



트레이드 렌즈
TRADE LENS

Bringing investing into focus.

LENS INSIGHT / No.07

Research on satellite access, terrestrial networks and customer economics

Starlink Mobile's Market Entry

Spectrum Strategy and Telecom Economics

From satellite reach to willingness to pay:
the returns and capital costs of a hybrid mobile network.

ENTRY ASSETS

Spectrum rights · satellite/ground network · distribution

ECONOMIC TEST

Usable quality · paid use · capital recovery

Coverage is the starting point.
Quality and subscriber economics decide the outcome.

Distinguishing agreements, authorizations and plans from live service—and tracing where value is captured.

01 / RESEARCH VIEW

The strategic shift is control of the customer

TradeLens view | Low-band spectrum creates an option to compete directly; it does not complete a nationwide network.

Core conclusion

Starlink Mobile is seeking a position beyond supplemental coverage and into the primary subscriber relationship. Our base case is continued partnerships and bundled services alongside a shift in bargaining power. Mass-market substitution still requires evidence on indoor quality, busy-hour capacity and subscriber economics. [\[1\]](#) [\[2\]](#)

01

What is changing?

Satellite connectivity is being combined with U.S. low-band spectrum and a terrestrial-deployment strategy.

02

Why does it matter?

A feature that helps carriers retain customers could also become a means of competing for those customers.

03

Who is affected?

Retail carriers face pricing and retention pressure; infrastructure suppliers face build-out opportunities and capital risk.

04

What confirms the view?

Closing, service availability, indoor and busy-hour quality, paid use and returns after capital costs.

One competitive model will not fit every country

Direct U.S. entry and international carrier distribution can coexist. The analysis separates technical reach, willingness to pay and the cost of delivering the service. More satellites do not translate mechanically into a proportional loss of incumbent revenue.

Decision rule

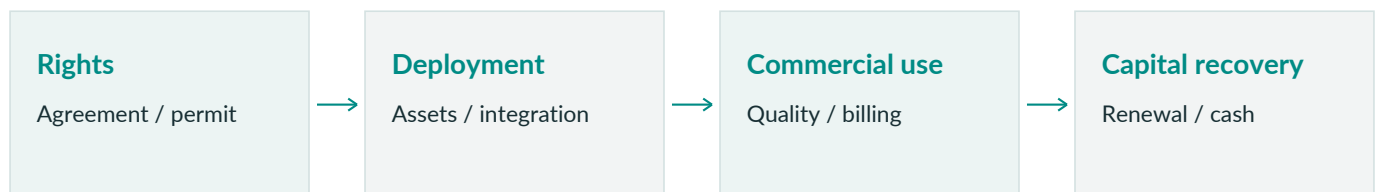
Coverage makes a connection possible. Competitiveness requires quality that customers keep using and economics that leave a return.

02 / EVENT & EXECUTION

An agreement, an authorization and a launch are different milestones

As of 10 October 2026 | Separate the announcement date from transaction and operating status.

Release	Development	Economic meaning and remaining step
1 Oct	U.S. three-carrier satellite JV agreement [6]	A joint response, not a completed unified service. Existing satellite partnerships continue.
6 Oct	FCC notice authorizing SpaceX NGSO MSS system [3]	Regulatory progress is distinct from launches, deployment and service availability.
8 Oct	Agreement to sell Grain's 800 MHz portfolio [1]	Nationwide licenses under contract; FCC approval and customary closing conditions remain.
8 Oct	SpaceX outlines a satellite/terrestrial strategy [2]	A direction toward independent mobile entry, not disclosed rollout economics.
9 Oct	Banglalink satellite-to-mobile launch announced [8]	Local-carrier distribution remains relevant alongside direct-entry ambitions.



Execution stages; a signed agreement does not establish the outcomes on the right.

What regulatory progress does—and does not—remove

Authorization expands what may be built. It does not eliminate device qualification, equipment procurement, network integration or support costs. Separate licensed rights, deployed assets and services actually used by customers.

Next policy observation

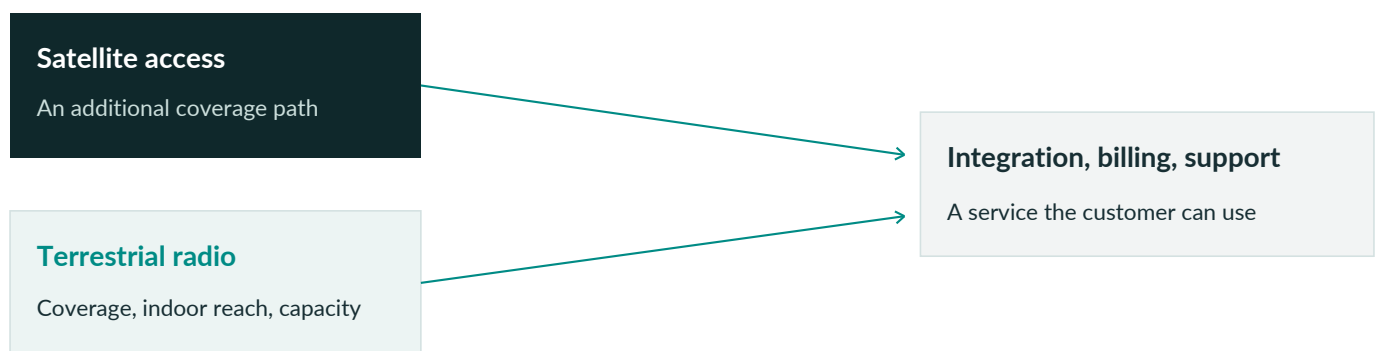
The FCC is reported to be considering D2D-related spectrum and rules on 29 October. A scheduled review is neither adoption nor a specific operator's allocation. [9]

03 / SPECTRUM & ARCHITECTURE

800 MHz is a coverage layer, not unlimited capacity

Frequency, bandwidth and user throughput are different measurements.

SpaceX describes up to 14 MHz of paired spectrum in the 800 MHz band alongside a hybrid architecture using 2 GHz mid-band resources. The company assigns a coverage role to low band and a capacity role to mid band. This is an intended design, not measured indoor performance. [1] [2]



A conceptual hybrid business architecture—not a satellite-only replacement

Measure	What it describes	What it does not establish
800 MHz / 2 GHz	The frequency bands used by the radios	800 Mbps / 2 Gbps for each user
Up to 14 MHz paired	Width of spectrum covered by the agreement	All 14 MHz available in one direction
Satellite + terrestrial	The company's intended network architecture	A complete indoor and urban U.S. service

Conceptual architecture based on company statements and network principles; it does not reconstruct actual band plans, equipment or interconnection contracts. [2] [5]

Implication

Low-band access does not make ground infrastructure obsolete. Combining reach, capacity and indoor quality may make the economics of the terrestrial layer more important.

04 / SERVICE BOUNDARIES

Separate today's product from the next-generation ambition

Direct-to-phone access, dish-based broadband and cellular backhaul are not interchangeable services.

Unit of analysis	Supported scope	Interpretation limit
T-Satellite retail offer	Limited-time \$10/line/month or inclusion in eligible plans; supported apps, messaging and devices. [4]	Retail price is not SpaceX's wholesale price. It does not cover every app, device or circumstance.
KDDI next-gen contract	Signed in August and announced in September 2026; V2 data and native voice outside coverage targeted for end-2027. [7]	A future target, not current performance or a universal U.S. launch date.
SpaceX U.S. strategy	An ambition to combine owned spectrum with space and terrestrial infrastructure. [2]	Distinct from disclosed country-level tariffs, quality and customer-acquisition results.

Direct to phone

Phone-satellite link

Dish broadband

Internet via a terminal

Cellular backhaul

Upstream tower link

Distinct service units; do not interchange speed, subscriber or revenue denominators. [5]

A useful coverage extension is not yet a primary-line substitute

T-Mobile's current terms describe outdoor clear-sky use, constrained speed and capacity, and possible delays or gaps. [4] Occasional emergency connectivity can still carry economic value. Replacing a primary line, however, requires reliable quality and convenience across a much broader set of daily conditions.

Comparison rule

Do not use dish-broadband speeds as direct-to-phone performance, or relabel a cellular-backhaul contract as mobile-subscriber revenue.



05 / CAPACITY ECONOMICS

Coverage area and simultaneous capacity are different assets

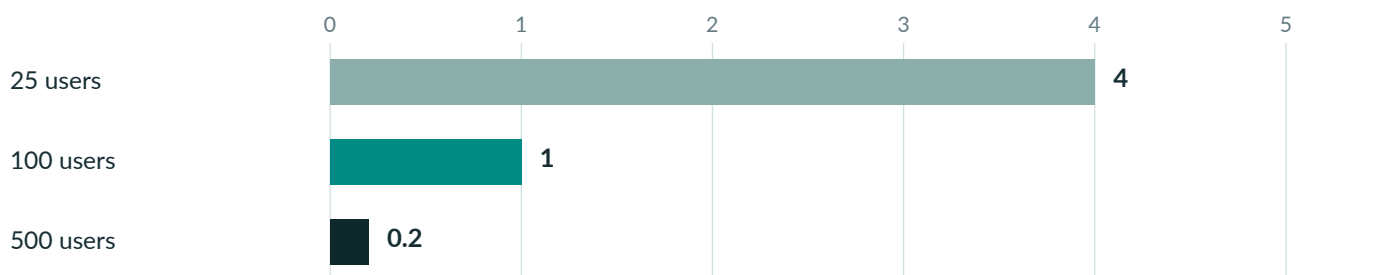
Illustrative model | The same aggregate capacity produces different outcomes as concurrency rises.

Model A | Equal sharing of effective capacity

Assume 100 Mbps of effective user-data capacity in one beam. All active users request the same load and share equally: throughput per user = 100 / concurrent active users. These are not Starlink capacity, speed or subscriber estimates.

Capacity allocated as concurrent users increase

Mbps / active user · illustrative



Active users	Effective total capacity	Equal-share throughput
25	100 Mbps	4.0 Mbps
100	100 Mbps	1.0 Mbps
500	100 Mbps	0.2 Mbps

100 Mbps is an assumed effective capacity after overhead. Scheduling, priority, beam reuse, mobility and traffic differences are excluded. Registered subscribers and simultaneously active users are different denominators.

Actual link performance also depends on antenna design, orbital height and elevation angle. [5] The model does not predict a service speed. It shows why a large coverage map does not by itself establish busy-hour quality.

The question this changes

After “How far does coverage extend?” ask whether customers can use it at the times and places that matter enough to pay.

06 / BUSINESS MODEL

Wholesale, bundles and independent retail have different economics

Who bills and serves the customer determines how the same connection is monetized.

Model	Customer relationship and revenue	Costs and risks
Carrier wholesale	Carrier owns billing; satellite provider receives contractual payments	Lower acquisition burden versus buyer concentration and wholesale pricing pressure
Optional add-on	Selected users pay extra; a second connection may coexist with a primary line	Adoption, usage, support costs and overlapping value
Included bundle	Coverage supports retention or migration to higher-value plans	Supplier costs may rise without a separate retail charge
Independent primary retail	Direct subscription revenue and a long-lived customer relationship	Acquisition, billing, support, network capital and quality obligations

TradeLens business-model taxonomy; it does not estimate undisclosed contract payments or cost allocations.

The option to enter can matter before subscribers switch

A credible direct route to customers can change a supplier's negotiating position. But retail entry also brings customer-service and network-quality obligations. A larger retail revenue pool does not automatically provide a higher return on capital than wholesale supply.

A free inclusion must earn its return elsewhere

A feature with no separate retail charge may still create value through lower churn or higher-plan adoption. Separate new subscribers, migration by existing customers and free use. Total subscriber growth alone cannot isolate the satellite feature from brand, pricing and other benefits.

Economic test

Owning the customer and relying on a distribution partner are not mutually exclusive wins or losses. Regulation, distribution costs and network economics can support both.

07 / INCUMBENT RESPONSE

Incumbents are building a collective response

Assess the supplier's entry option alongside the carriers' ability to coordinate.

AT&T, T-Mobile and Verizon announced a satellite-communications joint-venture agreement on 1 October. The initiative combines spectrum resources and common interfaces/specifications, while existing satellite partnerships and independent efforts continue. [6]

Spectrum / standards

Shared foundation

Multiple suppliers

Connectivity options

Existing customers

Billing and distribution

Analytical role map; not evidence that service integration is complete

Variable	Favors carriers when...	Favors satellite providers when...
Customer access	Billing, bundles and distribution remain sticky	A separate paying customer base develops
Supply choice	Alternative connections become usable	Quality/capacity remains differentiated
Spectrum / network	Shared standards reuse terrestrial assets	Owned rights support integrated deployment
Value capture	Bundles measurably reduce churn	Wholesale pricing or retail contribution holds

Coordination does not eliminate competition. Contract scope, exclusivity and switching costs can shift value capture even with unchanged technology. The continuation of existing agreements also argues against assuming an immediate supply cutoff or contract termination.

TradeLens view

A direct-entry option can strengthen supplier leverage; coordinated procurement and standardization can work in the opposite direction. Technical advantage and contractual pricing power are separate tests.



08 / SUBSCRIBER ECONOMICS

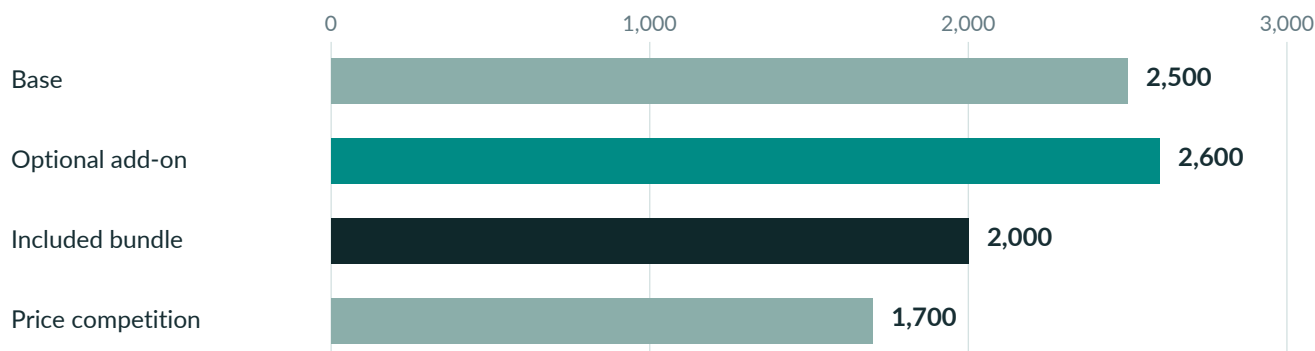
More connectivity does not always mean more contribution

Model B · Illustrative | Compare add-ons, bundles and price competition across the same 100 lines.

Monthly inputs · USD	Base	Optional	Included	Price cut
Base price / line	40	40	40	37
Base variable cost / line	15	15	15	15
Extra price / enabled line	—	10	0	0
Extra cost / enabled line	—	5	5	5
Satellite-enabled lines	0	20	100	100
Cohort contribution	2,500	2,600	2,000	1,700

Monthly contribution from the same customer cohort

USD / month · illustrative



Contribution = $100 \times (\text{base price} - \text{base variable cost}) + \text{enabled lines} \times (\text{extra price} - \text{extra cost})$. All inputs are assumptions, not actual tariffs, wholesale prices, traffic or churn. Marketing, fixed costs, capital investment and tax are excluded.

An offsetting benefit is needed

Including the feature on every line without repricing reduces contribution here. Additional charges, lower churn, reduced acquisition expense or other savings must materialize to offset that cost.



09 / CAPITAL & SCALE

Subscriber scale must cover the capital burden

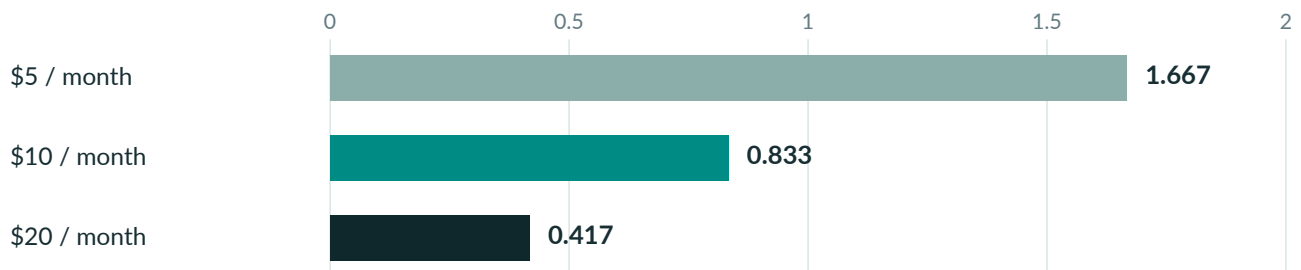
Illustrative model | A common fixed burden requires very different scale at different unit contributions.

Model C | A \$100 million annual burden

Assume $F = \$100$ million for fixed operating costs plus an annualized capital-use charge. Monthly contribution per line m is after variable delivery, support and retention costs. Required average paying lines $N = F / (12 \times m)$.

Required paying lines by monthly unit contribution

Million lines · illustrative



Monthly m	Required average paying lines	Interpretation
\$5	About 1.667 million	Low unit economics require greater scale
\$10	About 0.833 million	Double the contribution, halve the scale
\$20	About 0.417 million	Verify the quality and costs needed to sustain m

Not an estimate of SpaceX's costs or breakeven. The annualized capital charge is assumed to capture replacement and required return; depreciation and full investment principal are not deducted again. Upfront payback, tax and debt maturity are separate.

Scaling test

Advertised population coverage and free access are not paying lines. Expansion must earn enough incremental revenue to support added capacity, service and capital costs.

10 / VALUE CHAIN

Retail pressure and infrastructure demand can rise together

The same satellite expansion can create different outcomes across the telecom value chain.

Value-chain layer	Opportunity requires...	Costs and risks remain
Satellite / launch / operations	Usable capacity delivered on time and sold through paid contracts	Replenishment, launch, gateways and repeated financing needs
Retail mobile	Coverage monetized through charges or measurable retention	Satellite costs, price cuts and additional support
Towers / terrestrial radio	Hybrid deployment converted into actual site and equipment contracts	Build-out timing, location, renewals and negotiating pressure
Backhaul / core / integration	Traffic and interoperability translated into billable scope	Integration, security, fault response and capacity investment
Devices / radio components	Band and feature support translated into device adoption	Qualification, power, heat, cost and customer concentration

TradeLens analysis of the strategy; it does not assume any listed company's supply relationship, award or customer contract.

Contracts determine who carries the capital cost

Demand growth does not protect a supplier that expands against low fixed prices or no minimum use. Firm leases or capacity commitments improve visibility but retain counterparty and residual-value risk. Duration, minimum payments and cost pass-through matter more than equipment or site counts alone.

Look beyond capacity commitments to billing and collection

Even with a supply contract, billing tied to activation or acceptance can leave cash spending ahead of receipts. Examine prepayments, minimum charges, delay liability and asset reuse after termination. The test applies to both satellite entrants and terrestrial infrastructure suppliers.

Value-capture rule

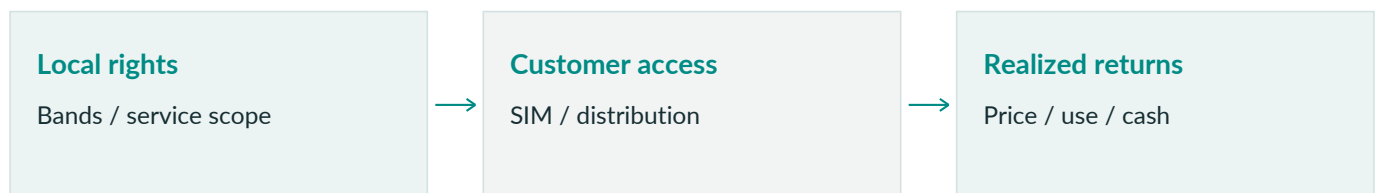
Separate who creates the connection, who bills the customer and who funds operation and replacement. Revenue growth and cash creation can diverge when those roles differ.

11 / GEOGRAPHIC STRATEGY

Direct U.S. entry can coexist with overseas partnerships

National spectrum rights and distribution economics can support different models for the same technology.

Market / case	Strategy shown by the source	Boundary
U.S. / Grain / SpaceX	Low-band transaction and integrated satellite/ground strategy. [1] [2]	Nationwide license geography is not actual service coverage.
Japan / KDDI	Local operator retains the customer interface while contracting for V2. [7]	Next-generation features target end-2027, not today's service level.
Bangladesh / Banglalink	Satellite connectivity launched through a local carrier and SIM. [8]	A local launch does not establish approval or availability elsewhere.



International expansion is a country-level business case, not simply a satellite footprint.

Do not extrapolate a U.S. tariff across the world

A technology's international reach does not standardize local sales, permissions, numbering, emergency communications, data handling or support. Carrier distribution may remain more capital-efficient even where direct retail looks more lucrative. The U.S. strategy should not be used to infer the same earnings effect for every foreign carrier.

A local partner can lower acquisition costs in return for a revenue share. Direct entry retains that share but adds local operations and obligations. Identical retail prices can therefore leave very different contributions and capital requirements across countries.

Applying the framework to Korea

First separate satellite-broadband resale from direct-to-phone access. Then examine permitted scope, spectrum/device requirements, actual partner agreements and billing. This report does not assert a Korean D2D authorization or any specific company's participation.



12 / SCENARIO MATRIX

The base case combines continued partnerships with gradual retail pressure

These are conditional TradeLens scenarios, not probabilities, subscriber forecasts or earnings estimates.

Scenario	Conditions that must coincide	Economic outcome
A. Complement and bundle Base case	Useful service and cost-efficient carrier distribution persist	Retention/add-on competition; wholesale contracts accumulate
B. Faster independent entry	Closing, ground deployment, indoor/busy-hour quality and acquisition all progress	Primary-line pricing competition; larger capital and support obligations
C. Delay / cost pressure	Regulatory, device or equipment bottlenecks; weak paid conversion	Narrower service focus; capital recovery and funding terms dominate
D. Multiple satellite suppliers	Interoperability and alternatives deliver usable quality	Potentially stronger carrier bargaining power and lower supplier pricing

What would change the base case

Put greater weight on direct competition if standalone retail maintains quality in everyday settings, retains paid users after promotions and earns a unit contribution that supports capital costs. Conversely, wider service reach with weak paid conversion or returns would undermine the business case despite technical progress.

A larger market can have more demanding economics

More suppliers can lower prices and expand use while requiring more traffic and capacity to generate the same revenue. High prices serving only a narrow out-of-coverage segment may also limit scale. Read scenarios as joint changes in price, use and cost—not demand in isolation.

What is not assumed

No common churn rate is imposed on all carriers, and no uniform increase or decline in tower demand is assumed. Outcomes depend on each market's products, contracts and deployment choices.

13 / OUTLOOK & MONITORING

The entry option is more credible; returns still depend on execution

Track technical progress, customer migration and capital recovery as separate outcomes.

Observation	Strengthens the view	Weakens the view
Rights / regulation	Closing and clear operating permissions	Delays or more restrictive conditions
Real service	Availability and device support with usable indoor/mobile quality	A persistent gap between marketed reach and use
Busy-hour quality	Effective throughput holds as demand rises	Congestion, reconnects or delays reduce utility
Paying customers	Renewals and repeat paid use after promotions	Mostly free or one-off access
Returns / capital	Contribution covers acquisition and capital needs	Build-out, replacement and support absorb gains

01

What changed?

A satellite supplier adds owned spectrum and a terrestrial route to customers.

02

Why it matters

The boundary between complement and competitor becomes less fixed.

03

Who captures value?

Those converting relationships, capacity and infrastructure into paid contracts.

04

What to verify

Usable quality, renewals, contribution and capital recovery—not maps alone.

Final assessment

Starlink Mobile is better understood as a competitor redesigning the mix of satellite, terrestrial infrastructure and distribution than as a single technology that immediately replaces carriers. Near-term effects are likely to emerge in partnership terms and bundles; larger retail effects depend on execution and capital efficiency.



14 / SOURCE REGISTER

Connect the analysis to its original sources

Select a teal citation, source title or the right-hand “Open source” label to open the original material.

01. Grain Management | Nationwide 800 MHz Spectrum Portfolio Sale to SpaceX

[Open source](#)

2026.10.08 · Transaction announcement · portfolio, FCC approval and closing conditions

02. SpaceX | Building the World's Most Advanced Mobile Network

[Open source](#)

2026.10.08 · 8 October entry in official Updates · spectrum and hybrid-network strategy; company plans

03. FCC | SpaceX Approved for NGSO MSS System for Direct-to-Device Services

[Open source](#)

2026.10.06 · Official decision notice · DA-26-1078 · NGSO MSS authorization

04. T-Mobile | T-Satellite: Satellite Phone Service

[Open source](#)

2026.10.10 · Service terms as of analysis date · retail price, supported devices/apps and limitations

05. Ericsson Technology Review | Using 3GPP Technology for Satellite Communication

[Open source](#)

2023.06.01 · Technical article · link budgets, beams and network principles; not current performance data

06. AT&T · T-Mobile · Verizon | Joint Venture to Help End Dead Zones

[Open source](#)

2026.10.01 · Joint announcement · spectrum/interface cooperation; existing partnerships continue

07. KDDI | KDDI Signs Asia's First Starlink Mobile V2 Agreement

[Open source](#)

2026.09.15 · Company release · 10 August agreement; end-2027 target distinguished from current service

08. VEON | Starlink Satellite-to-Mobile Service: Banglalink Launch

[Open source](#)

2026.10.09 · Official launch announcement · local-operator distribution in Bangladesh

09. Reuters | US FCC to Vote on Spectrum Auction and Direct-to-Device Services

[Open source](#)

2026.10.07 · News report · planned 29 October consideration, not adoption or an individual license

Source scope: announced transactions are distinct from completed deals; company targets are not operating results. The 2023 technical article supports principles only. Illustrative models do not forecast company costs, subscribers or speeds.

Methodology, disclaimer and use of this report

Confirmed facts, company plans, TradeLens analysis and illustrative models are kept separate.

Item	Basis
Date / scope	10 October 2026. U.S. spectrum and entry strategy; partnership cases in Japan and Bangladesh.
Evidence	Transaction and authorization notices are used within their scope. Future service and quality targets are not treated as current performance.
Model A · p.6	Equal sharing of 100 Mbps effective capacity. Capacity and active-user counts are illustrative.
Model B · p.9	Monthly contribution for the same 100 lines; base variable costs are held constant across feature models.
Model C · p.10	\$100 million annual fixed/capital-use burden divided by monthly contribution. Not a company breakeven estimate.
Service scope	Industry structure, business models, profitability and capital allocation. No trading calls, fair/target prices or personal investment advice.

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