

The logo for AST SpaceMobile. 'AST' is in large, white, bold, sans-serif capital letters. 'SpaceMobile' is in a smaller, orange, bold, sans-serif font. The background is a dark space with a bright, glowing orange arc representing a satellite's path.

# AST SpaceMobile

Transforming how  
the world connects



NASDAQ: ASTS

**Investor Presentation**

September 2023

### Forward Looking Statements

The information in this presentation and the oral statements made in connection therewith includes “forward-looking statements” for the purposes of federal securities laws that are not historical facts and involve risks and uncertainties that could cause actual results to differ materially from those expected and projected. All statements, other than statements of historical fact in this presentation and the oral statements made in connection therewith regarding AST SpaceMobile, Inc.’s, collectively with its subsidiaries (“SpaceMobile” or the “Company”), financial position, business strategy and the plans and objectives of management for future operations, are forward-looking statements. Words such as “expect,” “believe,” “anticipate,” “intend,” “estimate,” “seek” and variations and similar words and expressions are intended to identify such forward-looking statements. Such forward-looking statements relate to future events or future performance, but reflect management’s current beliefs, based on information currently available. A number of factors could cause actual events, performance or results to differ materially from the events, performance and results discussed in the forward-looking statements. For information identifying important factors that could cause actual results to differ materially from those anticipated in the forward-looking statements, please refer to the Risk Factors contained in AST SpaceMobile’s Annual Report on Form 10-K, filed with the SEC on March 31, 2023. The Company’s securities filings can be accessed on the EDGAR section of the SEC’s website at [www.sec.gov](http://www.sec.gov). Except as expressly required by applicable securities law, the Company disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

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# AST SpaceMobile is building the first & only space-based cellular broadband network



**Raised \$850+ million to date** to fund network build and technology with **2,600+ patent and patent-pending claims**



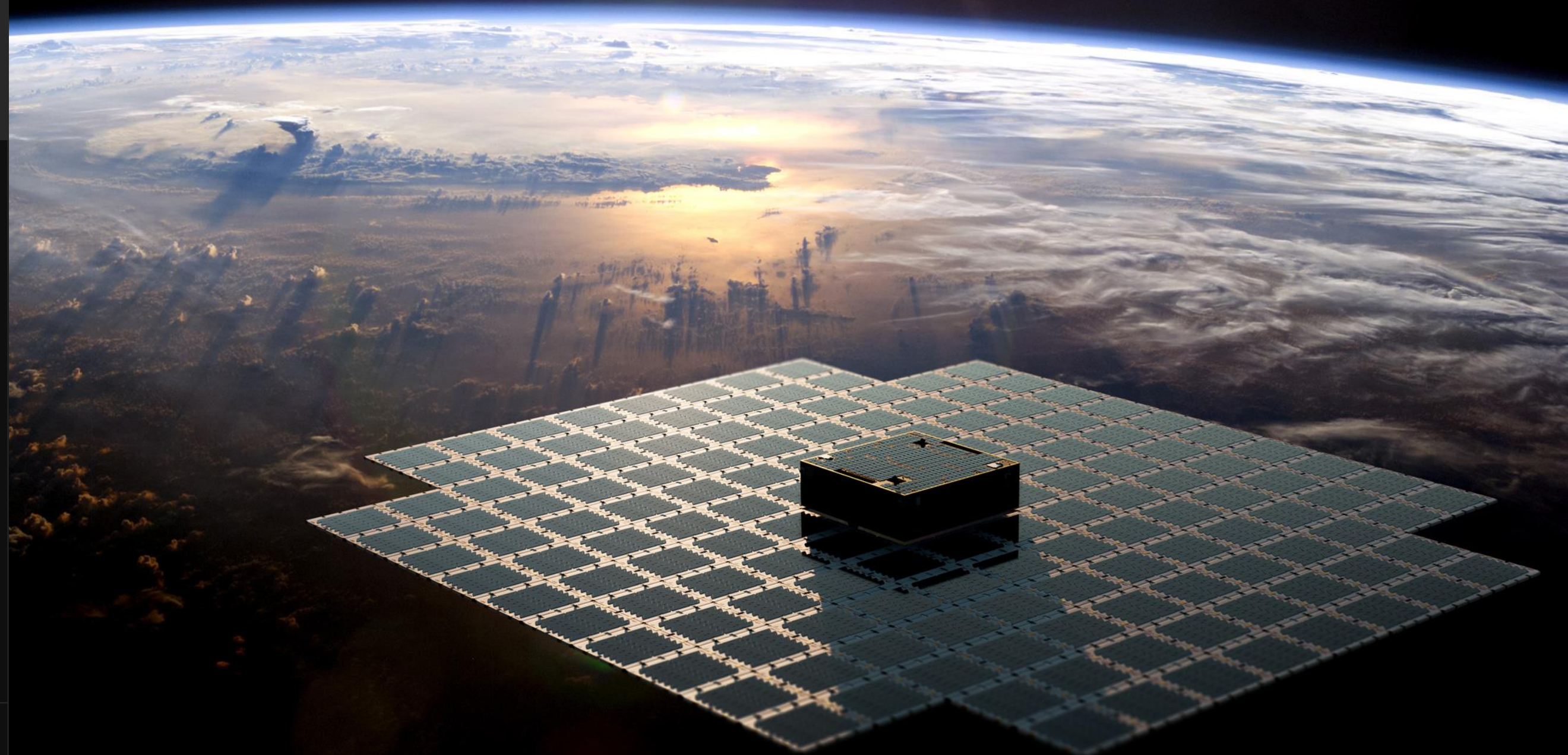
Signed agreements and understandings with **40+ mobile network operators** with **~2.4 billion existing subscribers**



**Confirmed 4G capabilities** and achieved **10+ mbps download speeds** to everyday smartphones directly from space



**Fully-funded** for operations of first **five commercial satellites** to offer **initial cellular broadband service**





# Transforming connectivity with direct-to-cell technology (5G + 4G LTE)

*“Eliminating the friction of specialized equipment and spectrum bands from direct-to-cellular satellite coverage, at broadband speeds, is a transformational event for the communications industry”*

*“Not only do we expect to provide essential, affordable broadband connectivity to everyone everywhere, we are working to expand the market to billions of individuals and devices”*



- Abel Avellan  
Chairman and CEO



Everyday smartphones from all major brands have communicated with BW3





# Market opportunity is deep, untapped and expanding

Source: GSMA market data as of December 31, 2022.

1. Represents 2023-2030 cumulative estimated demand,  
per Northern Sky Research.

## \$1.1 Trillion

global mobile wireless services market

## 5.5 Billion

mobile phones and devices moving in and out  
of coverage

## 44%

global population without cellular broadband

## ~90%

of Earth's surface without cellular coverage

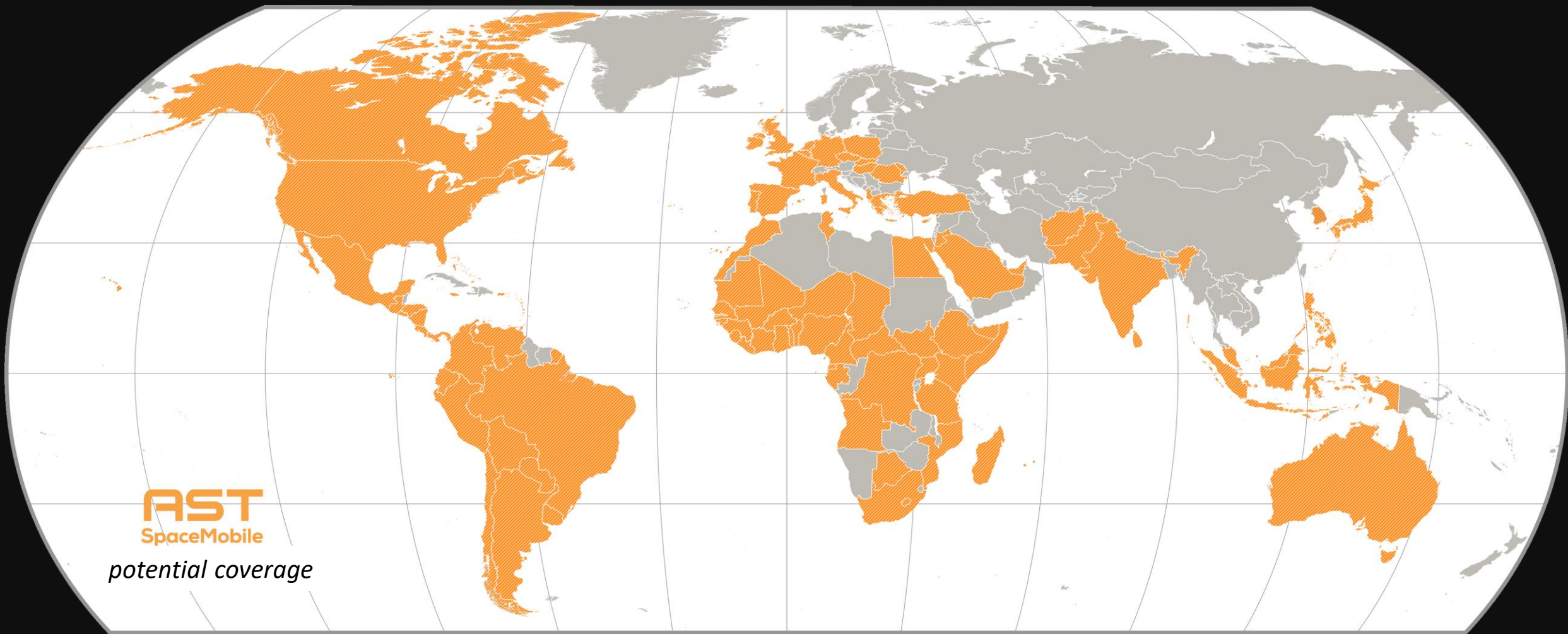
## \$67 Billion

8-yr expected demand for satellite direct-to-  
device communications <sup>1</sup>



Top Mobile Network Operators (MNOs) are AST investors, partners *and* customers

When operational, SpaceMobile service will be available to MNOs on a wholesale basis, with existing relationships spanning nearly all large countries (ex. China/Russia)



Strategic Investors

Select MNO Partners







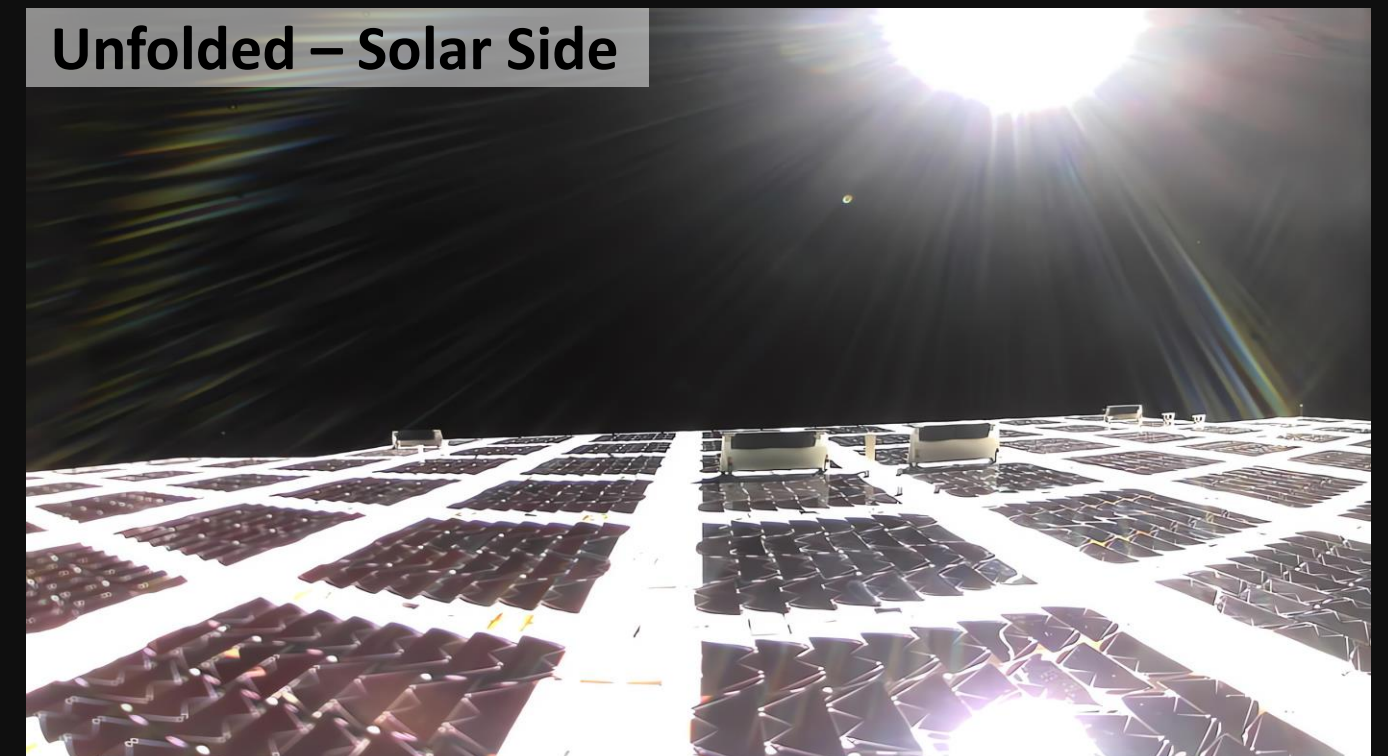
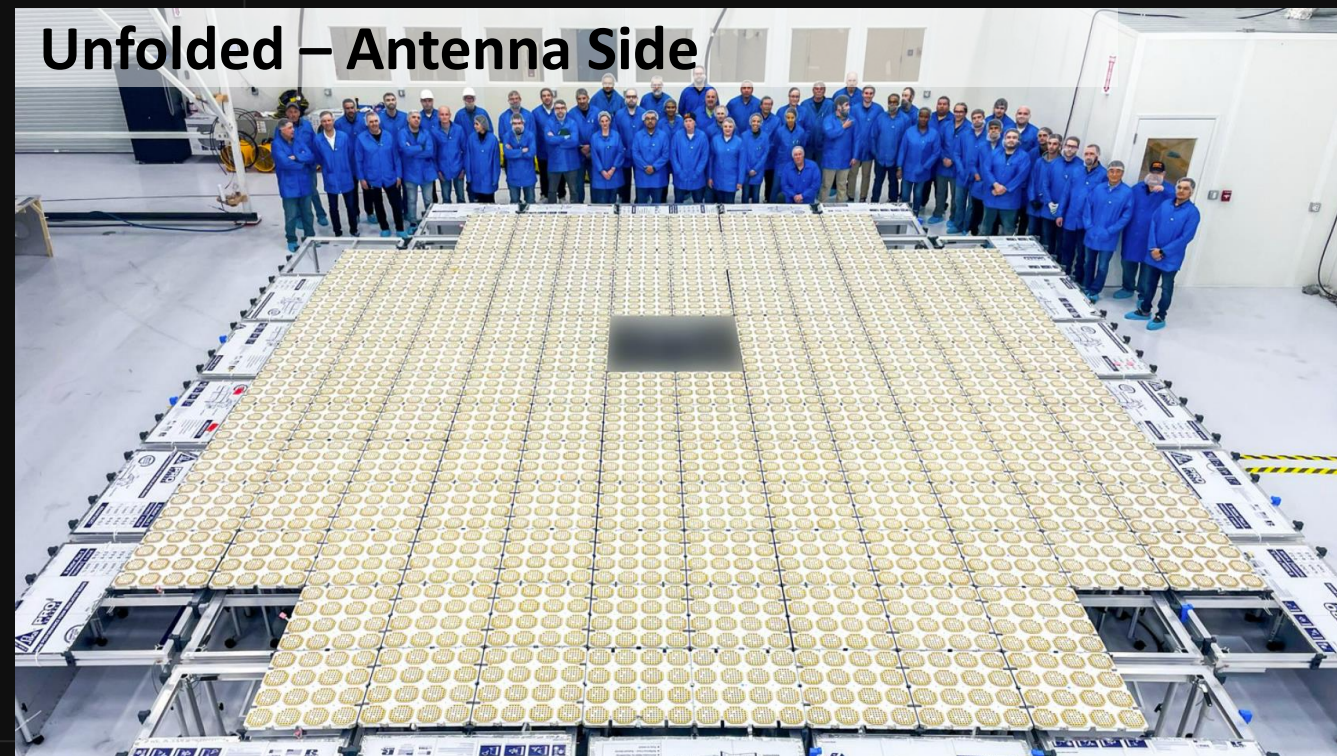
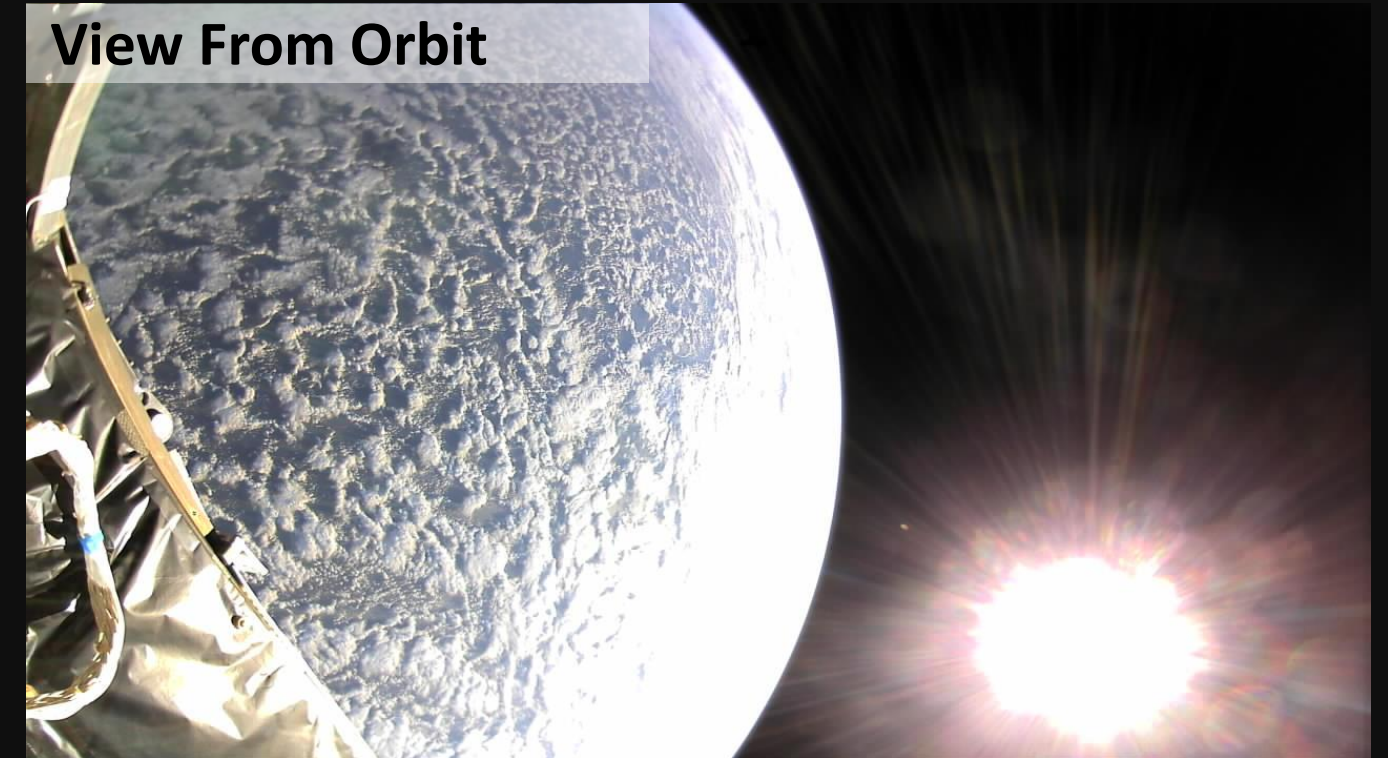






AST SpaceMobile is currently operating a 693 sqft phased array in low Earth orbit

BlueWalker 3 is the largest-ever commercial communications array deployed in LEO, designed to support cellular broadband directly to everyday smartphones



[Click here](#) to see how we assembled, launched and deployed BW3, and [click here](#) for an overview of the mission



# April 2023

## History made: First-ever space- based voice calls using everyday smartphones



“Today, we have taken another major step in mobile communications. 30 years after Vodafone sent the world’s first text message, we supported AST SpaceMobile in successfully making the first ever direct-to-smartphone test call using satellite communications. This is just the start. As a lead investor in AST SpaceMobile, we will continue to break technological boundaries by connecting many more millions of people across the planet when the service becomes commercially available.”

—Margherita Della Valle, CEO



“AT&T’s heritage began with the birth of the telephone 147 years ago and has continued with many other firsts including: trans-continental call, overseas call, call from the moon, and partnering to deliver the only network built with and for America’s first responders. We connect people to greater possibility, and this important milestone with AST SpaceMobile is a big step and we can’t wait to see what’s next in our space-based journey.”

—Chris Sambar, Head of AT&T Network



“It was a unique thrill and honor to have the Rakuten team talk with Abel in a world-first direct-to-satellite experience. Congratulations to AST SpaceMobile and all of its strategic collaborators on this groundbreaking event. As technological advancements like space connectivity become possible with pioneers like AST SpaceMobile, Rakuten will also progress even further along the road to democratizing connectivity for all.”

—Mickey Mikitani, Chairman & CEO



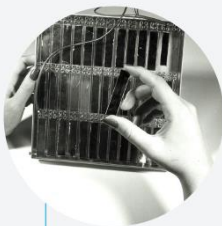
*The first voice call was made from the Midland, Texas area to Rakuten in Japan over AT&T spectrum using a Samsung Galaxy S22 smartphone*

## AT&T Milestones



First television transmission over transcontinental radio relay of President Truman

1951



First transmission of content over a satellite

1962



First ever two-way voice call on AT&T spectrum via satellite with an everyday cellphone by AST SpaceMobile

2023

1876

First phone call



1954

First solar battery



1977

First Fiber install in Chicago





June 2023

History made, again:  
First-ever 4G LTE to  
everyday  
smartphones  
directly from space



“Successfully reaching double-digit download speeds during satellite-to-smartphone testing takes us one step closer to ensuring people across the United States will be able to stay connected no matter their location. This milestone wouldn’t be possible without the overall focus and determination of the teams working daily to achieve our shared space-based vision of connectivity.”

—Chris Sambar, Head of AT&T Network



“Each mobile milestone in Vodafone’s history has moved us closer to connectivity for all. Achieving these mobile speeds, via satellite direct to standard 4G smartphones, shrinks the digital divide even further. Together with Vodacom and AST SpaceMobile, we look forward to bringing this capability to our customers in the hardest to reach areas of Africa and Europe.”

—Alberto Ripepi, Chief Network Officer



“This is an important milestone that will see real mobile broadband connectivity delivered directly to smartphones from space via AST SpaceMobile’s platform. As the RAN provider, we are proud to play a role in this important initiative that will provide crucial connectivity around the world.”

—Tommi Uitto, President of Mobile Networks



*Using AT&T cellular spectrum, we connected  
everyday smartphones to our BlueWalker 3  
test satellite and recorded 4G LTE download  
speeds (with 5MHz carrier) of*

**>10 Mbps**



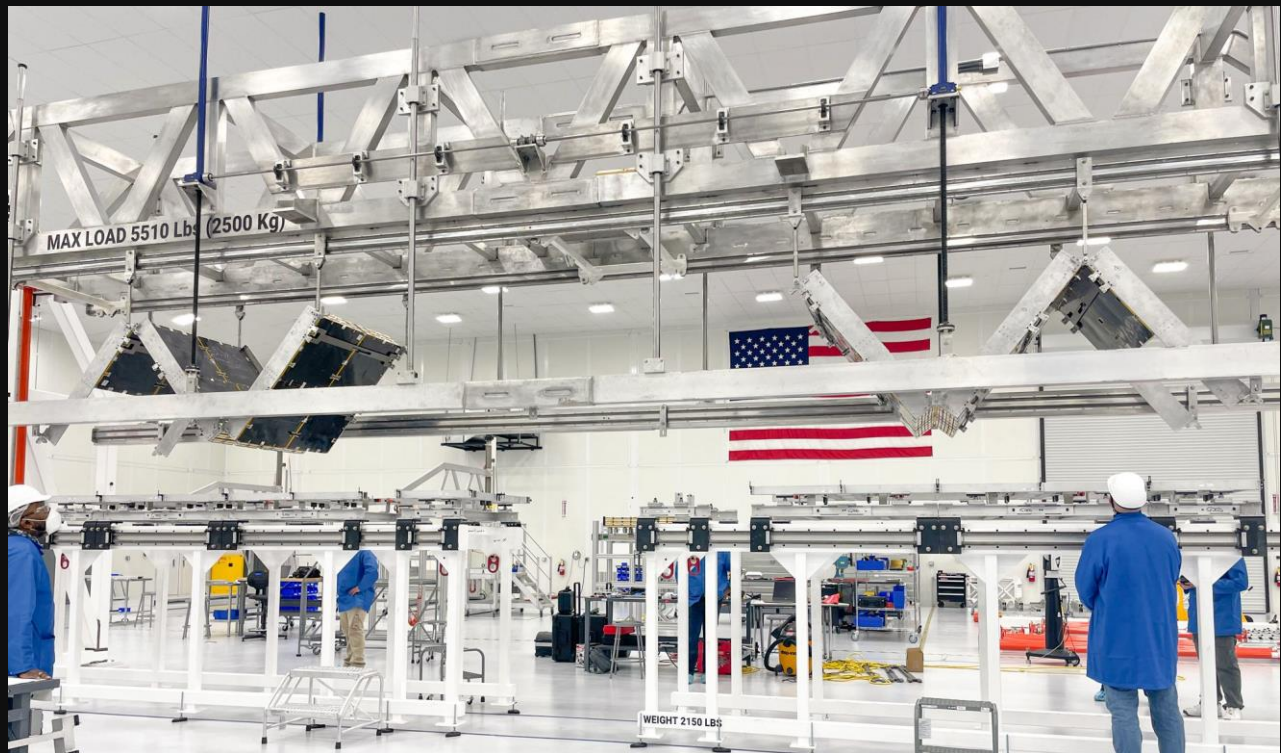
Vertically  
integrated  
manufacturing to  
support rapid  
constellation build

Two locations in Texas with combined 185,000 sq ft and potential capacity  
to produce up to 6 satellites per month using automated processes

Headquarters



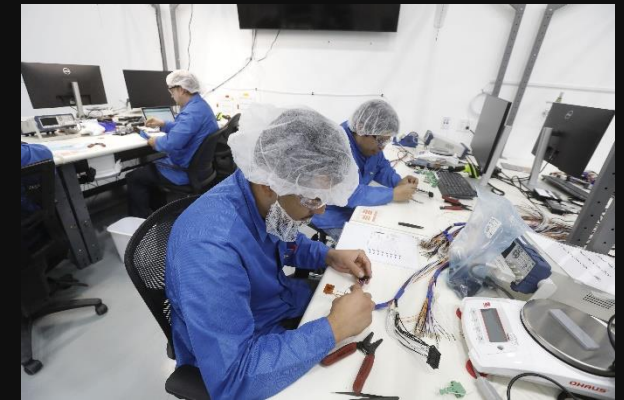
Site 2





# Manufacturing of first five BlueBird commercial satellites ramping

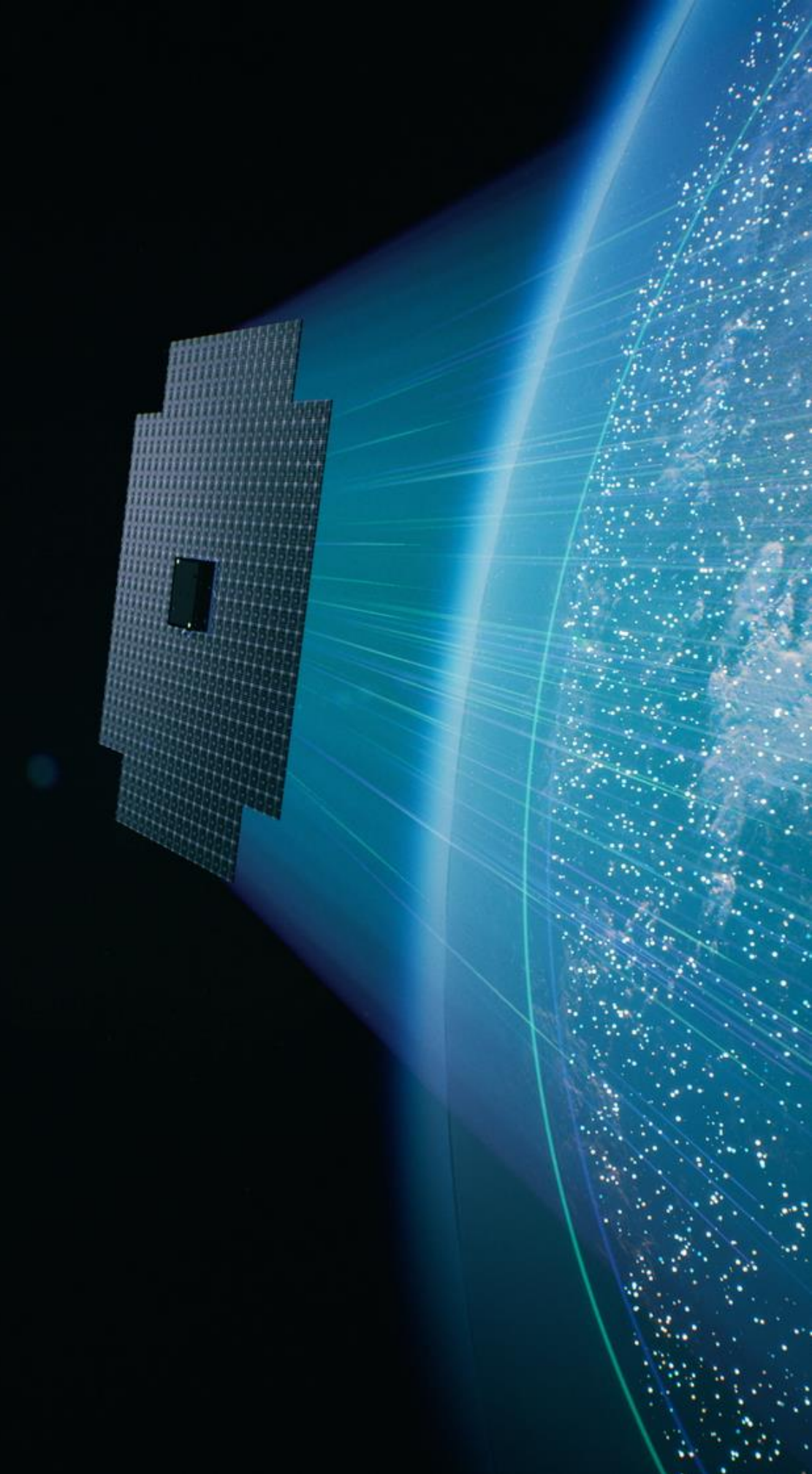
- Completed construction of clean room manufacturing space
- All necessary equipment delivered and installed
- All critical lead time items ordered
- All manufacturing processes and lines completed and implemented
- Completed part-by-part traceability and quality system





# Key future milestones to reach initial space-based cellular broadband commercial service

- Joint test results of BlueWalker 3 capabilities with MNO customers and technology partners
- Manufacturing and assembly of Block 1 BlueBird satellites at our Texas facilities
- Completion of definitive commercial agreements with initial customers
- Regulatory approvals in key markets
- Finalization of Block 2 BlueBird design, including ASIC tape out
- Launch of 5 Block 1 BlueBird satellites
- Initial commercial service using Block 1 satellites





# AST SpaceMobile differentiation



Only pure play, low Earth orbit (LEO) broadband communications company that is publicly-traded



Novel technology solution applicable to a market of 5.5 billion mobile phones and devices and the related \$1.1+ trillion TAM <sup>1</sup>



Jointly going to market, not competing, with mobile network operators with hundreds of millions of subscribers



Revenue share business model designed to allow users to sign up with a simple text message



Approximately \$191 million cash and cash equivalents to fund business operations and initial production satellites <sup>2</sup>

1. AST SpaceMobile market size based on GSMA Intelligence estimate of total cellular wireless market spend. As of December 31, 2022.  
2. Cash and cash equivalents as of June 30, 2023.



# Appendix

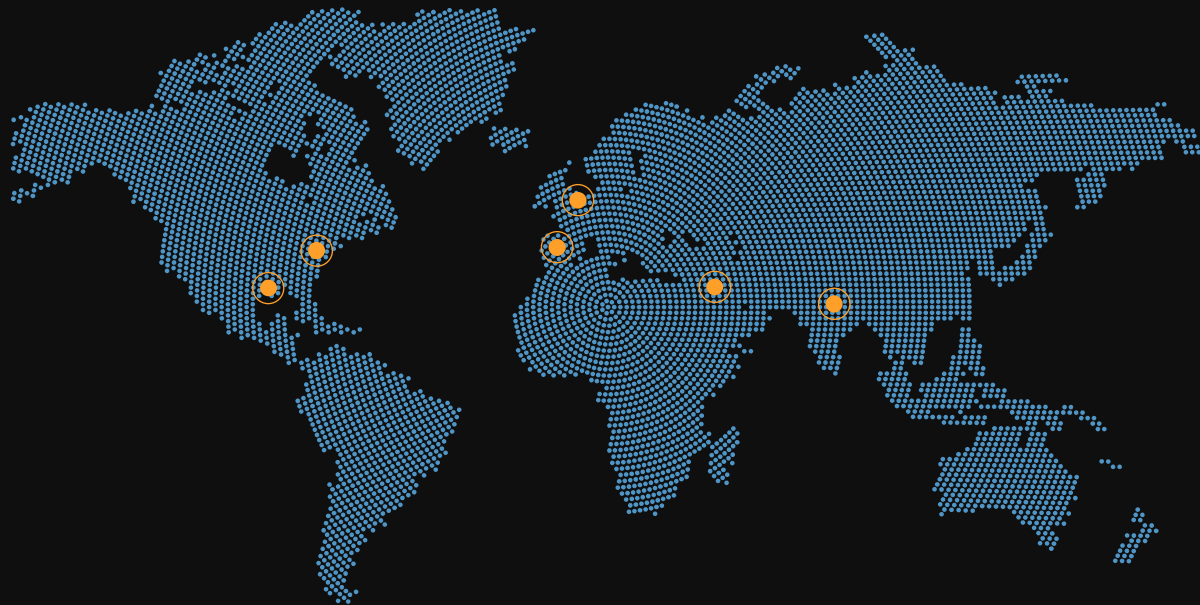




# Company snapshot

Founder-led leadership and deep team with decades of successful execution

## Global Infrastructure



Midland HQ / Manufacturing Facilities	Israel RF/Hardware Design	United Kingdom Manufacturing/ Support
Maryland Satellite Operations and Network Operations Center / Space Assembly Lab	Spain Mechanical Design	India Research & Development



Abel Avellan  
Chairman and CEO

- 25+ years space industry experience
- Co-inventor of 21 U.S. Patents
- Former Founder and CEO of EMC (Emerging Markets Comms.) until \$550mm sale in 2016
- Provided initial seed capital for AST SpaceMobile



Sean Wallace  
Chief Financial Officer

- 25+ years senior management and banking experience
- Prior CFO and Treasurer of Cogent Communications
- Former banking leadership positions at Standard Chartered Bank and J.P. Morgan



Scott Wisniewski  
Chief Strategy Officer

- 15+ years of M&A / financing experience
- Previously Managing Director, TMT Investment Banking at Barclays
- Advised AST on its \$110mm Series B in 2019 and the SPAC merger / PIPE financing in 2021



Brian Heller  
General Counsel and Secretary

- 20+ years of public company legal experience
- Prior General Counsel of Castle Brands Inc.
- Former Partner practicing Corporate and IP law



Chris Ivory  
Chief Commercial Officer

- 25+ years in satcom, business development and government / regulatory affairs
- Led Commercial Business Unit as EVP Globecomm
- Former SVP of Satellite Land Services at EMC



Dr. Huiwen Yao  
Chief Technology Officer

- 30+ years RF engineering + satcom
- Prior: Northrop Grumman Innovation Systems (Orbital ATK)
- 40+ GEO satellites built



Dr. Ray Sedwick  
Chief Space Scientist

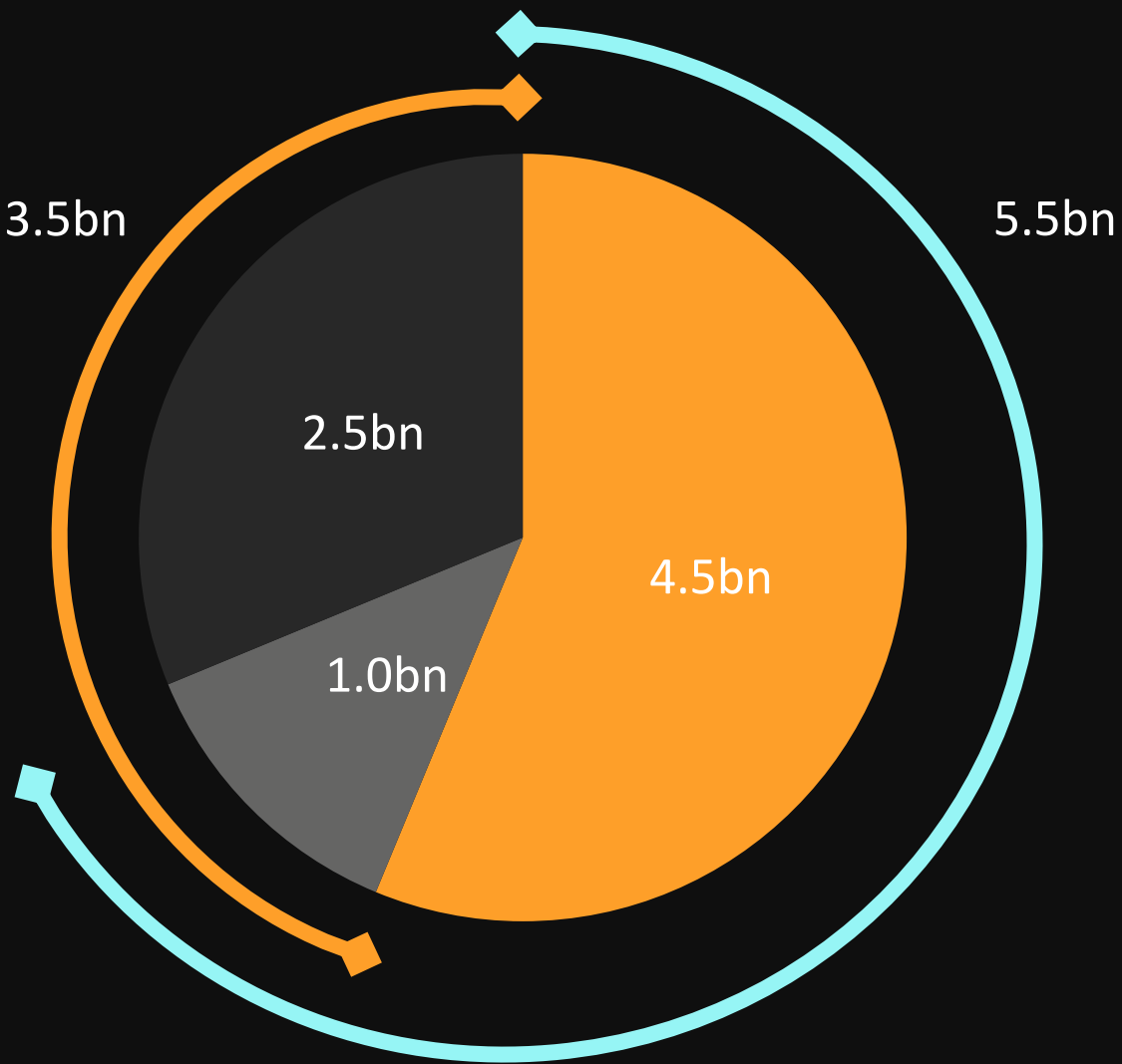
- Director, Space Power and Propulsion Lab at University of Maryland
- NASA Innovative Advanced Concepts Fellow



5.5 billion  
mobile phones  
and devices globally

Global wireless services market generates over \$1.1 trillion in annual revenue, with a backdrop of evolving and imperfect networks

Global Population – 8.0 billion



5.5 billion  
unique cellular  
subscribers

*move in and out  
of coverage as  
they live, work  
and travel*

3.5 billion  
not subscribed  
to cellular  
broadband

*0.4 billion  
have no  
coverage*

*3.1 billion  
usage gap*

- Cellular subscribers - broadband
- Cellular subscribers - no broadband
- Not a cellular subscriber




Source: GSMA Intelligence (data as of December 31, 2022).



# AST SpaceMobile technology solution

1. Market size based on the sum of 2020A revenues of included providers, AST SpaceMobile market size based on GSMA estimate of total cellular wireless market spend.

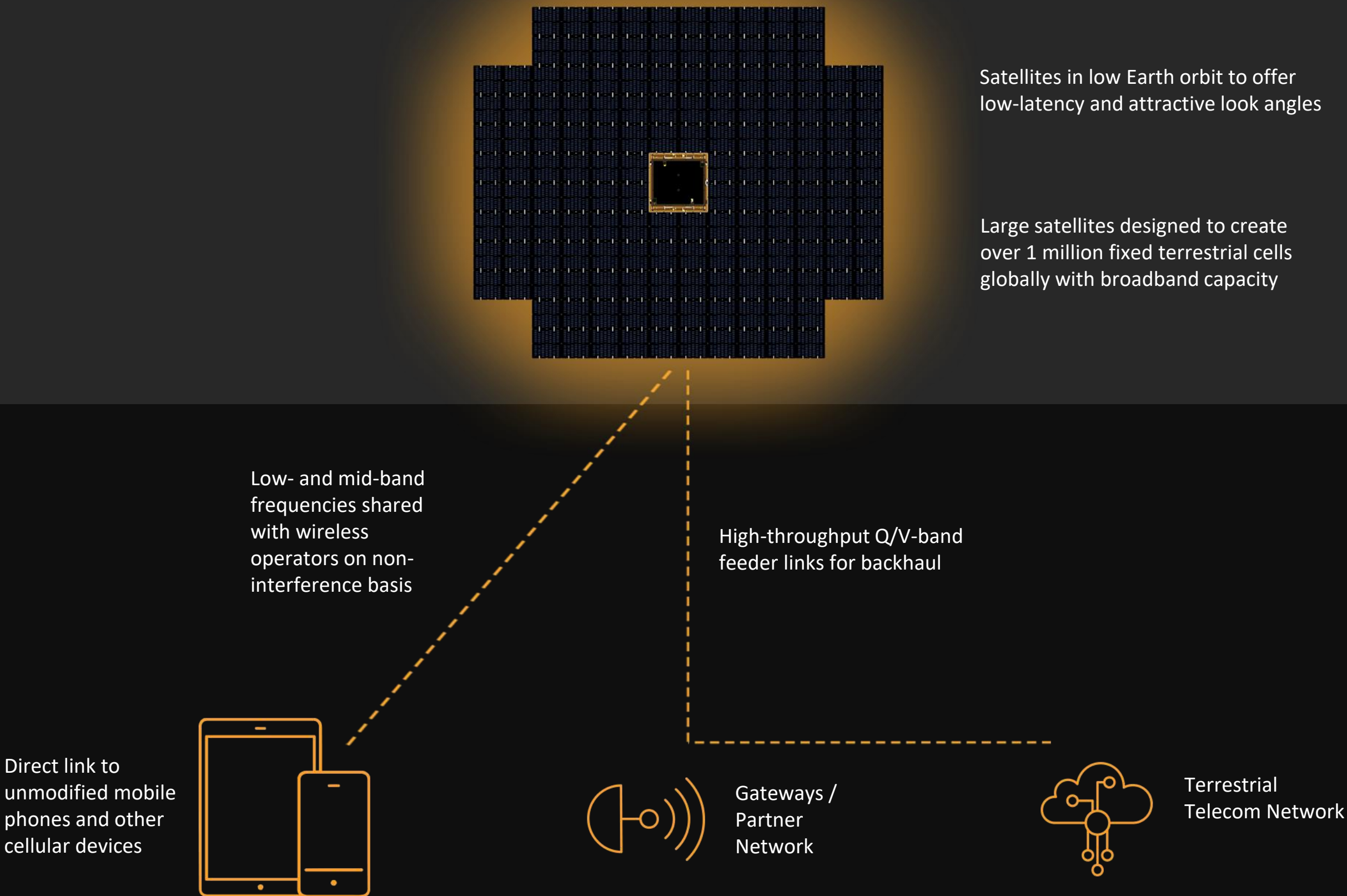
## Differentiated approach compared to existing space-based communications

	First & Only Broadband Direct To Mobile Phones	Direct via Proprietary Mobile Phones	Indirect via Complex, Expensive Hardware
			
	Any standard mobile phone	Provider-specific satphones (~\$1K)	Provider-specific antennas mounted on planes, ships, vehicles, buildings (~\$1K-\$200K+)
End Users	Mass market mobility and the unconnected	Narrowband service on satphones	Enterprise, Maritime, Aviation, Government, Residential
Market Size <sup>1</sup>	> \$1 trillion	< \$2 billion	< \$20 billion



Satellite-to-cellular architecture is transparent to end-user

SpaceMobile network designed to closely mirror terrestrial cellular architecture





# How subscribers are expected to use SpaceMobile

Service designed to be compatible with the 5.5 billion existing mobile phones and devices in use globally today

Significant flexibility in go-to-market strategy, with multiple potential ways for cellular subscribers to access more and better connectivity



Day Pass  
(Broadband)

- Subscribers receive a text on their phone asking if they would like to turn on SpaceMobile service



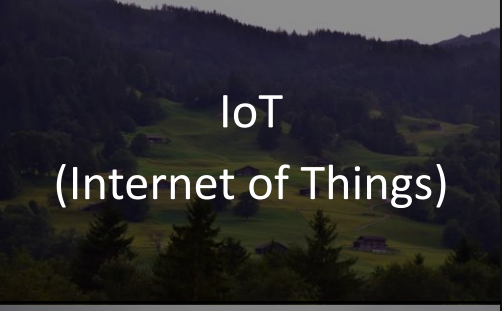
Monthly Add-on  
(Consumer)

- A fixed monthly rate to add SpaceMobile as a supplemental service to existing cellular plan
- Automatically connect with SpaceMobile’s network upon entering an area without cell tower coverage



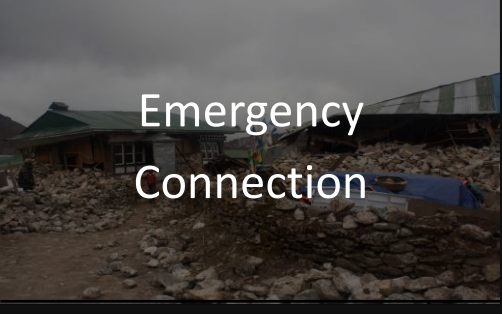
Monthly Add-on  
(Enterprise)

- Same as consumer, but with more data targeting power users



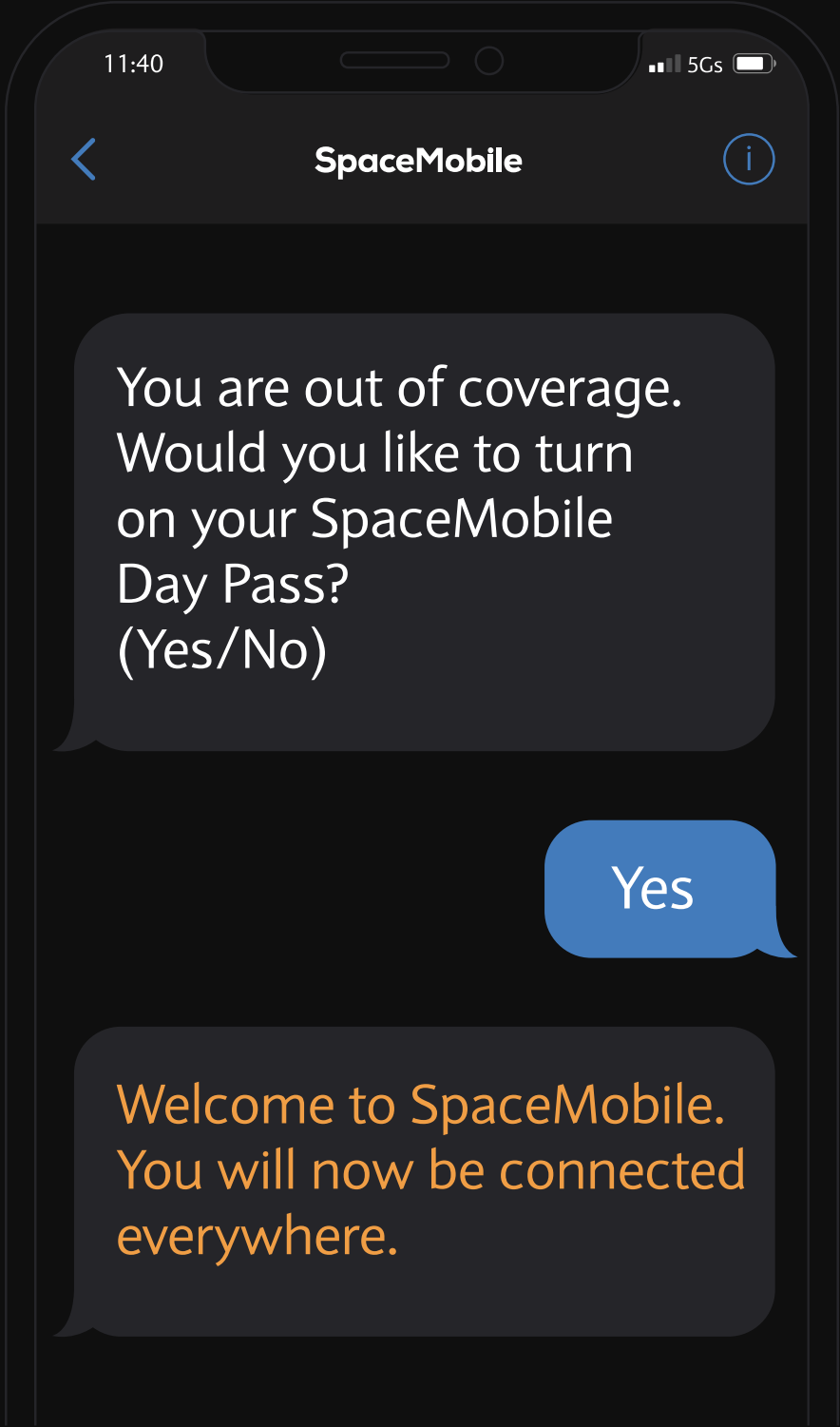
IoT  
(Internet of Things)

- Uplink / downlink for cellular compatible IoT devices, for areas with poor terrestrial connectivity



Emergency  
Connection

- Subscribers would use SpaceMobile during emergencies and natural disasters when terrestrial networks are not nearby or have failed





# Highly successful funding history

- 1. On September 6, 2022, AST SpaceMobile completed the sale of its 51% interest in its former subsidiary, NanoAvionika UAB ("Nano") for net proceeds of approximately \$26.6 million
- 2. Representative of \$75 million of gross proceeds from December 2022 follow-on offering, \$13.4 million of net proceeds from committed equity facility ("CEF") as of December 31, 2022 and \$20.0 million of net proceeds from at-the-market offering program as of December 31, 2022.
- 3. Representative of \$56.9 million of gross proceeds from June 2023 follow-on offering, and \$7.2 million of net proceeds from at-the-market offering program as of June 30, 2023.
- 4. Includes \$15.0 million equipment loan from Loan Star Bank, and a \$48.5 million draw on a \$100.0 million senior secured credit facility.

Milestone driven, value-creating financing approach with validation from a high-profile investor base across the wireless ecosystem

Select Investors	Rounds Participated	\$mm
Rakuten	2	\$104
Vodafone	2	\$35
American Tower	2	\$31
Cisneros	2	\$12
Bell Canada	1	\$10
Samsung	1	\$1

