

Es'hail-2 Mission

MISSION OVERVIEW

SpaceX is targeting launch of the Es'hail-2 satellite on Thursday, November 15 from Launch Complex 39A (LC-39A) at NASA's Kennedy Space Center in Florida. The primary launch window opens at 3:46 p.m. EST, or 20:46 UTC, and closes at 5:29 p.m. EST, or 22:29 UTC on Thursday, November 15. The satellite will be deployed approximately 32 minutes after liftoff.

A backup launch window opens at 3:48 p.m. EST, or 20:48 UTC, and closes at 5:29 p.m. EST, or 22:29 UTC on Friday, November 16.

Falcon 9's first stage for the Es'hail-2 mission previously supported the Telstar 19 VANTAGE mission in July 2018. Following stage separation, SpaceX will attempt to land Falcon 9's first stage on the "Of Course I Still Love You" dronship, which will be stationed in the Atlantic Ocean.



Official SpaceX Es'hail-2 Mission Patch

PAYLOAD

The Es'hail-2 satellite is based on the Mitsubishi Electric (MELCO) DS 2000 satellite bus, a proven, modular platform with high power capability and flexibility for a broad range of applications.

In addition to offering Ku-band resources to support the growing 25.5°E / 26.0°E broadcast neighborhood, Es'hail-2 also features multi-transponder Ka-band capacity, providing business and government sectors with secure communications across the Middle East and North Africa region. In partnership with leading service providers, Es'hailSat will offer a portfolio of broadcast and VSAT services to support business growth.

The spacecraft's multi-mission architecture will enable Es'hailSat to respond to demand for the fastest-growing applications in the Middle East and North Africa, including content transfer, broadcast distribution, enterprise communications, and government services.

MISSION TIMELINE (ALL TIMES APPROXIMATE)

COUNTDOWN

Hour/Min/Sec	Events
- 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

Hour/Min/Sec	Events
00:01:06	Max Q (moment of peak mechanical stress on the rocket)
00:02:35	1st stage main engine cutoff (MECO)
00:02:39	1st and 2nd stages separate
00:02:46	2nd stage engine starts
00:03:47	Fairing deployment
00:06:22	1st stage entry burn
00:08:07	2nd stage engine cutoff (SECO-1)
00:08:16	1st stage landing
00:26:34	2nd stage engine restarts
00:27:29	2nd stage engine cutoff (SECO-2)
00:32:29	Es'hail-2 satellite deployment

LAUNCH FACILITY

Launch Complex 39A at Kennedy Space Center, Florida

Launch Complex 39A at NASA's Kennedy Space Center has a long and storied history dating back to the early 1960s. Originally built to support the Apollo program, LC-39A supported the first Saturn V launch (Apollo 4), and many subsequent Apollo missions, including Apollo 11 in July 1969. Beginning in the late 1970s, LC-39A was modified to support Space Shuttle launches, hosting the first and last shuttle missions to orbit in 1981 and 2011 respectively.

In 2014, SpaceX signed a 20-year lease with NASA for the use of historic LC-39A. Since then, the company has made significant upgrades to modernize the pad's structures and ground systems, while also preserving its important heritage. Extensive modifications to LC-39A have been made to support launches of both commercial and crew missions on SpaceX's Falcon 9 and Falcon Heavy launch vehicles.

RESOURCES

SpaceX Contact | James Gleeson, Communications Director, 202-649-2633, media@spacex.com.

Photos | High-resolution photos will be posted at [flickr.com/spacex](https://www.flickr.com/photos/spacex/).

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