EchoStar XXIII Mission

Mission Overview

SpaceX's Falcon 9 rocket will deliver EchoStar XXIII, a commercial communications satellite for EchoStar Corporation, to a Geostationary Transfer Orbit (GTO). EchoStar is a premier global provider of satellite and video delivery solutions.

Official SpaceX EchoStar XXIII Mission Patch

SpaceX is targeting launch of EchoStar XXIII from historic Launch Complex 39A (LC-39A) at NASA's Kennedy Space Center in Florida. The two and a half hour launch window opens on Tuesday, March 14, at 1:34 a.m. EDT or 5:34 a.m. UTC. The satellite will be deployed approximately 34 minutes after launch.

A backup launch window opens on Thursday, March 16, at 1:35 a.m. EDT or 5:35 a.m. UTC.

The EchoStar XXIII mission will be SpaceX's second launch from LC-39A at Kennedy Space Center. SpaceX will not attempt to land Falcon 9's first stage after launch due to mission requirements.

Payload

EchoStar XXIII is a highly flexible, Ku-band broadcast satellite services (BSS) satellite with four main reflectors and multiple sub-reflectors supporting multiple mission profiles. Initial commercial deployment of EchoStar XXIII will be at 45° West, and the Satellite End of Life (EOL) Power is 20 kilowatts (kW).

EchoStar operates the world's fourth-largest commercial geosynchronous fleet, with 25 satellites. Headquartered in Englewood, Colorado and conducting business around the globe, EchoStar is a pioneer in secure communications technologies through its EchoStar Satellite Services, EchoStar Technologies and Hughes Network Systems business segments.

EchoStar Satellite Services (ESS) is an industry-leading provider of satellite communications solutions, video distribution, data communications and backhaul services to meet the needs of media and broadcast organizations, direct-to-home providers, enterprise customers and government service providers.

Mission Timeline (all times approximate)

COUNTDOWN

Hour/Min/Sec	Events
- 01:18:00	Launch Conductor takes launch readiness poll
- 00:70:00	RP-1 (rocket grade kerosene) loading underway
- 00:45:00	LOX (liquid oxygen) loading underway
- 00:07:00	Falcon 9 begins engine chill prior to launch
- 00:02:00	Range Control Officer (USAF) verifies range is go for launch
- 00:01:30	SpaceX Launch Director verifies go for launch
- 00:01:00	Flight computer commanded to begin final prelaunch checks
- 00:01:00	Propellant tank pressurization underway
- 00:00:03	Engine controller commands engine ignition sequence to start
00:00:00	Falcon 9 liftoff

LAUNCH AND SATELLITE DEPLOYMENT

Hour/Min/Sec	Events
00:01:16	Max Q (moment of peak mechanical stress on the rocket)
00:02:43	1st stage engine shutdown/main engine cutoff (MECO)
00:02:47	1st and 2nd stages separate
00:02:55	2nd stage engine starts
00:03:43	Fairing deployment
00:08:31	2nd stage engine cutoff (SECO-1)
00:26:19	2nd stage engine restarts
00:27:19	2nd stage engine cutoff (SECO-2)
00:34:00	EchoStar XXIII satellite deployed

Launch Facility

Launch Complex 39A at Kennedy Space Center, Florida

Launch Complex 39A (LC-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 Launch Complex 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 | John Taylor, Director of Communications, 310-363-6703, media@spacex.com.
PHOTOS | High-resolution photos will be posted at flickr.com/spacex.
WEBCAST | Launch webcast will go live about 20 minutes before liftoff at spacex.com/webcast.