SpaceX wants to put 1 million solar-powered data centers into orbit

SpaceX filed a request with the FCC on Friday seeking approval to put a constellation of 1 million data center satellites into orbit. While the FCC is unlikely to approve a network that expansive, SpaceX's strategy has been to request approval for unrealistically large numbers of satellites as a starting point for negotiations.

The filing proposes establishing a network of solar-powered data centers in low Earth orbit that communicate with one another via lasers. The filling speaks of the constellation in ambitious sci-fi terms, calling it a "first step towards becoming a Kardashev II-level civilization — one that can harness the Sun's full power."

Even if just a small fraction of those 1 million satellites wind up in orbit, it would mark a significant increase in the number of man-made objects in space. The European Space Agency estimates there are around 15,000 satellites orbiting the Earth at the moment, and the majority are Starlink. (Over 9,600 of them, according to *Johnathan's Space Report*.)

When experts are already concerned about the abundance of space junk and potential for orbital collisions, such an explosion of objects in orbit would seem ill-advised. But SpaceX argues that the orbital data centers would be a cheaper and more environmentally friendly alternative to land-based centers that form the backbone of the growing AI industry. Instead of syphoning water from communities, polluting groundwater, and driving up electricity bills, orbital data

centers would be able to radiate heat into the vacuum of space and rely almost exclusively on real-time solar power and limited batteries.

The backlash against data centers has been growing, and communities are increasingly winning their battles to block their construction. So it’s no surprise that the biggest names in AI are turning their attention to one of the few places where there isn’t a community to upset.

Correction January 31st: An earlier version of this article stated that there were over 11,000 Starlink satellites in orbit. That number was the total launched, including satellites that had been decommissioned. This has been corrected to reflect how many Starlink satellites are currently active in orbit.

https://www.theverge.com/tech/871641/spacex-fcc-1-million-solar-powered-data-centers-satellites-orbit