets, issuing API requests to connected platforms, and maintaining the outbound management connection. A service meeting the downstream figure but not the upstream figure will produce slow media publishing while otherwise appearing to operate normally.

7. Firewall and egress rules

The rules below are satisfied by default on consumer and small-business routers. Networks operating under managed IT, franchise IT policy, or restrictive egress filtering require the following outbound allowances.

PURPOSE	PORT	PROTO	DIR	NOTES
Management tunnel	7844	UDP	Egress	Primary transport (QUIC). Four concurrent connections to geographically distributed edge nodes.
Management tunnel	7844	TCP	Egress	Fallback transport (HTTP/2). Used automatically when UDP is unavailable.
Platform APIs / edge	443	TCP	Egress	HTTPS to connected service providers; optional edge features and update checks.
Name resolution	53	UDP/TCP	Egress	Standard DNS.
Time synchronization	123	UDP	Egress	NTP. Required for scheduled operations and log integrity.

Egress only
All rules above are outbound. No inbound rule is required on any port. The appliance initiates every connection; no external host initiates connections to it. A firewall blocking all ingress and permitting only the egress above is a complete configuration for this deployment.

Implementation notes by firewall type

FIREWALL TYPE	REQUIRED ACTION
Hostname / FQDN allowlist	Allow the edge tunnel hostnames. TanFlag supplies the current hostname set on request.
IP-based rule sets	Allow the current edge destination address ranges. These are published and maintained by the edge provider and are subject to change; request them close to the installation date rather than in advance.
SNI-enforcing firewalls	Additional SNI allowances are required. Request the current specification from TanFlag.
Deep packet inspection	TLS interception on the management tunnel will prevent the connection from establishing. The appliance must be exempted from interception.
Degraded operation	If UDP 7844 is blocked but TCP 7844 is permitted, the tunnel falls back to TCP and continues to function at reduced transport efficiency. If both are blocked, the platform cannot be reached remotely and installation cannot complete.

8. Ongoing client responsibilities

Client obligations after installation are limited to the following. Client staff do not administer, update, patch, or configure the platform, and client IT is not required to support it.

AREA	OBLIGATION
Power	Leave the appliance and the UPS powered and connected. Do not unplug either.
Network	Leave the appliance connected to the network port. Do not repurpose the port.
Physical	Do not move, open, or relocate the appliance. Contact TanFlag if the placement location must change.
Change notification	Notify TanFlag in advance of any router replacement, network reconfiguration, ISP change, or firewall policy change.

AREA	OBLIGATION
Fault reporting	Report any interruption to TanFlag directly. Do not attempt local remediation.

Network changes

A replacement router clears the DHCP reservation. An ISP change may introduce new egress filtering. Both are resolved in minutes given advance notice and result in an outage without it.

Pre-Installation Checklist

Items marked [IT] require a network administrator on sites operating under managed IT. On single-location sites these are handled by TanFlag during installation.

A · SITE AND PLACEMENT

- ☐ Placement location identified, indoors, with 2 in. clearance on all sides
- ☐ Location is not exposed to direct sun, heat sources, humidity, or airborne product
- ☐ Two battery-backed outlets available at the placement location
  One for the appliance, one for the site router or modem
- ☐ Outlet is not switched, timer-controlled, or on a strip powered down at close
- ☐ Placement is out of customer reach and does not require staff access

B · NETWORK

- ☐ Available LAN port on router or switch identified
- ☐ Ethernet run to the placement location exists or is scheduled
- ☐ Router administrative credentials available, or network contact designated
  Required for the DHCP reservation, see Section 5
- ☐ Internet plan confirmed at or above 25 Mbps down / 5 Mbps up
  Confirm against the service plan, not a speed test
- ☐ [IT] Any managed firewall, content filter, or DPI appliance disclosed to TanFlag
- ☐ [IT] Egress rules per Section 7 reviewed and scheduled for implementation
- ☐ [IT] Confirmed the appliance will not be subject to TLS interception

C · ACCOUNTS AND ACCESS

- ☐ Named individuals designated for platform access, with email addresses
- ☐ Business identity details compiled (legal name, DBA, locations, brands)
- ☐ Connected-platform account administrators identified for each service in scope
- ☐ Alert and approval routing preferences determined per platform
- ☐ Brand kit assembled (logo files, typefaces, color values, tone guidance)

D · SCHEDULING AND ACCESS

- ☐ Installation date and arrival window confirmed
- ☐ Building access arrangements confirmed for the installation window
- ☐ On-site contact available during the installation window

CONTACTS: COMPLETE IN FULL

Business legal name

Installation site address

Primary contact: name / mobile / email

Network or IT contact: name / mobile / email

After-hours contact: name / mobile	
Internet service provider / plan speeds	
Router make and model	
Managed IT provider, if any	
Requested installation date	

Installation timeline

Installations complete within seven days of deposit confirmation. On-site time is typically a single visit; duration varies with the number of connected accounts and brands in scope. Return this checklist with the contact block above to schedule.

Completed checklists and questions: TanFlag: (443) 991-8984