



CRUISE mPOWERED

Enabling a new era of guest connectivity experiences

Average bandwidth
consumption per vessel
will increase from

32

Mbps in 2021 to

224

Mbps by 2030

INDUSTRY PERSPECTIVE

In the intensely competitive cruise industry, customer experience is critical. And connectivity is a key aspect of any onboard experience today.

Guests aboard cruise ships expect to stay connected with friends and family, no matter the itinerary. Enabling connectivity to meet their expectations not only helps you elevate the onboard experience, but also brings opportunities for ancillary revenue. However, as cruisers return to sea, cruise operators

need to ensure their onboard networks can accommodate their customers' growing bandwidth requirements. Each passenger can consume multiple Mbps, and the bandwidth demand is expected to increase even further as the cruise customer base grows to include more tech-savvy millennials and Generation Z customers. NSR forecasts that the average bandwidth consumption per vessel will increase from 32Mbps in 2021 to 224Mbps by 2030.



O3b mPOWER provides unprecedented flexibility, scalability, and cloud-scale reach. This can elevate the customer experience, improve crew satisfaction, and reduce operational risk and complexity.

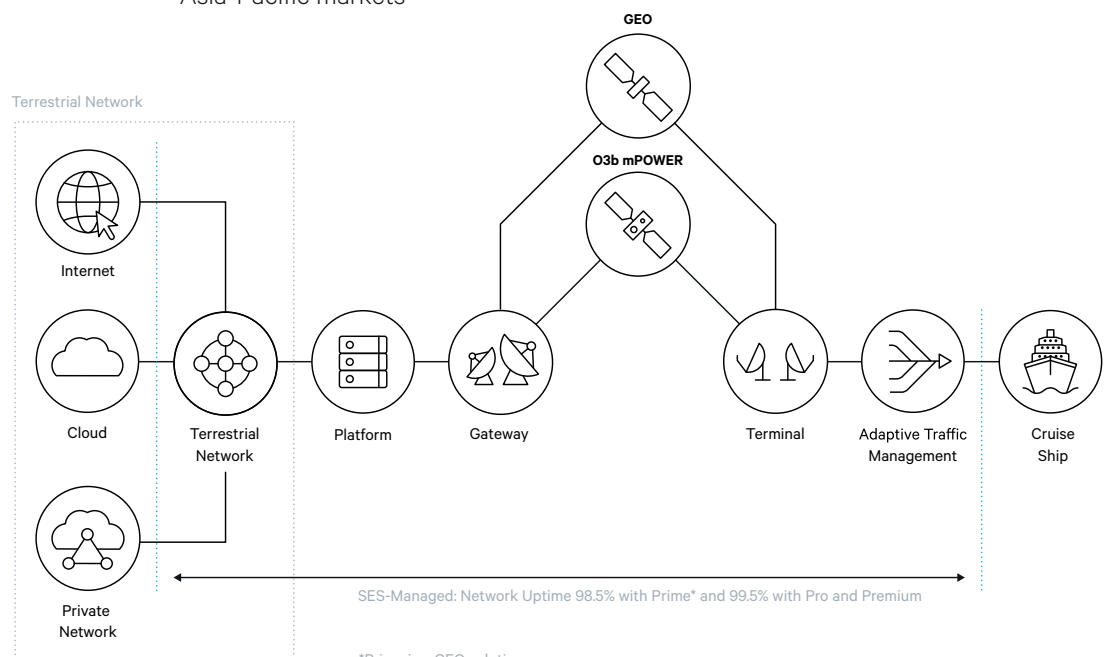
SERVICE DESCRIPTION

Cruise mPOWERED is enabled by O3b mPOWER—our next-generation medium Earth orbit (MEO) communications system. Cruise mPOWERED sets an entirely new standard for cruise ship connectivity worldwide, with industry-best bandwidth per ship and low-latency performance, fully managed end-to-end. In combination with SES's GEO

fleet, Cruise mPOWERED ensures seamless broadband globally. As the only commercially successful multi-orbit satellite operator in the cruise market, SES brings you the right combination of satellite and networking technologies for cruise operators to improve the guest experience on the ship, and provide guests with connectivity similar to what they experience at home.

KEY FEATURES

- A future-proof solution built on operationally proven, terabit-scale MEO technology, ready to grow in lock step with passenger and crew connectivity demands
- Unrivalled combination of low-latency performance and gigabit-scale throughput, supporting thousands of passengers per ship
- Unprecedented flexibility, with demand-driven capacity allocation and traffic routing that can be tailored to individual vessel requirements
- Global network coverage via the industry's only multi-orbit fleet, with unmatched capacity for key demand areas, including the Caribbean, Mediterranean, and Asia-Pacific markets
- Ability to maximise the value of advanced technologies—including the cloud, Internet of Things (IoT), and artificial intelligence (AI)
- Ability to optimise critical cloud workloads and applications via dedicated, private connectivity to top-tier cloud service providers
- Adaptive traffic management, including SD-WAN for optimised traffic prioritisation, quality-of-service (QoS), and application performance
- Dedicated 'follow-the-ship' beams from 100Mbps Committed Information Rate (CIR) to multiple gigabits per second of guaranteed bandwidth per ship





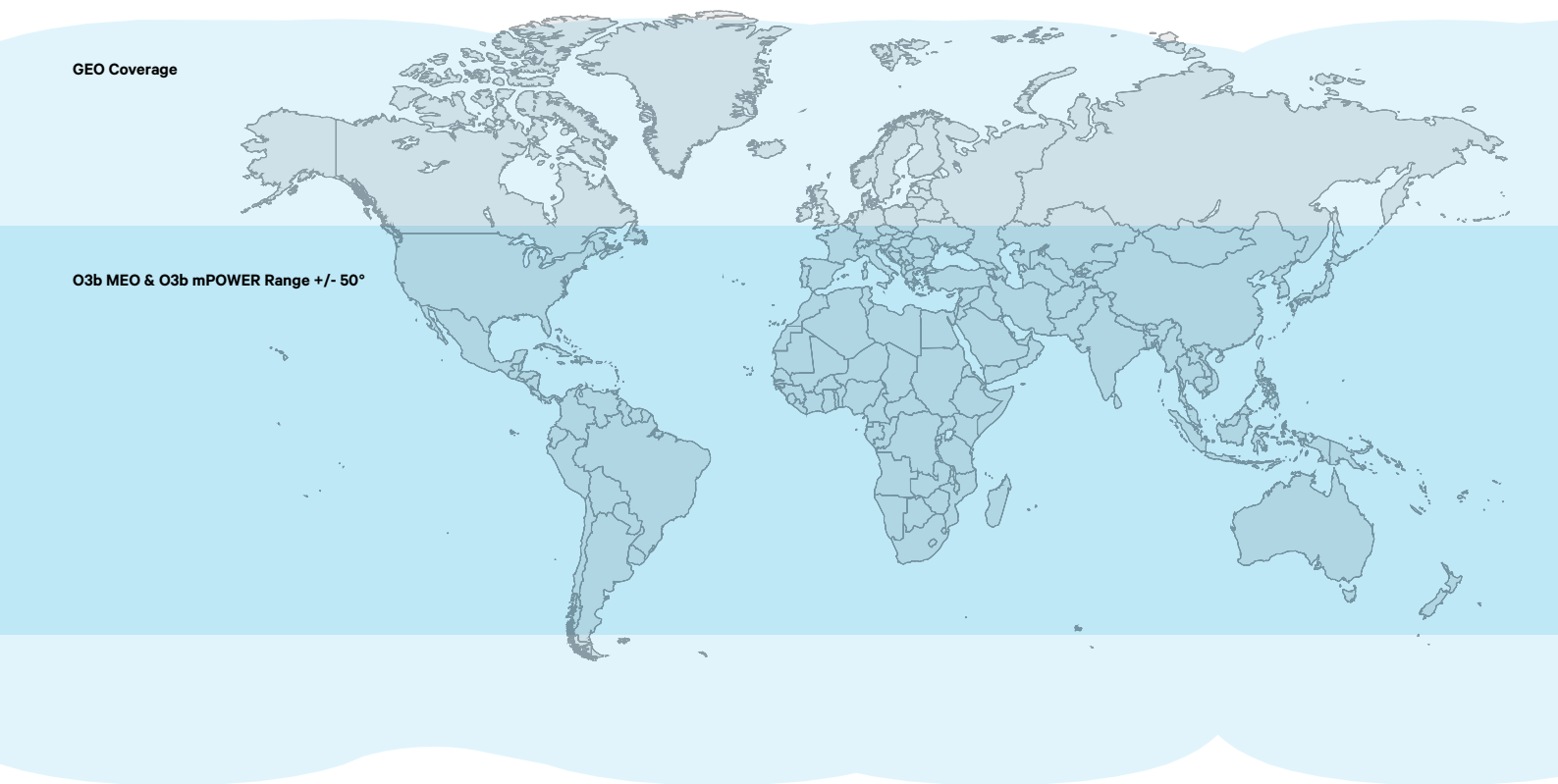
TECHNICAL SPECIFICATIONS

Cruise mPOWERED is available in three service packages—Prime, Pro, and Premium—allowing you to align service features and capabilities to your specific needs.

	Prime	Pro	Premium
Antenna type	Maritime (3-axis stabilised)	Maritime (3-axis stabilised)	Maritime (3-axis stabilised)
Antenna size	2.2 - 2.4m	2.2 - 2.4m	2.2 - 2.4m
Antenna and modem	SES certified	SES certified	SES certified
Number of modems for CONOPS	2	3–5	3–5
Link technology	DVB-S2X, eSCPC	DVB-S2X, eSCPC	DVB-S2X, eSCPC
MEO bandwidth (CIR)	Not applicable	100Mbps–1.5Gbps	100Mbps–1.5Gbps
MEO bandwidth (MIR)	Not applicable	CIR	CIR + 10%
GEO availability for primary service	Yes	No	Yes
GEO bandwidth (CIR)	100Mbps–300Mbps	Not applicable	5–250Mbps
GEO-based back-up (5–70Mbps)	Not applicable	Available	Available
Round-trip satellite latency (MEO)	Not applicable	150ms	150ms
Service availability	98.5%	99.5%	99.5%
Traffic termination	SES gateway or SES-defined point of presence (PoP)	SES gateway or SES-defined PoP	SES gateway or SES-defined PoP
Adaptive traffic management	No	Yes	No
SES Cloud Direct	No	Yes	Yes
Voice	Yes	Yes	Yes

- Three tiers
- Options for GEO connectivity
- Value added service options
 - [Voice](#)
 - [SES Cloud Direct](#)
 - [Adaptive traffic management](#)

GLOBAL COVERAGE MAP



REIMAGINE YOUR BUSINESS WITH CRUISE mPOWERED

With the flexibility to provide seamless regional and global coverage at multi-gigabit scale, Cruise mPOWERED sets a new industry standard for enabling superior guest and crew experiences. It offers three levels of

service that allow you to tailor the right set of performance and networking features to your specific requirements. With Cruise mPOWERED, you're ready to reimagine what it means to delight passengers and crew at sea.

Learn how [Cruise mPOWERED](#) can help you deliver exceptional guest experiences onboard.



Learn more about our full portfolio of services and solutions at [ses.com](#).

Copyright © 2023 SES. All specifications subject to change without notice.