

S05 / IMPLEMENTATION

Unattended camera connectivity

Engineer PoE power and provide controlled remote viewing

AI concept scene, not a customer-site photograph. Final configuration is project-specific.

Customer need and Phase-1 scope

Primary: YZW1000; cameras, NVR and VMS are project equipment

Customer context

For perimeter sites, water facilities and remote equipment rooms lacking practical broadband. Integrate networking, power management and authorized viewing; recording and AI are not inherent gateway functions.

Pilot assumption: one YZW1000, two compatible PoE cameras and optional local NVR. Engineer power, bitrate and storage from real camera models, not port count.

01 Engineer PSE supply, ports and cabling from actual camera needs.

02 Prefer local recording where appropriate and on-demand remote viewing; keep camera and NVR identities distinct.

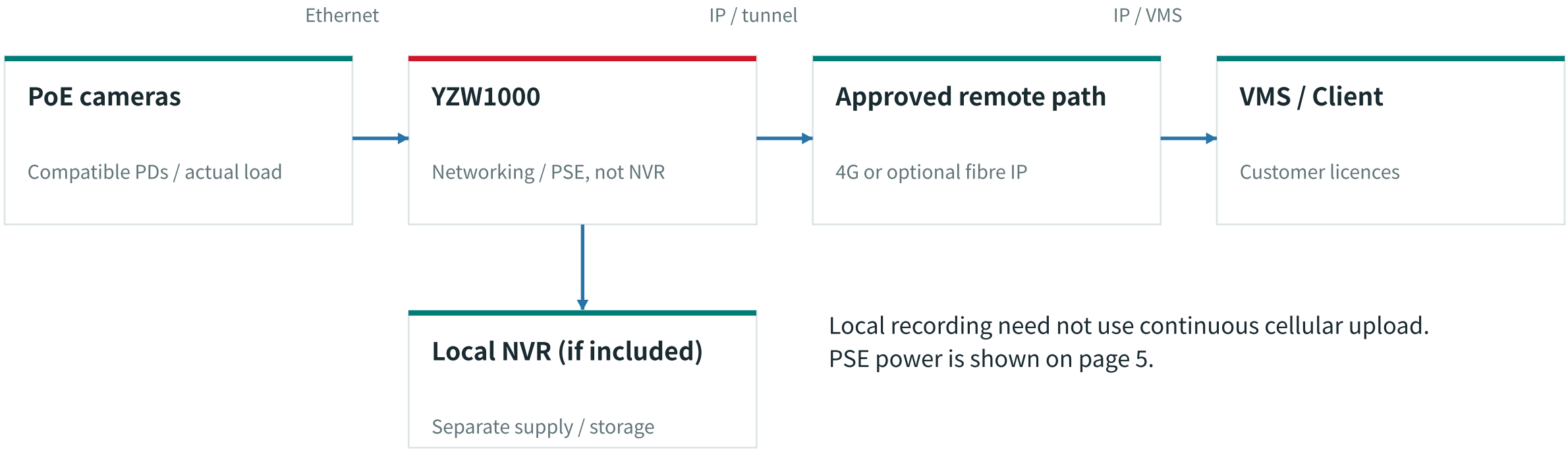
03 Use an approved remote path and test video recovery and per-port service.

Explicit exclusions

NVR, cloud recording, recognition and AI alarms are not included by default. Port count and the 90W / 720W specification ceilings are not a project power budget.

System architecture and ownership

Every link has a defined medium; field devices and applications are project equipment.



Equipment and selection conditions

Pilot quantities only. Separate standard items, project options and customer equipment in the final BOM.



Two Gigabit SFP and eight Gigabit RJ45 ports; default SFP WAN and RJ45 LAN roles.

IEEE 802.3af/at/bt PSE with per-port status and power cycle; compatible PD negotiation is required.

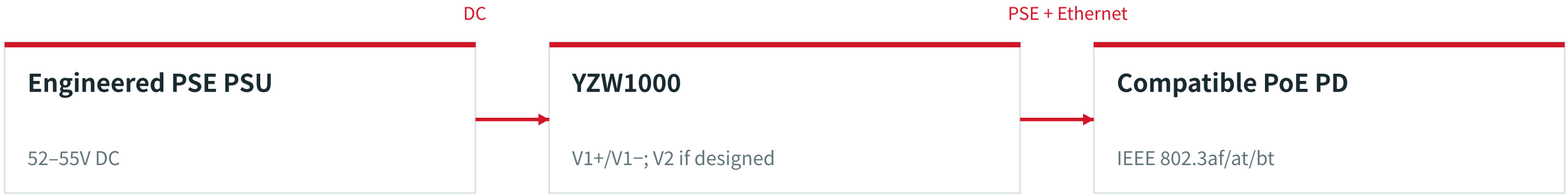
Host DC input: 12–55V. PSE requires 52–55V. The supplied 12V adapter cannot provide camera PoE power.

4G standard has Wi-Fi; optional 5G has no Wi-Fi. SFP modules and PSE PSU are optional.

Component	Qty	Owner	Selection / condition
YZW1000 / antennas	1 set	EDGELOR	Ordered 4G / 5G and Wi-Fi conditions
PoE cameras	2 in pilot	Agreed BOM	PD standard, peak / IR / startup power
52–55V PSE supply	Per BOM	Optional BOM	Host, PDs, loss and environment margin
Local NVR / storage	If required	Agreed BOM	Recording licence, bitrate and retention
Cabinet / SPD / cabling	Per site	Installer	Host is IP30; use a suitable enclosure
SIM / SFP / remote VMS	As designed	Agreed BOM	Backhaul, matched optics and licences

Power and wiring boundaries

Boundary diagram, not a terminal construction drawing. Qualified personnel use approved electrical plans.



01 For PSE, connect an engineered 52–55V supply to V1+ / V1−. Design any V2 backup separately; 12–55V host input does not imply PoE across that range.

02 Use approved PSE ports and compatible PDs. Check class, cable and distance; do not attach unknown passive-power equipment.

03 Usable PoE budget is constrained by PSU, input, host load, temperature and losses. Use the verified limiting value, not eight times 90W.

04 List separate NVR or auxiliary supplies. Match speed, wavelength, connector and fibre at both ends of an optical link.

Installation and site work

The scene illustrates the environment only. Add actual installation and cable photographs from the image brief.



AI concept scene; not a construction drawing or delivered-site photo.

01 YZW1000 is IP30 and needs an engineered enclosure, grounding and ventilation; it is not directly rain-exposed pole hardware.

02 Obtain publication permission and redact faces / plates. Show only the authorized camera field of view.

03 Avoid shielding cellular antennas. Document the PSU, PSE ports, camera cables and surge / earth paths.

S05-H2 installation set + S05-H3 wiring set: capture after real site implementation.

Workflow, platform and security

A delivered message is not proof of equipment state. Diagnose from the last verified layer.

1 **Local video**

Cameras use Ethernet. A local NVR can record without sending every stream over cellular.

2 **Remote view**

Authorized VMS uses the approved path; choose streams from measured quality and bandwidth.

3 **Budget**

Estimate traffic from bitrate, viewing time and concurrency; calculate retention separately.

4 **Service**

Power-cycle only with approval, then verify the image and recording, not just port power.

Platform and operating conditions

- Change initial passwords on camera, NVR and gateway; separate video, management and remote-service rights as designed.
- Do not default to public port exposure or UPnP. Customer security staff approve the access path and evidence policy.
- Vision algorithms are out of scope. AI needs a separate host, model, representative footage and evaluation.

Commission in order and keep evidence

Validate one layer at a time before outputs or remote changes.

Task	Pass evidence	First checks on failure
01 Power budget	PD standard, peaks and 52–55V supply confirmed.	Do not test PSE with only a 12V adapter.
02 One camera	PD negotiates power and produces video.	Check port status, cable and PD support.
03 Local recording	If included, NVR recording and playback work.	Check licence, storage, clocks and camera setup.
04 Remote viewing	Actual VMS sees the authorized camera.	Check routes, bitrate and credentials.
05 Planned load	Test peak startup / IR and intended total load.	Check voltage, margin, temperature and loss.
06 Recovery	Video / recording recover after each approved test.	Keep host power and separate fault types.

Acceptance and ownership

Agree duration, thresholds, samples and sign-off owner before testing. These are acceptance categories.

Test	Evidence to keep
Power	Record input, PD negotiation, planned peak load and thermal behaviour.
Video	Agree image quality and latency using actual footage, not link LEDs.
Recovery	Verify image after port / IP faults; record NVR continuity separately.
Security / traffic	Unauthorized access fails; agree data plan and concurrency.

Delivery ownership

- EDGELOR: agreed equipment, applicable documentation and contracted configuration support.
- Customer / integrator: protocols, platform, accounts, licences, thresholds and publication rights.
- Installer / engineers: electrical work, mounting, protection, actual commissioning and joint sign-off.

Handover and open engineering items

Suitable for project discussion and a website reference solution. Resolve the open items before construction.

Handover and diagnosis

Deliver port-to-camera map, power budget, cable / fibre list, data-plan estimate, VMS / NVR licences, redacted evidence and recovery tests. Separate power, LAN video, recording and remote-uplink faults.

Confirm before implementation

01 PD standard, peak power, bitrate and night mode.

02 52–55V PSU, enclosure heat and surge / earth design.

03 Recording, retention and viewing concurrency.

04 Coverage, data plan, VPN and privacy approval.

Evidence (physical PDF pages)

DS1000 V1.5 • P2 / P6–10

CAT V2.0 • P23

/solutions/remote-connectivity/ • 2026-11-06

Detailed paths and source hashes: companion evidence register.

Related website category

www.edgelor.com