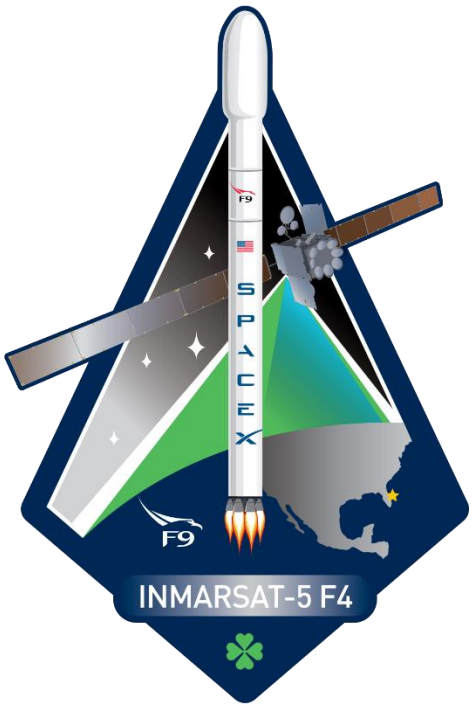
Inmarsat-5 F4 Mission

Mission Overview

SpaceX's Falcon 9 rocket will deliver Inmarsat-5 F4, a commercial communications satellite, to a Geostationary Transfer Orbit (GTO). As the industry leader and pioneer of mobile satellite communications, Inmarsat has been powering global connectivity for more than three decades.

SpaceX is targeting launch of Inmarsat-5 F4 from historic Launch Complex 39A (LC-39A) at NASA's Kennedy Space Center in Florida. The 49-minute launch window opens on Monday, May 15, at 7:21 p.m. EDT, or 23:21 UTC.

A backup launch window opens on Tuesday, May 16, at 7:21 p.m. EDT, or 23:21 UTC.



Official SpaceX Inmarsat-5 F4 Mission Patch

SpaceX will not attempt to land Falcon 9's first stage after launch due to mission requirements.

Payload

Inmarsat-5 F4 (I-5 F4) is the fourth satellite in the Global Xpress (GX) constellation; the world's first globally available, high-speed, mobile broadband service.

Inmarsat, the only operator of a global Ka-band network, created the GX platform to enable communities across the world to benefit from the emerging digital society.

Already delivering unprecedented service speeds, coverage, reliability and security to users on land, at sea and in the air, Inmarsat's GX network entered global commercial service in December 2015. I-5 F4 adds further capacity to the network, as well as in-orbit redundancy that further upgrades the reliability and resilience of Inmarsat's service offerings.

Global Xpress is establishing a new standard of excellence for broadband communications in established VSAT markets and is gaining strong traction in new market areas, such as the rapidly expanding aviation passenger connectivity sector.

The first four GX satellites, including I-5 F4, were constructed by Inmarsat's partner Boeing Network & Space Systems.

Mission Timeline (all times approximate)

COUNTDOWN

Hour/Min/Sec	Events
- 01:13:00	Launch Conductor takes launch readiness poll
- 01:10:00	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 to flight pressure begins
- 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
00:01:17	Max Q (moment of peak mechanical stress on the rocket)
00:02:45	1st stage engine shutdown/main engine cutoff (MECO)
00:02:49	1st and 2nd stages separate
00:02:56	Second stage engine starts
00:03:35	Fairing deploy
00:08:38	2nd stage engine cutoff (SECO-1)
00:26:59	2nd stage engine restarts
00:27:55	2nd stage engine cutoff (SECO-2)
00:31:48	Inmarsat-5 F4 satellite deploy

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 15 minutes before liftoff at spacex.com/webcast.