STARLINK-1234

Starlink is a satellite internet constellation operated by Starlink Services, LLC, an international telecommunications provider that is a wholly owned subsidiary of American aerospace company SpaceX,[5] providing coverage to around 130 countries and territories.[6] It also aims to provide global mobile broadband.[7] Starlink has been instrumental to SpaceX's growth.[8]

SpaceX began launching Starlink satellites in 2019. As of May 2025, the constellation consists of over 7,600 mass-produced small satellites in low Earth orbit (LEO)[9] that communicate with designated ground transceivers. Starlink comprises 65% of all active satellites.[10] Nearly 12,000 satellites are planned, with a possible later extension to 34,400. SpaceX announced reaching over 1 million subscribers in December 2022[11] and 4 million subscribers in September 2024.[12]

The SpaceX satellite development facility in Redmond, Washington, houses Starlink research, development, manufacturing, and orbit control facilities. In May 2018, SpaceX estimated the cost of designing, building and deploying the constellation would be at least US$10 billion.[1] Revenues from Starlink in 2022 were reportedly $1.4 billion with a net loss. In May 2024 that year's revenue was expected to reach $6.6 billion[13] but by December the prediction was raised to $7.7 billion.[14] Revenue was then expected to reach $11.8 billion in 2025.[14] Financial statements filed with the Netherlands Chamber of Commerce revealed Starlink 2024 revenue only reached $2.7 billion,[15][16] about two-thirds short of the latest prediction, for a profit of $72 million.[15]

Starlink has been extensively used in the Russo-Ukrainian War, a role for which it has been contracted by the United States Department of Defense.[17] Starshield, a military version of Starlink, is designed for government use.[18][19] Starlink's technology is reportedly a front-runner for the U.S. Golden Dome (missile defense system) that involves placing weapons into orbit.[20]

Astronomers raised concerns about the effect the constellation would have on ground-based astronomy, and how the satellites contribute to an already congested orbital environment.[21][22] SpaceX has attempted to mitigate astronometric interference concerns with measures to reduce the satellites' brightness during operation.[23] The satellites are equipped with Hall-effect thrusters allowing them to raise their orbit, station-keep, and de-orbit at the end of their lives. They are also designed to autonomously and smoothly avoid collisions based on uplinked tracking data.[24]

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