SES

BROCHURE

O3b mPOWER GOVERNMENT SERVICES

O3b mPOWER

PERFORMANCE ABOVE ALL

ENABLE MISSION SUCCESS ANYWHERE

Governments worldwide look to commercial satellite services to meet mission-critical networking needs—at fixed sites or mobile locations on land, at sea, or in the air. Mission success increasingly relies on advanced digital technologies—including high-resolution intelligence gathering and video communications. When predictable performance matters, and contention is not an option, only O3b mPOWER provides high-throughput, low-latency, resilient, and secure commercial satellite communications. Unmatched committed information rates (CIR) enable defence agencies to meet demanding operational requirements. With unprecedented performance, flexibility, and scale, O3b mPOWER seamlessly delivers the time-sensitive information government organisations need to make better decisions faster. For operations where security and enhanced control is paramount, only O3b mPOWER's Sovereign Services support government-preferred waveforms, and connect directly to government gateways. O3b mPOWER Managed Services also offer Naval and Fixed Enterprise operations the same high-performance connectivity via SES-owned and operated gateways.

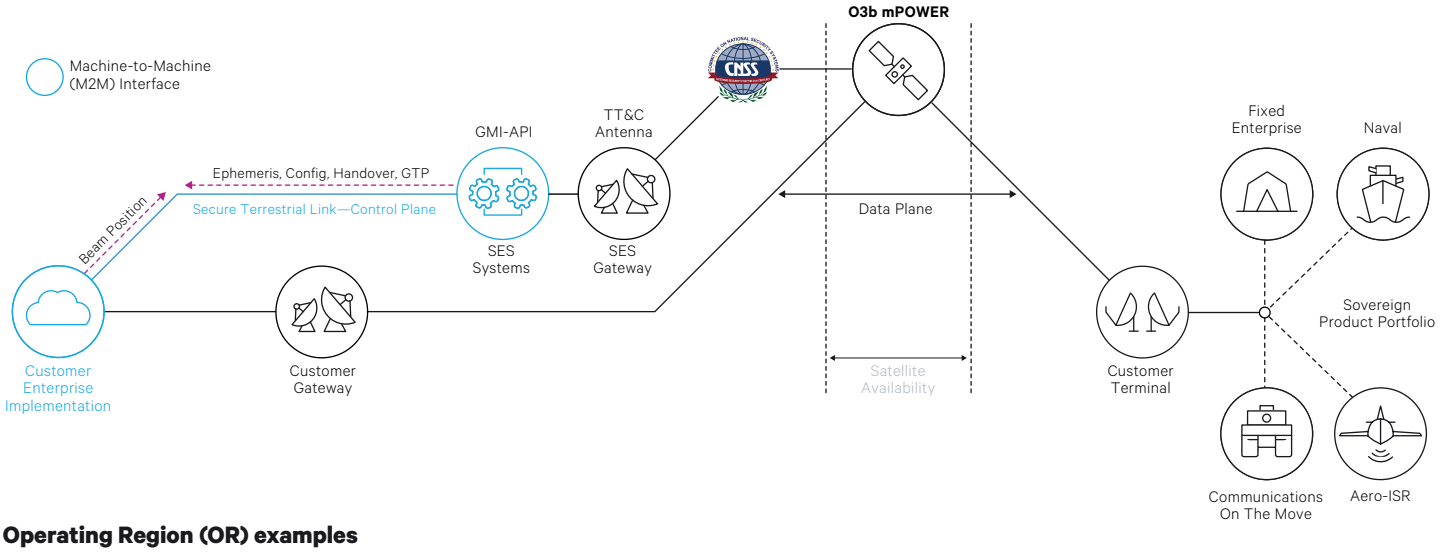
MAXIMISING GOVERNMENT CONTROL WITH SOVEREIGN SERVICES

Unparalleled performance, operational flexibility, and system scale—with enhanced government control

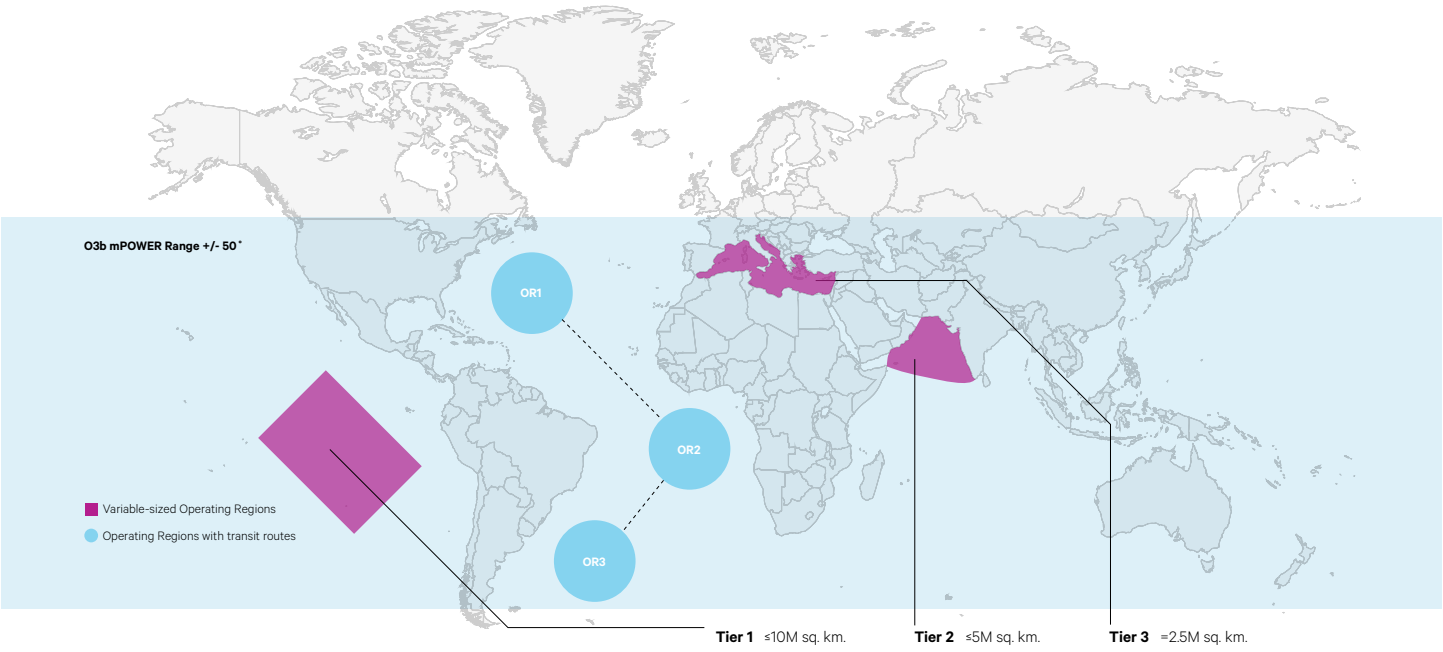
O3b mPOWER Sovereign Services enable governments to maximise sovereign control, reliability, and security while operating on a commercial satellite system. Traffic is routed through a private satellite connection and lands at a government-secure gateway. The open architecture of O3b mPOWER enables customer-preferred hardware solutions and tactical waveforms, and allows standard military encryption, including high assurance internet protocol encryptor (HAIPE) devices.

Sovereign Services deliver low-latency, high-throughput connectivity to users in fixed or mobile locations. Fully digital payloads enable flexible bandwidth allocation when and where it's needed. Steerable, secure beams with location obfuscation enhance mission security by minimising the probability of Naval and Aero-ISR asset detection. Inherent anti-jam features and resiliency are a hallmark of O3b mPOWER, which operates in Medium Earth Orbit (MEO). Sovereign Services provide unmatched security, resilience, and control for managing mission-critical data.

Sovereign Services network architecture



Operating Region (OR) examples



ENABLING HIGH-PERFORMANCE OPERATIONS WITH MANAGED SERVICES

1.5Gbps

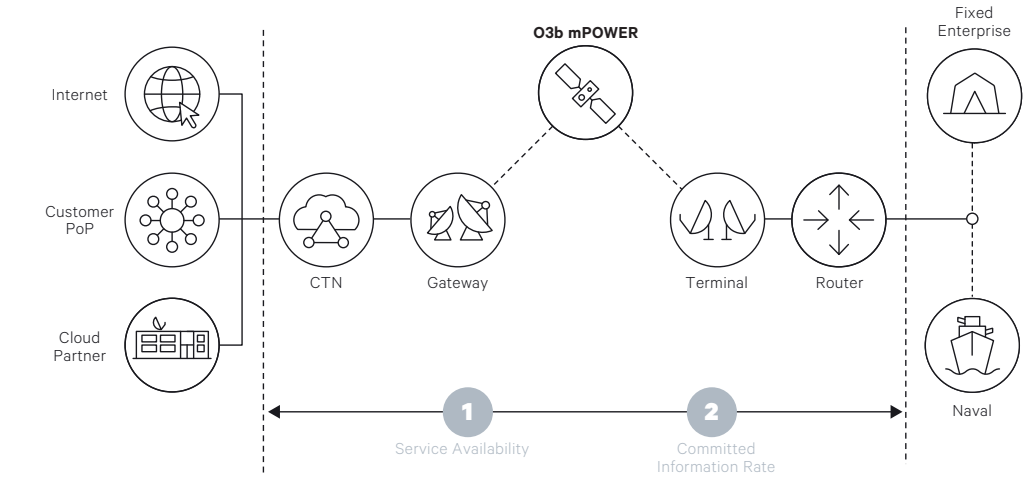
to a single ship or to a remote land-based location or forward operating base

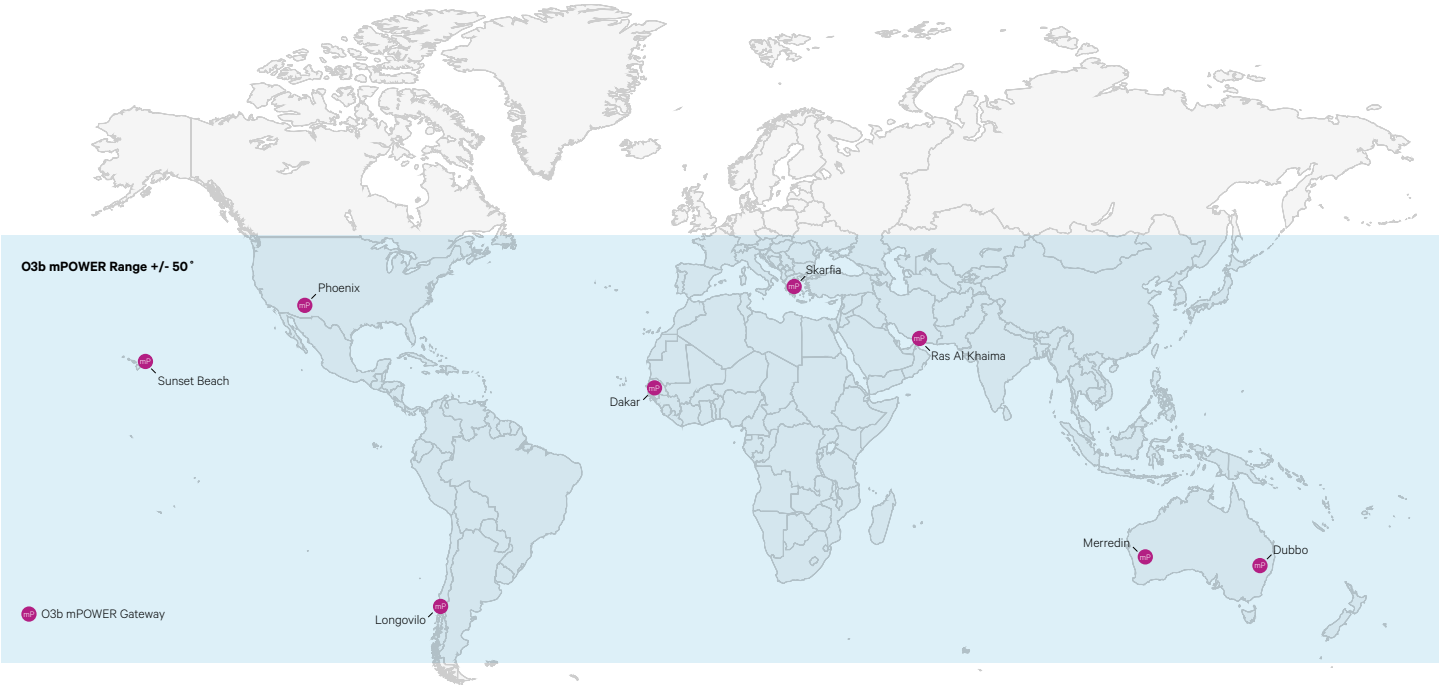
O3b mPOWER Managed Services provide unparalleled high-performance, enterprise-level network solutions—fully managed and supported by SES.

Government customers can leverage uncontended high-throughput, low-latency connectivity up to 1.5Gbps to a single ship or to a remote land-based location or forward operating base. With Managed Services, defence, space, and civil agencies can access a full range of operational, logistical, and back-office applications with predictable quality of service. Manage high-volume mission-critical data transmissions, video briefings, and surveillance information—with enough bandwidth to support personnel morale, welfare, and recreation (MWR) programmes. Our fully managed and supported service also enables private, dedicated connectivity to top-tier cloud service providers.

O3b mPOWER Managed Services easily scale to enable a range of new use cases—from mission-critical communications for small mobile teams at the tactical edge, to more robust MWR services and full regional fibre restoration.

Managed Services network architecture





OUR GOVERNMENT SERVICES PORTFOLIO

Setting a new benchmark for government network performance, scale, and control through O3b mPOWER.

SOVEREIGN AERO-ISR mPOWERED

Unprecedented high-performance and secure network services with unmatched return link throughput unlock the power of multiple high-definition sensors operating at full capacity from a single ISR platform. With low latency provided by O3b mPOWER, government organisations can command unmanned aircraft, provide operational and navigational data to manned missions, and transmit ISR data in real time to central command centres in any chosen location.

TECHNICAL SPECIFICATIONS

The Sovereign Aero-ISR mPOWERED service is available in three packages—Tier 1, Tier 2, and Tier 3.

Constellation	O3b mPOWER		
Satellite availability SLA	99.5%		
Gateway	Sovereign government gateway		
Terminal options	**Tier 1** **Option 1** Customer-selected SES-certified modems and terminals **Option 2** SES-provided 12" (30cm), 18" (46cm), or 9.8" x 10.6" (25cm x 27cm) terminal and modem or micromodem, one-time payment **Option 3** SES-provided 12" (30cm), 18" (46cm), or 9.8" x 10.6" (25cm x 27cm) terminal and modem or micromodem, payment plan included in MRC	**Tier 2** **Option 1** Customer-selected SES-certified modems and terminals **Option 2** SES-provided 12" (30cm), 18" (46cm), 9.8" x 10.6" (25cm x 27cm), or 9.8" x 5.3" (25cm x 13.5cm) terminal and modem or micromodem, one-time payment **Option 3** SES-provided 12" (30cm), 18" (46cm), 9.8" x 10.6" (25cm x 27cm), or 9.8" x 5.3" (25cm x 13.5cm) terminal and modem or micromodem, payment plan included in MRC	**Tier 3** **Option 1** Customer-selected SES-certified modems and terminals **Option 2** SES-provided 9.8" x 5.3" (25cm x 13cm), or 5" x 5.3" (13cm x 13.5cm) terminal and modem or micromodem, one-time payment **Option 3** SES-provided 9.8" x 5.3" (25cm x 13cm), or 5" x 5.3" (13cm x 13.5cm) terminal and modem or micromodem, payment plan included in MRC
Antenna/BUC	25W, 20W	25W, 20W	8W or 25W
Capacity packages	**Option 1** FWD: 512Kbps | RTN: ≤10Mbps **Option 2** FWD: 1Mbps | RTN: ≤25Mbps **Option 3** FWD: 1Mbps | RTN: ≤45Mbps	**Option 1** FWD: 512Kbps | RTN: ≤10Mbps **Option 2** FWD: 1Mbps | RTN: ≤25Mbps **Option 3** FWD: 5Mbps | RTN: ≤25Mbps	**Option 1** FWD: 512Kbps | RTN: ≤3Mbps **Option 2** FWD: 512Kbps | RTN: ≤6Mbps
Coverage Within +/- 50° latitude	**Option 1** Regional service within customer-defined operating region (OR) with radius ≤1,500km **Option 2** Field of view (no intra-gateway roaming)	**Option 1** Regional service within customer-defined OR with radius ≤900km **Option 2** Field of view (no intra-gateway roaming)	**Option 1** Regional service within customer-defined OR with radius ≤300km

SOVEREIGN NAVAL mPOWERED

Industry-best bandwidth scaling, low-latency performance, and ironclad resilience enabled by O3b mPOWER establish an entirely new standard for ship connectivity worldwide. Government-controlled steerable, secure beams with location obfuscation minimise the probability of detection by adversaries, protect personnel and valuable assets, and enable increasingly data-informed operations.

TECHNICAL SPECIFICATIONS

The Sovereign Naval mPOWERED service is available in three packages—Tier 1 (up to 1.5Gbps per ship), Tier 2 (up to 500Mbps per ship), and Tier 3 (up to 100Mbps per ship).

Constellation	O3b mPOWER		
Satellite availability SLA	99.5%		
Gateway	Sovereign government gateway		
Terminal options	**Tier 1** **Option 1** Customer-selected SES-certified modems and terminals **Option 2** 2.4m terminal and/or SES-provided modem, one-time payment **Option 3** 2.4m terminal and/or SES-provided modem, payment plan included in MRC	**Tier 2** **Option 1** Customer-selected SES-certified modems and terminals **Option 2** 1.3m terminal and/or SES-provided modem, one-time payment **Option 3** 1.3m terminal and/or SES-provided modem, payment plan included in MRC	**Tier 3** **Option 1** Customer-selected SES-certified modems and terminals **Option 2** 0.85m terminal and/or SES-provided modem, one-time payment **Option 3** 0.85m terminal and/or SES-provided modem, payment plan included in MRC
Antenna/BUC	2.4m/40W	1.3m/20W	0.85m/20W
Capacity packages	**Option 1** Pre-defined operating region (OR): • 500Mbps – 1,500Mbps • 100Mbps increments **Option 2** Global service for transit between ORs (within MEO coverage): • 45Mbps (2:1)	**Option 1** Pre-defined OR: • 100Mbps – 500Mbps • 50Mbps increments **Option 2** Global service for transit between ORs (within MEO coverage): • 45Mbps (2:1)	**Option 1** Pre-defined OR: • 100Mbps
Link agility	FWD/RTN ratios of 4:1, 3:1, or 2:1	FWD/RTN ratios of 4:1, 3:1, or 2:1	FWD/RTN ratio of 2:1
Coverage Within +/- 50° latitude	Regional service within customer-defined OR ≤10M sq. km Options for 2.5M, 5M, or 10M sq. km	Regional service within customer-defined OR ≤5M sq. km Options for 2.5M or 5M sq. km	Regional service within customer-defined OR = 2.5M sq. km
Number of ships	Per-ship service (up to eight ships can be assigned to a beam, but only one can use it at a time)		

SOVEREIGN FIXED ENTERPRISE mPOWERED

Unmatched high-throughput, low-latency, and secure network services optimised for use cases on land. From mission-critical data transfers to video conferencing and MWR for personnel, only O3b mPOWER offers the scale needed to provide fibre-like services in remote locations. Integration with government gateways and secure private networks maximises data security. Transportable ground terminals enable network deployment or reconstitution within days.

TECHNICAL SPECIFICATIONS

The Sovereign Fixed Enterprise mPOWERED service is available in two packages: Tier 2 (up to 1.5Gbps), and Tier 3 (up to 700Mbps).

Constellation	O3b mPOWER		
Satellite availability SLA	99.5%		
Gateway	Sovereign government gateway		
Terminal options	**Tier 1**	**Tier 2**	**Tier 3**
	Not available at O3b mPOWER start of service	**Option 1** Customer-selected SES-certified modems and terminals **Option 2** SES-provided 2.4m terminal, one-time payment **Option 3** SES-provided 2.4m terminal, payment plan included in MRC	**Option 1** Customer-selected SES-certified modems and terminals **Option 2** SES-provided 1.3m or 1.2m terminal, one-time payment **Option 3** SES-provided 1.3m or 1.2m terminal, payment plan included in MRC
Antenna/BUC	N/A	2.4m/40W	1.2m or 1.3m/20W or 40W
Capacity packages	N/A	**FWD:** ≤1,000Mbps **RTN:** ≤500Mbps	**FWD:** ≤500Mbps **RTN:** ≤200Mbps
Link agility	Customers can choose from FWD/RTN ratios of 3:1, 2:1, 1:1, 1:2, or 1:3		
Link reconfigurability	Monthly changes in demand to flex with operational needs		
Coverage Within +/- 50° latitude	Regional service within customer-defined service area		
O3b mPOWER HW compatibility certification	Customer sponsorship; vendor action		
API integration	Customer sponsorship; vendor action		
Beam portability Within region	**Option 1:** None (static)	**Option 2:** Two weeks notice	**Option 3:** 72 hours notice

SOVEREIGN COTM mPOWERED

Take the command post to the field with high-throughput, low-latency, secure data services for mobile land-based operations. Access high-quality mission-critical operational and navigational data, and videoconferencing while on the move.

Sovereign COTM mPOWERED can be implemented onboard different-sized vehicles to support a wide range of scenarios—from military mobile command posts and surveillance to humanitarian responses.

TECHNICAL SPECIFICATIONS

The Sovereign COTM mPOWERED service provides up to 20Mbps throughput with several options which may be mixed and matched to meet our customer's specific requirements.

Constellation	O3b mPOWER
Satellite availability SLA	99.5%
Gateway	Sovereign government gateway
Terminal options	**Option 1** Customer-selected SES-certified modems and terminals **Option 2** SES-provided 9.8" x 10.6" (25cm x 27cm), or 19.7" x 5.3" (50cm x 13.5cm) terminal with modem, one-time payment **Option 3** SES-provided 9.8" x 10.6" (25cm x 27cm), or 19.7" x 5.3" (50cm x 13.5cm) terminal with modem, payment plan included in MRC
Antenna/BUC	9.8" (25cm)/25W
Capacity packages	**FWD:** ≤10Mbps **RTN:** ≤10Mbps
Link agility	Customers can choose from FWD/RTN ratios of 3:1, 2:1, 1:1, 1:2, or 1:3
Link reconfigurability	Monthly changes in demand to flex with operational needs
Coverage Within +/- 50° latitude	Regional service within customer-defined service area
Beam portability Within region	**Option 1:** None (static) **Option 2:** Two weeks notice[1] **Option 3:** 72 hours notice[1]

[1] Portability request must go through an asset management review to ensure system resource availability.

MANAGED FIXED ENTERPRISE mPOWERED

Ultra-high-throughput, low-latency, and secure data services support a broad range of use cases. Manage mission-critical data, including massive amounts of IoT and sensor information, run HD video conferences, and retain enough bandwidth to enable MWR services.

Managed Fixed Enterprise mPOWERED is the market's only satellite solution that can deliver up to 1.5Gbps of total throughput to a single terminal, and enable private, dedicated connectivity to top-tier cloud service providers.

TECHNICAL SPECIFICATIONS

Constellation	O3b mPOWER			
Service availability SLA	99.5%			
Satellite latency SLA	≤150ms RTT			
Gateway	SES-managed gateway			
Terminal options	**Tier 1**	**Tier 2**	**Tier 3**	**Tier 4**
	Not available at O3b mPOWER start of service	**Option 1** SES-provided 2.4m terminal, one-time payment **Option 2** Same equipment as above, payment plan included in MRC[1]	**Option 1** SES-provided 1.2 or 1.3m terminal, one-time payment **Option 2** Same equipment as above, payment plan included in MRC[1]	**Not available at O3b mPOWER start of service**
Antenna/BUC	N/A	2.4m/40W	1.2m or 1.3m/ 20W or 40W	N/A
Capacity packages	N/A	**FWD:** ≤1,000Mbps **RTN[2]:** ≤500Mbps	**FWD:** ≤500Mbps **RTN[2]:** ≤200Mbps	N/A
Link agility	Ability to choose symmetrical or asymmetrical link ratios (4:1, 3:1, 2:1, 1:1 or 1:4, 1:3, 1:2)			
Link reconfigurability	**Option 1:** None	**Option 2:** Monthly		
Coverage Within +/- 50° latitude	Regional service within customer-defined service area			
Beam portability[3] Within region	**Option 1:** None (static)	**Option 2:** Two weeks notice	**Option 3:** 72 hours notice	
System management NOC	• 24x7 monitoring • End-to-end case and fault management		• Fault identification and alarm handling • Fault triage, isolation, troubleshooting, and resolution	
Internet connection	**Option 1** – Not available	**Option 2** – Available, flex handoff: • Connect to the default SES On-net PoP • Connect to On-net, Off-net, on-premises, or direct-to-cloud PoP		
Terms and conditions	One base year, plus option years (with standard gov early termination)			
Billing	MRC based on CIR; non-contended service			

[1] In Option 2, equipment is amortised over the base years of the original contract. Once the contract is complete, the customer retains complete ownership of the equipment. If the customer chooses to renew the contract, the MRC is updated to no longer include equipment costs.

[2] Based on link budget, SES can provide higher throughput, if necessary, based on requirements.

[3] Ability to port links and capacity across the customer's network within the region.

MANAGED NAVAL mPOWERED

Enable operational systems, advanced logistics tools, and quality of life applications at sea. Land traffic at SES gateways, and manage uncontended bandwidth up to 1.5Gbps for a predefined operational region. Optional link portability allows organisations to define and move to new operational regions and access uncontended 45Mbps connectivity during the transit in between. Private, dedicated connectivity to top-tier cloud service providers is available using SES Cloud Direct.

TECHNICAL SPECIFICATIONS

Constellation	O3b mPOWER		
Service availability SLA	**Option 1:** 98.5%	**Option 2:** 99.5%	
Satellite latency SLA	≤150ms RTT		
Gateway	SES-managed gateway		
Terminal options	**Tier 1**	**Tier 2**	**Tier 3**
	Option 1 SES-provided terminal with two parabolic antennas of 2.4m diameter with modem, one-time payment **Option 2** Same equipment as above, payment plan included in MRC[1]	**Option 1** SES-provided terminal with two parabolic antennas of 1.3m diameter with modem, one-time payment **Option 2** Same equipment as above, payment plan included in MRC[1]	**Option 1** SES-provided terminal with two parabolic antennas of 0.85m diameter with modem, one-time payment **Option 2** Same equipment as above, payment plan included in MRC[1]
Antenna/BUC	2.4m/40W	1.3m/20W or 40W[2]	0.85m/20W
Capacity packages for OR (baseline throughput) Pre-defined OR with CIR	**Option 1** Total throughput 500–1,500Mbps (100Mbps increments) **Option 2** Global service for transit (within MEO coverage): 45Mbps (2:1)	**Option 1** Total throughput 100–500Mbps (50Mbps increments) **Option 2** Global service for transit (within MEO coverage): 45Mbps (2:1)	**Option 1** Total throughput 100Mbps
Link agility	FWD/RTN ratios of 4:1, 3:1, or 2:1	FWD/RTN ratios of 4:1, 3:1, or 2:1	FWD/RTN ratio of 2:1
OR coverage Within +/- 50° latitude	Regional service within predefined home OR ≤10M sq. km • Options for 2.5M, 5M, or 10M sq. km	Regional service within predefined home OR ≤5M sq. km • Options for 2.5M or 5M sq. km	Regional service within predefined home OR = 2.5M sq. km
OR portability[3] Uncontended and within +/- 50° latitude (no more than 3x/calendar year)	**Option 1:** No	**Option 2:** Yes	
Coverage Latitude	**Option 1** Standard coverage (0 to +/-30°)	**Option 2** Extended coverage (+/-30 to +/-50°)	
Number of ships	Per-ship service		
Out-of-band connectivity	Iridium Certus OOB for management and control of mobile terminal		
System management NOC	• 24x7 monitoring • End-to-end case and fault management	• Fault identification and alarm handling • Fault triage, isolation, troubleshooting, and resolution	
Unified customer portal	Included		
Unified API	Included		
Cloud Direct	**Option 1:** Not available	**Option 2:** Available	
Internet connection	**Option 1:** Not available	**Option 2:** Available	
Terms and conditions	**Option 1:** One base year, plus option years (with standard gov early termination) **Option 2:** Five years (no early termination)		
Billing	MRC per ship		

[1] Equipment is amortised over the base years of the original contract. Once the contract is complete, the customer retains complete ownership of the equipment. If the customer chooses to renew the contract, the MRC is updated to no longer include equipment costs.

[2] Higher throughputs on the RTN link will require a 40W transceiver for MEO connectivity.

[3] Customers must provide at least a 72 hours ANP prior to the date of when the ported OR is needed for service. Portability request subject to Asset Management review process to ensure system resource availability.

Learn more about our Government Services at www.ses.com

SES HEADQUARTERS

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