



# STARLINK MISSION

## MISSION OVERVIEW

SpaceX is targeting Monday, November 11 at 9:56 a.m. EST, 14:56 UTC, for launch of 60 Starlink satellites from Space Launch Complex 40 (SLC-40) at Cape Canaveral Air Force Station, Florida. A backup launch opportunity is available at 9:34 a.m. EST, 14:34 UTC, on Tuesday, November 12.

Falcon 9's first stage supported the Iridium-7, SAOCOM-1A, and Nusantara Satu missions, and the fairing was previously flown on Falcon Heavy's Arabsat-6A mission earlier this year.

Following stage separation, SpaceX will land Falcon 9's first stage on the "Of Course I Still Love You" droneship, which will be stationed in the Atlantic Ocean. Approximately 45 minutes after liftoff, SpaceX's two fairing recovery vessels, "Ms. Tree" and "Ms. Chief," will attempt to recover the two fairing halves.

The Starlink satellites will deploy at an altitude of 280 km. Prior to orbit raise, SpaceX engineers will conduct data reviews to ensure all Starlink satellites are operating as intended. Once the checkouts are complete, the satellites will then use their onboard ion thrusters to move into their intended orbits.

## PAYLOAD DESCRIPTION

SpaceX is developing a low latency, broadband internet system to meet the needs of consumers across the globe. Enabled by a constellation of low Earth orbit satellites, Starlink will provide fast, reliable internet to populations with little or no connectivity, including those in rural communities and places where existing services are too expensive or unreliable.

Since the most recent launch of Starlink satellites in May, SpaceX has increased spectrum capacity for the end-user through upgrades in design that maximize the use of both Ka and Ku bands. Additionally, components of each satellite are 100% demisable and will quickly burn up in Earth's atmosphere at the end of their life cycle—a measure that exceeds all current safety standards.

Starlink is targeted to offer service in parts of the U.S. and Canada after six launches, rapidly expanding to global coverage of the populated world after 24 launches. Additional information on the system can be found at [starlink.com](http://starlink.com).

## WEBCAST

Launch webcast will go live about 15 minutes before liftoff at [spacex.com/webcast](http://spacex.com/webcast)

## PHOTOS

High-resolution photos will be posted at [flickr.com/spacex](http://flickr.com/spacex)



## LAUNCH FACILITY

Falcon 9 will launch this Starlink mission from Space Launch Complex 40 (SLC-40) at Cape Canaveral Air Force Station in Florida. Learn more about SpaceX's launch facilities at [spacex.com/about](https://spacex.com/about)

## SPACE X CONTACT

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## MISSION TIMELINE (all times approximate)

### COUNTDOWN

Hr/Min/Sec	Event
- 00:38:00	SpaceX Launch Director verifies go for propellant load
- 00:35:00	RP-1 (rocket grade kerosene) loading underway
- 00:35:00	1st stage LOX (liquid oxygen) loading underway
- 00:16:00	2nd stage LOX loading underway
- 00:07:00	Falcon 9 begins engine chill prior to launch
- 00:01:00	Command flight computer to begin final prelaunch checks
- 00:01:00	Propellant tank pressurization to flight pressure begins
- 00:00:45	SpaceX Launch Director verifies go for launch
- 00:00:03	Engine controller commands engine ignition sequence to start
- 00:00:00	Falcon 9 liftoff

### LAUNCH, LANDING, AND SATELLITE DEPLOYMENT

Hr/Min/Sec	Event
00:01:14	Max Q (moment of peak mechanical stress on the rocket)
00:02:33	1st stage main engine cutoff (MECO)
00:02:36	1st and 2nd stages separate
00:02:44	2nd stage engine starts
00:03:24	Fairing deployment
00:06:41	1st stage entry burn complete
00:08:24	1st stage landing
00:08:49	2nd stage engine cutoff (SECO-1)
00:44:50	2nd stage engine restarts
00:44:52	2nd stage engine cutoff (SECO-2)
00:60:43	Starlink satellites begin deployment