LEOs, GEOs and MEOs: Learn the Pros and Cons of Each

Description

LEOs, GEOs and MEOs: Learn the Pros and Cons of Each

Technology in the connectivity space is evolving at a rapid pace, and it can be hard to keep up. Different satellite technologies like LEOs, GEOs and MEOs, for example, are better used in certain circumstances than others. Letâ??s explore the satellite options below.

- **Satellite terminology explained**

- ○ 1Low Earth Orbit (LEO) satellites

- ○ 2Geostationary Earth Orbit/Geosynchronous Equatorial Orbit (GEO) satellites

- ○ 3Medium Earth Orbit (MEO) satellites

• Compare your options

	LEO Satellites	GEO Satellites	MEO Satellites
Altitude	160-2,000 kilometres	35,786 kilometres	2,000-35,786 kilometres
Round-trip latency	Low (around 20-50 ms)	High (around 500 ms)	Moderate (around 100-150 ms)
Coverage	Regional coverage with constellation	Regional coverage (spot beam)	Regional coverage
Constellation Size (number of satellites clustered together)	Large (hundreds to thousands)	Small (typically fewer than 10)	Moderate (tens to hundreds)
Deployment Cost	High	Moderate to high	Moderate to high
Data Transfer Rates	High	High	High
Reliability	Dependent on constellation management	Generally reliable	Generally reliable
Better for phone or internet	Suitable for both	Suitable primarily for internet	Suitable for both

Advantages	○ Low latency ○ High data transfer rates ○ Less susceptibility to atmospheric interference	○ Wide coverage ○ Stable signal strength ○ Fewer satellites required	○ Balanced latency and coverage ○ Relatively lower deployment cost ○ Improved latency compared to GEO
Disadvantages	○ High deployment cost ○ Need for large constellation for continuous coverage ○ Potential for signal interference	○ High latency ○ Limited coverage area ○ Signal degradation at higher latitudes	○ Higher latency than LEO ○ Less global coverage than LEO ○ Higher deployment cost than LEO

• Other popular articles

- ○ News
  November 4, 2024

  Telstra 3G shutdown is now complete

  ○ News
  October 25, 2024

  Phones using the 3G network to call triple zero will be disconnected on 28 October 2024

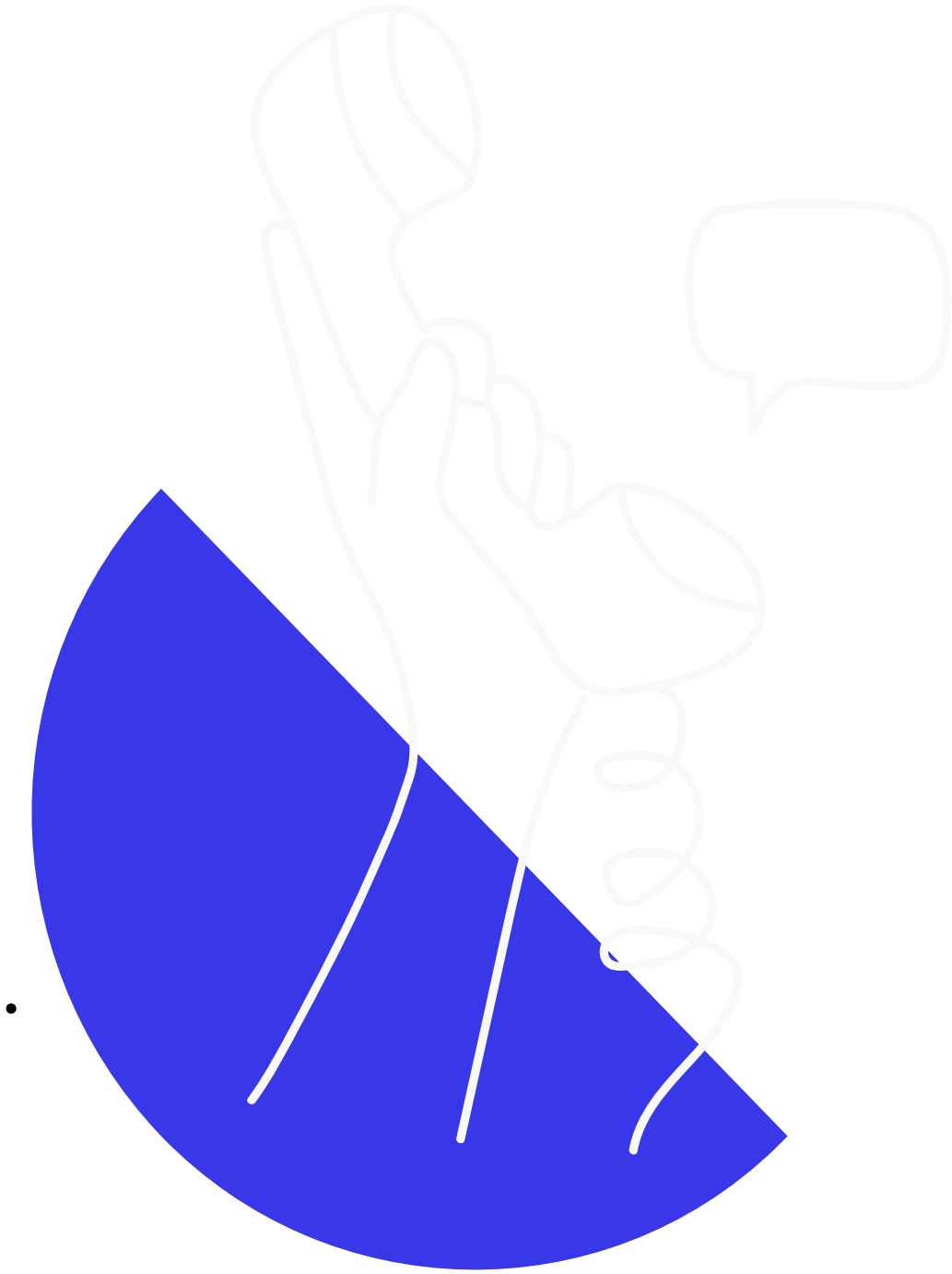
  ○ News
  October 25, 2024

  NBN Co accelerating higher speed tiers in September 2025

  ○ Guides
  October 17, 2024

  Connectivity definitions

- Back to resources



Didnâ??t find the answers you were after?

Chat to us on our hotline with one of our team members and letâ??s get the conversation started. If we donâ??t answer, weâ??ll get back to you in no time at all.

1300 081 029

Category

1. Guides

Date
23/01/2026
Date Created
12/03/2024