

BOSMONT ■ REGIONAL WISP

Ubiquiti fixed-wireless broadband network investment proposal

Regional multi-area build plus lower-capital 5 km starter path for Bosmont, Newclare, Newlands, Maraisburg and Florida.

OPTION A

R190,000

Regional platform: multi-sector high site, broader reach, resilience and relay/backhaul readiness.

OPTION B

R65,000

Starter network: focused one/two-sector launch around proven demand and clean line-of-sight.

ESTATE

55 premises

Homes, flats and small businesses treated as a capacity and migration planning base.



Conceptual RF/geographic graphic - not a certified RF prediction or guarantee

Current PDF used as factual source material only. Visual design rebuilt from scratch.

INVESTMENT VIEW

Two ways to buy the same future network

The proposal is not a single oversized Wi-Fi hotspot. It is a managed fixed-wireless ISP architecture: Openserve fibre feeds an operator core, tower sectors divide geography and airtime, and every subscriber connects through a directional outdoor CPE before indoor Wi-Fi begins.

CORE DECISION

Launch or scale

R65k proves demand and operations. R190k invests earlier in geography, sector capacity and resilience.

VALUE DRIVER

Airtime control

Sectorisation lets the operator divide demand instead of pushing one radio harder.

RISK CONTROL

Survey first

Final coverage depends on tower height, line of sight, Fresnel clearance, spectrum and subscriber mounting.

What the investor should understand

- The 55-premise estate is a starting operating base, not a reason to oversell unmanaged capacity.
- Openserve supplies the fibre boundary; the WISP platform controls distribution after the handoff.
- NanoStation M5 links can remain if stable, while new/high-demand installs should migrate to AC CPE.
- A 5 km starter ring is a planning objective, not a guarantee of universal service.
- The regional option funds earlier capacity, resilience and expansion readiness.

Investor message

Option B creates a controlled launch vehicle. Option A accelerates the same architecture into a regional infrastructure platform. The underlying network layers stay consistent, so the starter path can evolve without throwing away the original design.

Option A and Option B are intentionally different

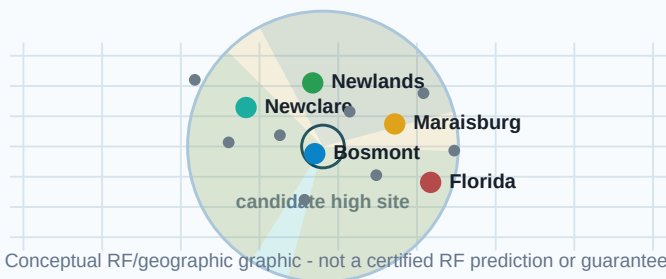
OPTION A

Regional Network

R190,000 project investment

- Multi-sector high-site architecture for Bosmont, Newclare, Newlands, Maraisburg and Florida where feasible.
- Designed for capacity division, AC migration, stronger resilience and relay/backhaul expansion.

Best for infrastructure value and broader subscriber acquisition.
Requires survey, RF limits and Openserve/ISP confirmation.



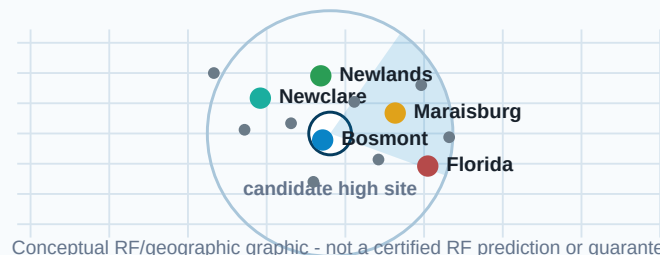
OPTION B

5 km Starter Network

R65,000 project investment

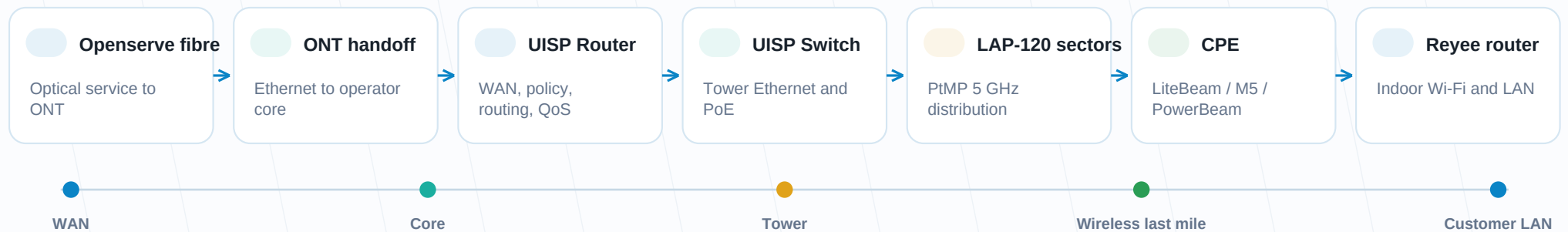
- Focused one/two-sector launch aimed at the strongest subscriber cluster around the high site.
- Preserves the same logical layers: fibre, core, sector, CPE, indoor router and monitoring.

Lower-capital path: launch, prove demand, then add sectors and upstream capacity. The 5 km ring is not a service promise.



From fibre handoff to customer Wi-Fi

Every customer packet should be understood as a chain. Troubleshooting, investment scope and expansion planning all become clearer when the handoff, operator core, RF distribution and indoor Wi-Fi are separated.



Openserve boundary

Openserve describes fibre running from the street distribution infrastructure to an ONT inside the home or office; Ethernet then continues to the router/operator layer.

Operator boundary

UISP router and switching equipment form the managed WISP core: WAN, VLANs, policy, PoE, monitoring and tower distribution.

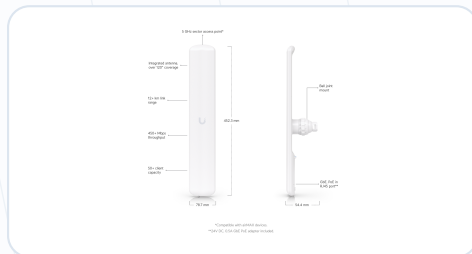
Customer boundary

Outdoor CPE terminates the radio path. The Reyee router then provides customer NAT, LAN and indoor Wi-Fi, which must be diagnosed separately from RF.

EQUIPMENT

Real product references, not generic radio art

Product photography on this page is fetched from official Ubiquiti product material where available. RF maps and topology diagrams elsewhere are labelled separately as conceptual graphics.

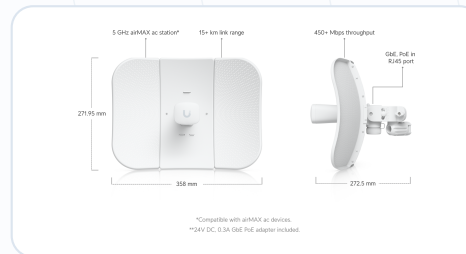


airMAX Lite AP

LAP-120

Primary sector access point

Real product photography from official Ubiquiti product material where fetched.

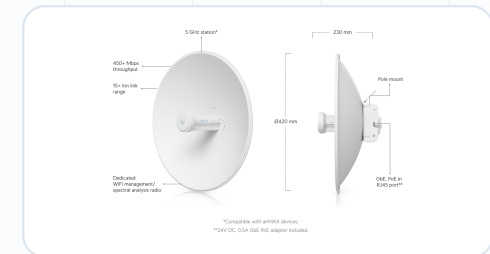


airMAX LiteBeam 5AC

LBE-5AC-Gen2

Preferred new customer CPE

Real product photography from official Ubiquiti product material where fetched.

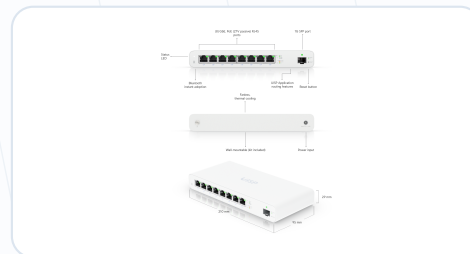


airMAX PowerBeam 5AC

PBE-5AC-Gen2

High-gain PtP and difficult links

Real product photography from official Ubiquiti product material where fetched.

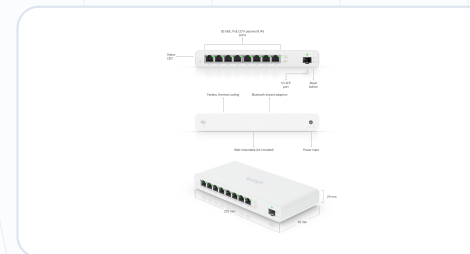


UISP Router

UISP-R

Operator gateway and policy layer

Real product photography from official Ubiquiti product material where fetched.



UISP Switch

UISP-S

Tower PoE and Layer-2 aggregation

Real product photography from official Ubiquiti product material where fetched.

Spec note: Ubiquiti product pages/datasheets inform the technical facts; final SKU availability, local warranty and supplier pricing must be confirmed before procurement.

Specification evidence used in this prospectus

- LAP-120: 16 dBi integrated 120 degree sector AP; 1 GbE; 24 V passive PoE; approx. 8 W.
- LiteBeam 5AC Gen2: 23 dBi CPE; 1 GbE; 24 V passive PoE; 450+ Mbps platform throughput.
- PowerBeam 5AC: high-performance 5 GHz PtP bridge with integrated dish reflector.
- UISP Switch: 8 GbE RJ45 plus SFP, 27 V passive PoE, 110 W total PoE budget.
- UISP Router: operator gateway layer; final SKU and capacity should be confirmed against supplier availability.

Real photography rule

Equipment imagery is kept separate from RF coverage graphics.
Product cards use official Ubiquiti material where fetched;
conceptual diagrams are labelled as conceptual.

Verification rule

Openserve service capability, fibre handoff details, monthly charges
and exact address coverage remain verification items until confirmed
for the actual build site.

Coverage is engineered, not assumed



Conceptual RF/geographic graphic - not a certified RF prediction or guaranteed Openserve footprint.

Coverage constraints to show clearly

- Tower location and usable mounting height
- Line of sight and Fresnel clearance
- Terrain, buildings, trees and rooftop clutter
- 5 GHz noise floor and channel plan
- Sector loading, modulation and airtime fairness
- Legal South African RF power/EIRP limits
- Client mounting height and alignment quality
- Openserve service availability at the actual handoff site

Important investor caveat

Do not read the shaded sectors or 5 km planning radius as guaranteed coverage. A construction-ready design needs coordinates, height, spectrum survey and path profiles.

BUILD PATH

Launch, prove demand, then expand deliberately



Where the money goes

R190,000 Regional Network

- Multi-sector high-site hardware and installation allowance
- UISP routing/switching core, PoE, protection and cabinet discipline
- Power resilience allowance: UPS, surge protection, grounding and monitoring
- 55-premise migration strategy, including AC-first new installs
- Provision for relay/backhaul where the main tower cannot see a new area
- Broader commissioning documentation and expansion-ready topology

R65,000 5 km Starter Network

- One/two-sector launch configuration toward strongest demand
- Same logical architecture as the regional design, but narrower capital scope
- Starter UISP core, PoE, protection and commissioning allowance
- Use existing stable M5 links where technically sensible
- New installs prefer LiteBeam 5AC or current Ubiquiti equivalent
- Designed to expand sector by sector as customer density and revenue prove out

Both figures are investment envelopes, not verified current retail bills of material. Final supplier pricing, tower/civil costs, rental/wayleave costs, Openserve monthly charges and exact UPS sizing must be confirmed.

Confirmed, conceptual and still-to-verify

Item	Status	Treatment in investor document
55 connected/target premises	Source PDF	Use as subscriber estate for capacity and migration planning.
R190k and R65k options	Source PDF	Present as project investment envelopes, not a live BOM quote.
Ubiquiti product specs	Official sources	Use manufacturer pages/datasheets; verify exact SKU availability before purchase.
Product photography	Official where fetched	Label as real product photography; do not mix with RF concept diagrams.
Openserve fibre handoff	Official sources	Describe ONT/fibre boundary; confirm exact service and address coverage.
5 km coverage radius	Conceptual	Show as planning objective only; not a universal service guarantee.
Regional coverage	Conceptual	Requires tower coordinates, height, terrain, Fresnel and spectrum survey.
Relay/backhaul sites	Future assumption	Use only after surveyed line-of-sight and permission/wayleave checks.

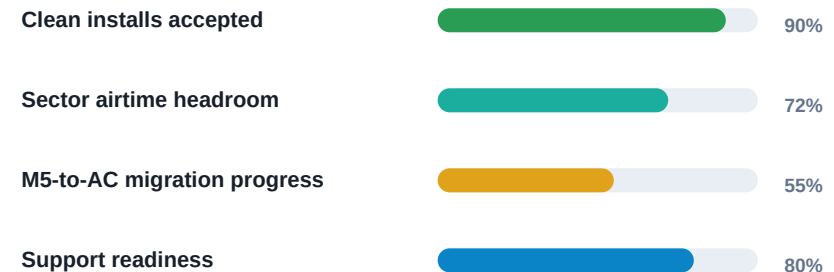
What must be true before scaling capital

Use this page as the investor control panel: the starter network should earn regional expansion by proving demand, RF quality, support readiness and a confirmed fibre handoff before further capital is released.

Starter-to-regional release gates

- Mapped subscriber cluster and confirmed high-site access
- Openserve/ISP product and handoff confirmed at build address
- Spectrum survey supports selected channel plan
- First-sector client acceptance tests meet target thresholds
- Support process and monitoring are active before scaling

Operating KPIs to report



Illustrative KPI dashboard - conceptual operating view, not live UISP data.

Recommended build-stage evidence pack

- High-site photos, permission/lease note and mounting height.
- Openserve/ISP order or written confirmation of product, handoff, SLA and monthly charge.
- Per-client survey table: address, coordinates, roof height, CPE type, sector, expected path.
- Spectrum screenshots, proposed channels, channel widths and azimuth plan.
- Commissioning sheet per client: RSSI, SNR, modulation, throughput, latency, Ethernet negotiation.
- Final supplier BOM with current pricing, warranty status and lead time.

DUE DILIGENCE

Appendix for the next engineering pass

Construction-ready inputs still required

- Exact tower/high-site coordinates and usable mounting height
- The 55 customer coordinates and roof access notes
- Spectrum survey and channel plan
- Path profiles and Fresnel clearance per sector/client
- Openserve service availability, product, monthly cost and handoff location
- Final supplier quote and exact bill of materials

Visual-source distinction used

- Product cards: official Ubiquiti product material where fetched
- Maps/sectors/topology: conceptual graphics built for explanation
- Coverage claims: treated as assumptions pending survey
- Openserve: official fibre/ONT and business product pages used for handoff framing

Source ledger

- Source PDF: Bosmont_Ubiquiti_Full_Network_Engineering_Proposal.pdf - factual/content reference only.
- Ubiquiti official product pages: LAP-120, LiteBeam 5AC Gen2, PowerBeam 5AC, UISP Router and UISP Switch.
- Ubiquiti datasheet/installation material: airMAX and UISP specifications used for antenna, Ethernet, PoE and throughput notes.
- Openserve official broadband/hardware pages: fibre runs to ATB/ONT; ONT provides the fibre endpoint before router/operator layer.
- Openserve official products/services pages: Fibre Connect, Fibre Connect Premium and Office Connect capability framing.

Prepared for investor discussion. This is not legal, financial or RF certification advice; final deployment requires field engineering, supplier quotation and service confirmation.