SPACEX

STARLINK MISSION

MISSION OVERVIEW

SpaceX is targeting Wednesday, January 29 at 9:06 a.m. EST, or 14:06 UTC, for its fourth launch of Starlink satellites from Space Launch Complex 40 (SLC-40) at Cape Canaveral Air Force Station, Florida. A backup launch opportunity is available on Thursday, January 30 at 8:45 a.m. EST, or 13:45 UTC.

Falcon 9's first stage previously launched Crew Dragon on its first demonstration mission in March 2019 and the RADARSAT Constellation Mission in June 2019. 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 290 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 and operational altitude of 550 km.

PAYLOAD DESCRIPTION

SpaceX is leveraging its experience in building rockets and spacecraft to deploy the world's most advanced broadband internet system. With performance that far surpasses that of traditional satellite internet, and a global network unbounded by ground infrastructure limitations, Starlink will deliver high speed broadband internet to locations where access has been unreliable, expensive, or completely unavailable.

Each Starlink satellite weights approximately 260kg and features a compact, flat-panel design that minimizes volume, allowing for a dense launch stack to take full advantage of Falcon 9's launch capabilities. With four powerful phased array antennas on each satellite, an enormous amount of throughput can be placed and redirected in a short time, for an order of magnitude lower cost.

The system is on the leading edge of on-orbit debris mitigation, meeting or exceeding all regulatory and industry standards. At end of their life cycle, the satellites will utilize their on-board propulsion system to deorbit over the course of a few months. In the unlikely event their propulsion system becomes inoperable, the satellites will burn up in Earth's atmosphere within 1-5 years, significantly less than the hundreds or thousands of years required at higher altitudes. Components of each satellite are fully demisable.

Starlink is targeting service in the Northern U.S. and Canada in 2020, rapidly expanding to near global coverage of the populated world by 2021. Additional information on the system can be found at starlink.com.

WEBCAST

Launch webcast will go live about 15 minutes before liftoff at spacex.com/webcast

PHOTOS

High-resolution photos will be posted at 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

SPACEX CONTACT

James Gleeson
Communications Director
202.870.4694
media@spacex.com

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 DEPLOYMENT

Hr/Min/Sec	Event
00:01:13	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
00:02:43	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)
00:45:55	2nd stage engine restarts
00:45:57	2nd stage engine cutoff (SECO-2)
01:01:48	Starlink satellites begin deployment