

APPENDIX - NEW INVESTMENT – AST SpaceMobile (ASTS)

Among the companies in our portfolio, AST SpaceMobile (“AST”) presents the widest range of potential outcomes. AST is developing a space-based cellular broadband network using a constellation of satellites that will communicate directly with unmodified smartphones using the same cellular bands as terrestrial towers. If successful, users will never be out of cellular range. Their network will provide coverage in areas where traditional cell towers cannot reach, enabling users to stream Netflix in the middle of the ocean using their unmodified iPhone.

Market Opportunity The market AST is addressing is enormous, encompassing military applications, first responder services, primary mobile internet access, and wireless coverage for areas not currently served by land-based cell towers. The company plans to launch 248 satellites into low Earth orbit. Each satellite unfolds like an origami creation to reach 700 square feet in size (half a basketball court). The combination of low Earth orbit proximity, satellite size, and hundreds of patents enables high-speed voice and data connectivity from unmodified smartphones.

Strategic Partnerships AST will work with existing telecom companies, leveraging their broad reach, spectrum, billing systems, and customer support infrastructure. Current partnerships include AT&T, Verizon, Google, Samsung, Vodafone, Rakuten, and dozens of cellular network operators that collectively reach more than 3 billion people.

Current Status The company currently has five satellites in orbit that are effectively proof of concept and for testing. Their plan is to launch an additional 60 satellites by the end of Q1 2026. Management projects they will reach cash flow breakeven (excluding growth capex) by the end of 2025, when they have 25 satellites in orbit. The revenue ramp should be steep in the back half of 2025 as satellites come online. The company has approximately \$1.5 billion in cash to fund their next growth phase.

Competitive Landscape Starlink is often cited as a competitor and has a partnership with T-Mobile. However, Starlink entered the direct-to-consumer space via acquisition, and their current T-Mobile service is limited to texting. Similarly, Apple offers a satellite service with very limited capability that remains free to users. The market is large enough to support multiple players. AST's primary differentiation is their satellite size, which provides both higher capacity and broadband capability on unmodified phones.

Defense Opportunities There is potentially a very large government business opportunity. One of Trump's executive orders called for creation of a "Golden Dome," directing the Department of Defense to "develop a next generation missile shield." Trump's recently passed "Big Beautiful Bill" provided \$25 billion in funding for the Golden Dome, with AST and Starlink cited as potential vendors.

AST's role in the "Golden Dome" is not yet formalized, but there have been indicators suggesting it could be significant. The company can also provide GPS alternatives valuable to the military, where GPS is susceptible to jamming.

First Responder Market AST is also partnering with both AT&T and Verizon on their first responder offerings. This partnership will provide full coverage in national parks and other areas with limited cell tower coverage. While commercial details are not public, defense and first responder applications are expected to provide the best monetization of limited capacity during the initial years when capacity constraints exist.

Market Sizing and Economics Given the early-stage nature of the business, pricing and adoption rates remain speculative. Carriers will likely segment their markets with tiered usage at different price points, catering to off-grid residents and outdoor enthusiasts at the high end, and peace-of-mind subscribers at the low end. Demand will also vary by geography, with some regions like continental Europe having better existing cell coverage than others.

Through current partnerships, AST has reach to nearly 3 billion subscribers globally. Many are in markets that will be difficult to monetize at high rates, but focusing on the US, Canada, Japan, Australia, and Europe yields over 1 billion cell phone subscribers. Accounting for duplicate subscribers, the numbers become compelling with greater than 2% penetration in these markets, before considering defense and first responder opportunities.

The economics become very attractive assuming higher adoption rates, pricing, margins, and valuation multiples. Given the market size, various scenarios can generate substantial free cash flow projections. I am confident that if the technology works and achieves modest adoption, the financial model will be successful. However, given the wide range of possible adoption rates, potential pricing, margins, and investor multiples, presenting a single scenario would imply a level of precision and confidence I do not possess.

Investment Rationale Many scenarios support significantly higher valuations. This business has attributes conducive to fast growth, leveraging existing mobile network operators' customer bases (AT&T, Verizon, etc.) as well as their billing and customer support infrastructure. The company will also leverage existing hardware, requiring no specialized hardware purchases from consumers.

AST's share price has more than doubled since our initial purchase, which began as a smaller starter position that has grown through appreciation and additional purchases. While AST carries more regulatory and execution risk than our typical investments, it also possesses several attributes we seek: high insider ownership (CEO owns over 30%), recurring revenue potential, and operating leverage due to very low variable costs. Additionally, the outcome is potentially very asymmetric, with substantially more upside than downside—I believe that it has a high expected value albeit with a very wide range of outcomes and uncertain timing (but multi-year runway).

Acknowledgment The AST investment would not have occurred without Ryan O'Connor of Crossroads Capital, who flagged this opportunity for me in Omaha at the Berkshire Hathaway meeting. Here is a link ([Link](#)) to a podcast where Ryan discusses the opportunity.