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Telecom & Cable Services | North America

SpaceX Signs Deal w/ Qualcomm for Radio Equipment; Implications for Telcos & Towers

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North America
Industry View **In-Line**

Key Takeaways

- Qualcomm will supply SpaceX with Massive MIMO radios and related tech for Starlink Mobile terrestrial buildout
- SpaceX expects to deploy 'tens of thousands' of macro cell sites starting in 2027, including in suburban and urban areas
- Capital allocation priorities, spectrum availability, and Big 3 network advantages remain major hurdles to SpaceX becoming a major carrier.
- Towers: Qualcomm deal strengthens SpaceX's potential as a fourth tower tenant, but leasing upside hinges on signed leases and execution.
- ECHO / DISH Wireless mediation process w/ TowerCos extended by 2 weeks to November 18 with some hopes for some resolution or settlement before going to trial

What Happened? Qualcomm (QCOM, $173, rated EW by Joe Moore) announced that it has entered into a multi-year agreement with SpaceX (SPCX, $136, rated OW by Adam Jonas) to supply its Dragonwing QRU100 and QDU100 platforms and Layer 1 software to support a planned buildout of terrestrial base stations for Starlink Mobile. The press release notes that "the network will combine high-capacity Massive MIMO (multiple-input multiple-output) radio and baseband technology and power-efficient processing to support cellular base station deployment at scale." SpaceX expects to begin deployment in 2027, with "tens of thousands of sites deployed over the multi-year agreement" according to the release. A separate media report (see here) added that "the network build means tens of thousands of sites – all macro cells, not to be confused with small cells" according to a Qualcomm executive.

What Capabilities Could This Deal Bring to Starlink Mobile? Massive MIMO technology leverages base stations with antenna arrays consisting of a "massive" number of individual antennas, often housing several dozen or more small antennas within a single antenna array (vs. <8 antennas in traditional systems). These multiple-antenna arrays enable a variety of techniques that increase network capacity and coverage by supporting simultaneous data streams and directing signals more precisely than conventional antennas. For example, Massive MIMO supports beamforming, a technique where signals can be amplified in the direction of a particular user, which, among other things, improves spectral efficiency (the amount of data that can be transmitted over a particular frequency bandwidth).

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Ericsson has a useful primer on Massive MIMO technology here.

Additionally, a Qualcomm executive noted in a media interview (see here) that the deal involves a relatively novel pairing of Massive MIMO technology with 2 GHz spectrum, as Massive MIMO is typically deployed in higher frequency bands such as 3.5 GHz and above. The executive added that "we [Qualcomm] don't build the boxes...they [SpaceX] have to build the boxes, but we provide all the components and everything that goes inside that box."

Implications for the Telecom Ecosystem: We believe the emphasis on Massive MIMO is notable given that the technology is often deployed to enhance coverage and capacity in congested/densely populated areas, potentially suggesting that Starlink Mobile's terrestrial network buildout could extend beyond rural areas into suburban and urban areas.

Today's announcement builds on recent news, including the October 9th announcement of the purchase of 800 MHz spectrum from Grain Management (see our views here), the October 20th SPCX earnings call in which management suggested a path to becoming a major U.S. Carrier, an (unconfirmed) media report on October 22nd suggesting that SPCX is in talks with Tower companies to secure 80K+ cell sites across the US (see here), and an (unconfirmed) media report on November 3rd (see our views here) suggesting that SPCX is in talks with EchoStar to leverage the Boost Mobile wireless platform for Starlink Mobile.

These developments reinforce the notion that SpaceX is likely serious about entering the US Mobile market. However, as we have noted previously, there are multiple potential gating factors and hurdles for SpaceX to overcome on the path to becoming a mobile network operator, including:

- **SpaceX's spectrum holdings will pale in comparison to those of the Big 3 Telcos**. Even with transactions announced to date, each of the Big 3 will have several times the low- and mid-band spectrum that SpaceX will have (see Exhibit 1), in addition to dense terrestrial networks that have been built out over the last several decades.
- **Spectrum is a scarce resource.** Upcoming FCC auctions present opportunities to acquire additional spectrum, but most of it likely will not be deployable for wireless service until 2030 or beyond. In the meantime, there are opportunities to pick up smaller blocks of spectrum in the secondary market, but these opportunities largely involve smaller chunks of spectrum relative to what's in the FCC auction pipeline and, in many cases, licenses are encumbered by existing operations and may not be readily available to be repurposed.
- **SpaceX has many competing capital priorities.** We would argue that every dollar spent on spectrum is a dollar SpaceX cannot spend on AI chips, Starship, Terafab, and other technologies that we would argue open up larger TAMs with greater ROI than the direct-to-cell business.

We continue to expect Big 3 Telco valuations to be range-bound in the neighborhood of ~5-7x EV/Adj. EBITDA given the anticipated overhang from potential disruption from SpaceX and AI agents, as well as the elevated interest rate

environment. We remain Overweight ECHO and continue to see it as the most attractive spectrum play in the market, with ~30MHz of low/mid band spectrum remaining, which we value at ~$11bn, while the stock continues to trade at a material discount to NAV. We reiterate our Overweight ratings on AT&T and T-Mobile and remain Equal-weight Verizon.

We continue to be notably below consensus with our Starlink Mobile estimates, particularly in the US. In our model, we have Starlink direct-to-consumer (non-partnership) subscribers eclipsing 1% share in the US in 2031, scaling to ~7% in 2035. Mobile revenue hits ~$18bn in 2030 from <$1bn annually in 2026, but largely driven by international subscribers and partnerships with other MNOs.

Implications for Towers (OW AMT, EW SBAC, EW CCI): We view Qualcomm's announced agreement with SpaceX as constructive for long-term tower leasing, providing more tangible support for a sizable terrestrial buildout than the recent unconfirmed reports regarding tower negotiations and Boost Mobile. The planned deployment of tens of thousands of sites beginning in 2027 strengthens the credibility of the facilities-based fourth-carrier outcome outlined in our recent Tower Troughs?. The reported focus on macro cells, together with the use of Massive MIMO, also suggests a potentially broader terrestrial opportunity than marginal rural coverage alone, including capacity deployments in suburban and urban markets. If executed using third-party towers, this could support meaningful new colocations, subsequent amendments, and selective tower development. Crown Castle, with pure play US exposure, would likely benefit most in this scenario.

However, the equipment agreement does not establish signed tower leases and we are hesitant to ascribe full value to tower stocks. The ultimate leasing opportunity will depend on deployment timing, site selection, and the mix of independent towers, rooftops, and other structures. Within our three-scenario framework, today's announcement shifts the balance toward an owned terrestrial network, while leaving open how tower-intensive that network ultimately becomes. SpaceX could still pursue a more vertically integrated, tower-light architecture, and its spectrum constraints and competing capital priorities remain relevant to execution. Accordingly, we see stronger support for a potentially meaningful fourth-tenant leasing opportunity, while awaiting site agreements and deployment progress before assuming a dense nationwide network comparable to those of the Big 3 tower co's.

Other Developments: Today, a status conference was held in bankruptcy court as part of Dish Wireless LLC's (a subsidiary of EchoStar) Chapter 11 bankruptcy proceedings. Lawyers representing creditors, including tower companies, made statements during the proceeding expressing skepticism around the accuracy of recent media reports suggesting that SPCX is 1) in talks with Tower companies to secure 80K+ tower sites and 2) exploring a potential partnership with or acquisition of EchoStar's Boost Mobile. Meanwhile, litigation of the Dish Wireless bankruptcy remains paused while negotiations continue during a separate mediation process; today, the court extended the mediation process by two weeks to November 18th.

We note that certain creditors have previously attempted to challenge EchoStar's transfer of Boost Mobile assets from Dish Wireless LLC. To the extent that creditors

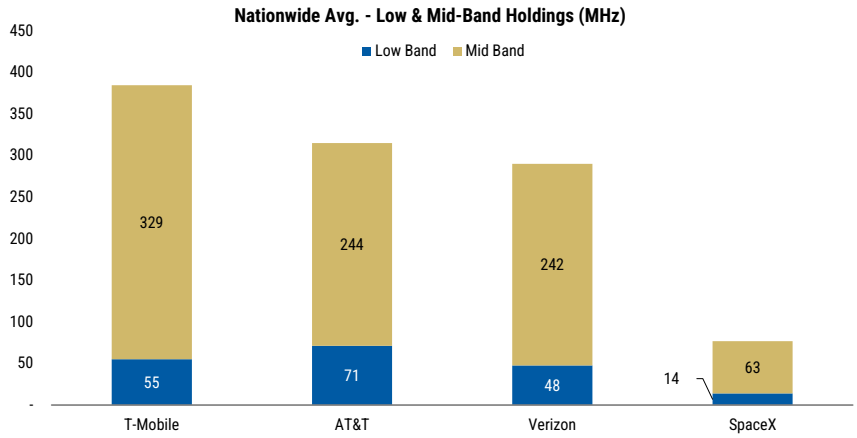


are able to successfully challenge that transfer, a theoretical partnership or acquisition of Boost Mobile assets by SPCX could face legal hurdles, possibly delaying one potential path for SPCX to scale distribution of Starlink Mobile.

See the following notes for more in-depth views:

- EchoStar Corporation: ECHO/SPCX: The Plot Potentially Thickens (3 Nov 2026)
- Telecom & Cable Services: Wireless Spectrum Primer and Updated Thoughts on SpaceX Impacting Telcos (16 Oct 2026)
- SpaceX: Elon Goes Low (Band)… Implications Across the Telco Ecosystem (9 Oct 2026)

Exhibit 1: Even with the spectrum licenses to be acquired from EchoStar and Grain, SpaceX's total low- and mid-band spectrum holdings will pale in comparison to those of the Big 3 Telcos



Source: FCC, Company data, Morgan Stanley Research estimates. Note: Spectrum holdings are adjusted for announced spectrum transactions that have not yet closed as of the date of publication, including SpaceX's pending purchase of spectrum from EchoStar and Grain Management.