



## CRS-21 MISSION

### MISSION OVERVIEW

SpaceX is targeting Sunday, December 6 for launch of its [twenty-first Commercial Resupply Services mission \(CRS-21\)](#), which will launch from Launch Complex 39A (LC-39A) at Kennedy Space Center, Florida. Liftoff is targeted for 11:17 a.m. EST, or 16:17 UTC. Dragon will separate from Falcon 9's second stage about eleven minutes after liftoff and autonomously dock to the space station on Monday, December 7.

### WEBCAST

You can watch a live webcast of this mission, which will begin about 15 minutes prior to liftoff, by clicking [here](#).

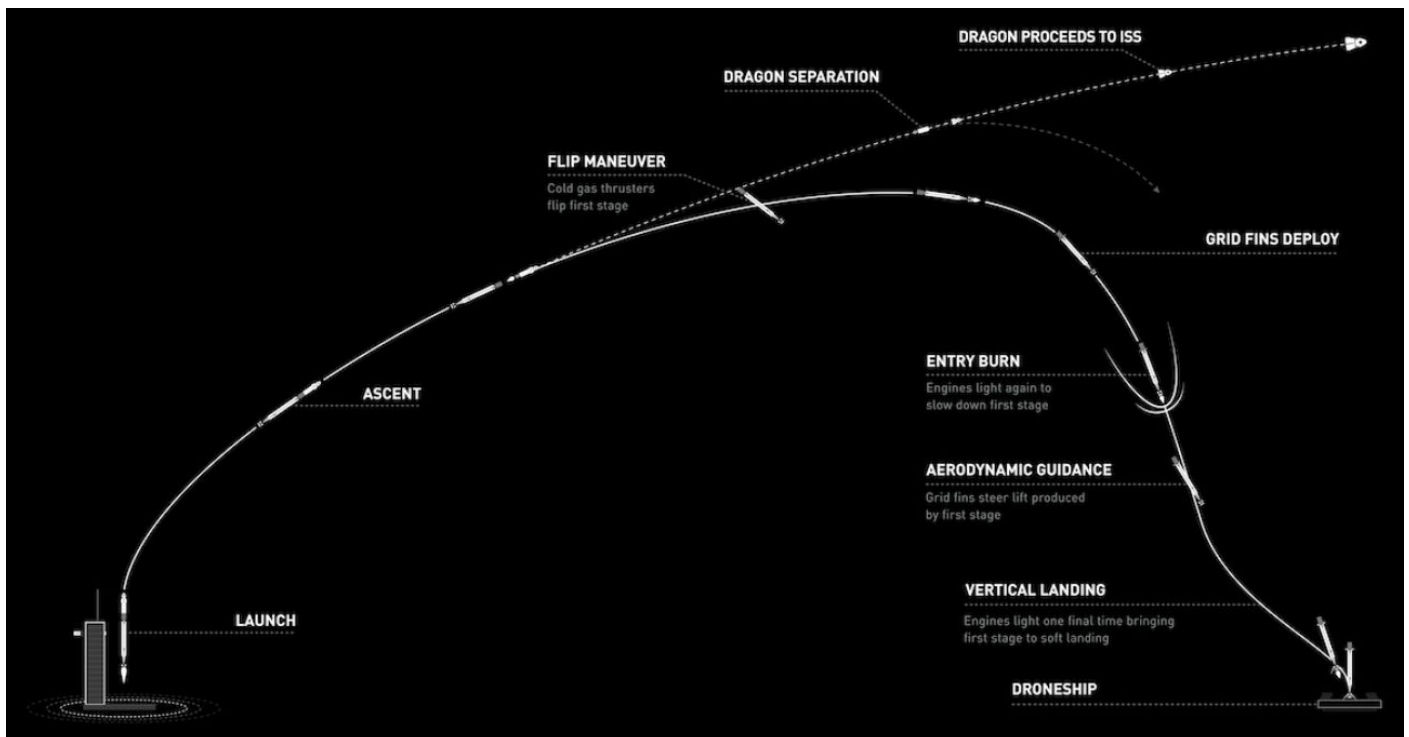
### PHOTOS

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

This is the first flight of the updated cargo version of Dragon, which is capable of carrying about 20 percent more volume than the previous version of Dragon and has double the amount of powered locker cargo capability. Dragon is now designed for up to five flights to and from the space station, and this cargo version of the spacecraft can stay on station more than twice as long as the previous version of Dragon.

The Falcon 9 first stage rocket booster supporting this launch previously supported launch of Dragon's first flight with NASA astronauts to the International Space Station (Demo-2), the ANASIS-II mission, and a Starlink mission. Following stage separation, SpaceX will land Falcon 9's first stage on the "Of Course I Still Love You" droneship, which will be located in the Atlantic Ocean.

### MISSION PROFILE



# MISSION TIMELINE (ALL TIMES APPROXIMATE)

## COUNTDOWN

<b>Hr/Min/Sec</b>	<b>Event</b>
- 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 pre-launch engine chill
- 00:05:00	Dragon transitions to internal power
- 00:01:00	Command flight computer to begin final prelaunch checks
- 00:01:00	Propellant tanks pressurize for flight
- 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

<b>Hr/Min/Sec</b>	<b>Event</b>
00:01:18	Max Q (moment of peak mechanical stress on the rocket)
00:02:30	1st stage main engine cutoff (MECO)
00:02:34	1st and 2nd stages separate
00:02:41	2nd stage engine starts
00:06:37	1st stage entry burn begins
00:08:38	2nd stage engine cutoff (SECO)
00:08:38	1st stage landing
00:11:49	Dragon separates from 2nd stage
00:12:35	Dragon nosecone open sequence begins