

## **StarLink – September 2020 Update**

By Bob Primak, for the Lexington Technology Use Group

### **Three Parts:**

#### **Project Description, Scope and Benchmarks**

#### **Videos and Pictures of the Sept. 3, 2020 Launch and Recovery Operations**

#### **Starlink Internet Services Details**

(All images used have credits embedded in the image copies themselves.)

(The recording of this presentation will be paused to avoid including copies of any copyrighted videos.)

### **References:**

<https://techcrunch.com/2020/09/03/spacex-confirms-starlink-internet-private-beta-underway-showing-low-latency-and-speeds-over-100mbps/>

(has an image which has a credit at the bottom)

<https://www.space.com/spacex-starlink-11-satellites-launch-september-2020.html>

master image for Space.com slides:

Credit: <https://www.space.com/spacex-starlink-11-satellites-launch-september-2020.html>

<https://cdn.mos.cms.futurecdn.net/SrzS836uRo9xRxii2QwjyV-650-80.png.webp>

(reference embedded in my copy of this image)

### **Stop Recording Meeting for the videos.**

videos of launch, fairing recovery and booster return and landing on a ship:

<https://www.space.com/spacex-starlink-11-satellites-launch-september-2020.html>

launch and first stage separation and landing:

[https://www.youtube.com/watch?v=7Ei\\_Z\\_Xv3BM](https://www.youtube.com/watch?v=7Ei_Z_Xv3BM)

deployment of satellites:

<https://videos.space.com/m/N9qB26JP/watch-spacex-deploy-60-starlink-satellites-in-amazing-view-from-space?list=9wzCTV4g>

fairing recovery (previous launch in July)

<https://www.space.com/spacex-falcon-9-rocket-payload-fairing-catch-success.html>

### **Resume recording of meeting for Print Article Slides and Discussion Period.**

Print Articles:

About the Internet Service and the overall cost of the project:

<https://www.cnbc.com/2020/06/12/spacex-starlink-satellite-internet-service-application-beta-test.html>

A \$16 billion subsidy for SpaceX

Rural America, to be precise.

(Meeting the standards for the FCC Grant.)

<https://www.fool.com/investing/2020/08/23/fast-broadband-from-orbit-new-data-says-spacex-can/>

<https://www.reviews.org/internet-service/spacex-starlink-satellite-internet-review/#Recap>

*(Direct copy of the article's Recap follows.)*

## **SpaceX Starlink Satellite Internet Update 2020**

SpaceX's Starlink internet seeks to solve the rural vs. urban internet divide, and it looks promising.

Aug 10, 2020

*(Insert Review pull-quote and image here.)*

*(And FCC Grant for Rural Services. With its image.)*



Estimated launch: Mid-2020 (delayed)

Estimated cost: \$80/mo. (ongoing)

Estimated equipment fees: \$100–\$300 (one-time setup)

*(Note: This system does use a satellite dish, which needs a permit in some communities.)*

*(Services like Starry for Fixed 5G Internet to the Home or Business, do not need dish or other large exterior antennas, though a whole-building mast antenna may be used.)*

[Official Starlink Site](#)

*(Recap Details follow.)*

## Recap: Will Starlink satellite internet service be good?

We're all eager to see whether Starlink lives up to the hype, but the Air Force beta test that saw download speeds around 600 Mbps looks promising. To recap, here are some of the key points we know or can guess at so far:

- **When will Starlink internet be available?** Right now, the earliest date is mid-2020 in the US and Canada. You can get a head start and [sign up to be a beta tester](#) when Starlink becomes available in your area. (*And, What is a Plus Code?*) (*Add Links to References.*)
- **How much will Starlink internet cost?** Our best guess is around \$80 a month and maybe an additional \$100–\$300 for the user terminal.
- **How many Starlink satellites are in orbit?** As of August 10, 2020, 595 Starlink satellites are in orbit.
- **How many Starlink satellites will be in orbit when the launches are done?** SpaceX has filed requests to launch a total of 42,000 satellites so far. (Aug 10, 2020)



More on costs:

### **5 Things to Know About SpaceX's Falcon 9 Rocket**

*Getting an accurate fix on SpaceX's costs is hard, but figuring out the trajectory of those costs -- down -- is easy.*

(Motley Fool)

<https://www.fool.com/investing/2020/09/12/5-things-to-know-about-spacexs-falcon-9-rocket/>

Sept. 12, 2020

The idea was to present the headlines and pull-quotes as a slide show. Then switch applications to show videos in the Chrome Browser. Illustrations were used inside the slide show, with embedded credits, as well as tables and timelines.

Setting in Zoom Share Screen: Two checkboxes. (1) Share computer audio. (2) Optimize sharing for videos. Both are in the screen (popup) for selecting what source to share. (PC with Windows 10 Pro 1909.) Full-screen videos now play with their audio and present a nice picture.

This is only a 15-min. Presentation. (More time with discussion and videos.)

09/09/20 – Bob Primak –

Updated 09/16/20 – Bob Primak –