O3b mPOWER IP TRANSIT

Enabling flexible, dynamic bandwidth allocation at scale

Executive Guide

SES

CLOUD-SCALE PERFORMANCE WITH UNMATCHED NETWORK AGILITY

Steady adoption of cloud services and applications is pushing capacity rates for IP transit into the tens of gigabits per second.

Telcos, mobile network operators, cloud service providers, and other network operators face an evolving range of challenges to reach under-served areas with reliable, high-performance services. The growing use of cloud services and applications requires networks to scale more dynamically, and operate with more agility. As cloud applications increasingly become critical to business, and network outages and disasters continue to rise, network operators need to prioritise resilience, application awareness, and flexible allocation of bandwidth in their network extension services.

Introduced in 2014 over the O3b MEO fleet, our IP Transit solution redefined the landscape of satellite-enabled managed network services. The solution set new industry thresholds in provisioned capacity rates and low-latency performance (<150 milliseconds), enabling seamless point-to-point extension of telco's and service provider's core networks into under-served areas.

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With O3b mPOWER, SES is setting new thresholds for performance and flexibility in managed network services. With up to 10Gbps dedicated capacity, O3b mPOWER-enabled IP Transit delivers the throughput and low latency telcos and other network operators need for critical cloud services and emerging applications based on 5G, the Internet of Things (IoT), and artificial intelligence (AI). As a result, O3b mPOWER will strengthen the robust service level agreements (SLAs) offered by our first-generation IP Transit solution.

The O3b mPOWER system's flexibility will drive unprecedented operational agility and efficiency in satellite-based network services. Adaptive Resource Control (ARC), a new cloud-based software capability from SES, ensures synchronisation and optimisation of spacecraft and ground systems. Integration of software-defined wide area networking (SD-WAN) adds another layer of flexibility by affording network operators more bandwidth efficiency, resiliency, and security through application awareness. Together, these innovations help network operators extend IP Transit seamlessly and more efficiently—anywhere on the globe.
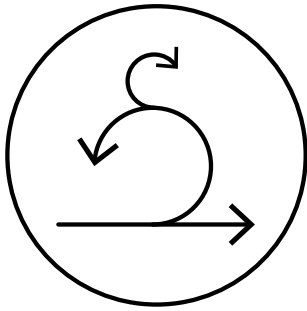
FREEDOM TO CREATE AND DIFFERENTIATE

O3b mPOWER-enabled IP Transit creates opportunities for telcos, mobile network operators, cloud service providers, and other operators to introduce new, differentiated services to under-served markets. With thousands of high-capacity beams per satellite, and new software capabilities integrated into the system, O3b mPOWER affords operators more flexibility to extend IP Transit links into new markets. This includes areas where fibre and other access technologies may be available today, but require a more reliable primary connection, a more scalable link for network resilience, or a diverse path with which to create a logical, higher-throughput connection via intelligent link bonding.

O3b mPOWER's performance and flexibility also enable telcos and other service providers to offer IP Transit services optimised for cloud applications. Designed with more flexibility, O3b mPOWER enables "one-hop" direct IP Transit links to cloud service provider data centres, effectively improving cloud application performance regardless of the end user's geographical location. In addition, proven low-latency performance, flexible bandwidth allocation on forward and return paths, and service offerings that scale to multiple gigabits per second enable network operators to equip the whole enterprise—across multiple locations—with the productivity and economic advantages of cloud applications.
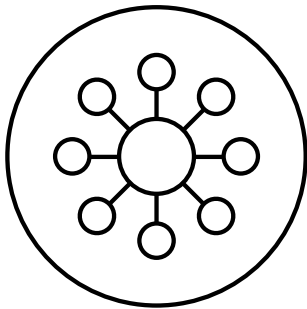
FREEDOM TO INTEGRATE AND OPTIMISE

O3b mPOWER-enabled IP Transit delivers as an end-to-end managed network service, eliminating the operational risk and capital expense of integrating and optimising satellite connectivity with the rest of the network core. As a managed service, IP Transit includes the industry's most robust and comprehensive service level agreement (SLA) covering throughput, latency, and availability—from end to end. Our IP Transit solution is MEF certified, adhering to the same performance thresholds of the metro and core fibre networks operated by telcos and other service providers worldwide.

The addition of ARC optimises our IP Transit services even further. ARC synchronises spacecraft and ground system resources, dynamically controlling power levels, throughput, and frequency allocation to ensure optimised service performance. This gives network planners unmatched flexibility in allocating capacity when and where it's needed, allowing bandwidth on demand, and consumption-based service models. With SD-WAN, our IP Transit services become more secure and application aware, providing you with deep insights into end-user application usage, and more control over network behaviour. A key enabler of intelligent multi-access networking, SD-WAN provides you with the means to steer application traffic over the optimal link, and to create a more efficient and resilient IP Transit solution.
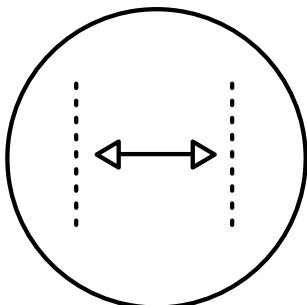
FREEDOM TO ECONOMISE AND SCALE

Innovation across the entire O3b mPOWER system—satellite, ground system, and software technologies—results in exponentially more scale, and lower total cost of ownership per unit of capacity than any available satellite transit service. With O3b mPOWER, we can provision services at highly granular capacity rates, with the flexibility to shape and combine beams as required to match bandwidth needs and avoid wasted spectrum.

Attracted by the proven commercial and operational success of our first-generation O3b MEO fleet, a diverse range of partners are working to develop technology solutions for O3b mPOWER. Innovations in ground systems and software, for example, enable IP Transit services with smarter, more space-efficient customer edge terminals, resulting in more scalable performance and lower cost of ownership. When we combine these capabilities with the terabit-level scale of O3b mPOWER, we provide telcos and network operators of all kinds with a future-proof IP Transit solution that has unprecedented flexibility.

MEET THE GROWING DEMAND FOR CONNECTIVITY

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