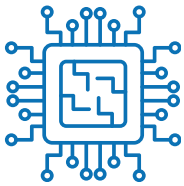
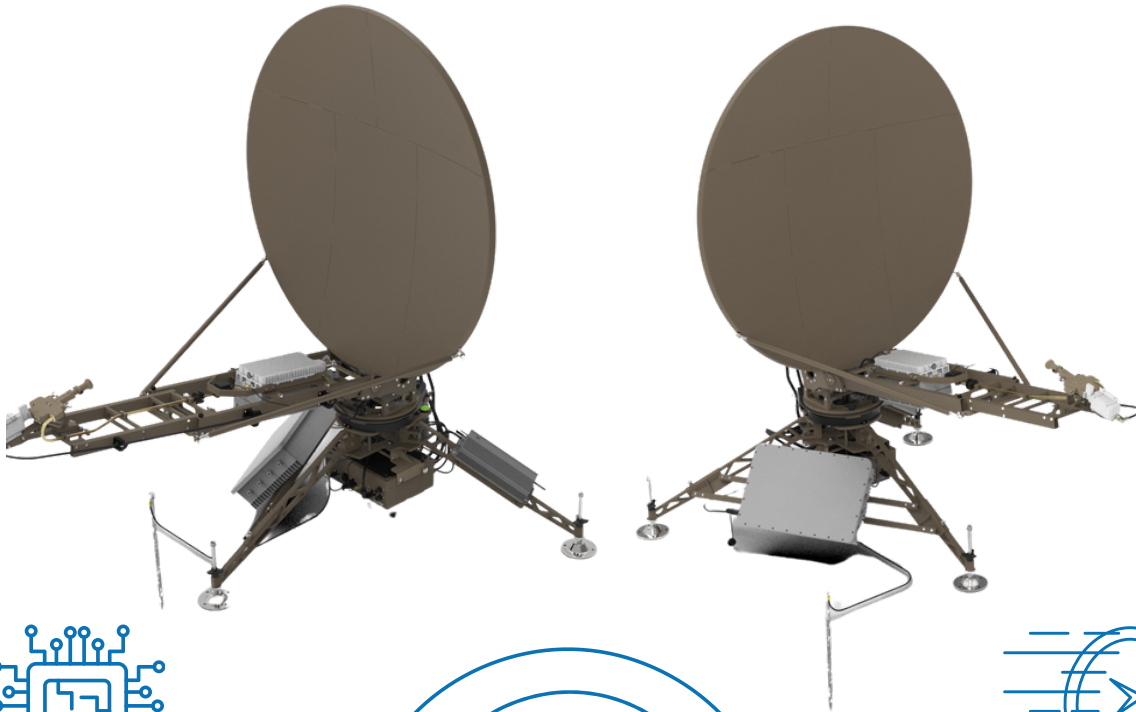


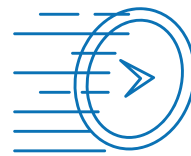
PICO 120a SES O3b mPOWER



Fully integrated flyway terminal



Multiband



Rapid deployment and toolless assembly

The PICO120a is a compact **1.2m multiband auto-pointing terminal** designed for high-performance connectivity over the **SES O3b mPOWER MEO network**. Featuring a no-keyhole design and interchangeable feeds for X, Ku, and Ka bands, it enables rapid **frequency switching** and **flexible deployment**. For seamless MEO operation, terminals are **deployed in pairs** with advanced tracking and handover capabilities to ensure uninterrupted service. The integrated **RAPU** housing the ACU, beacon receiver, control system delivers fast satellite acquisition and effortless GEO compatibility when needed.

SES[^] O3b mPOWER

requtech

Made by Sweden: Reliability and Innovation in Challenging Environments



Ka- Band	
Feed	2 port or 4 port, Feed systems for optional BUC/LNB
TX Frequency	27.5 – 30.0 GHz or 29 – 31GHz
RX Frequency	17.7 – 20.2 GHz or 19.2 – 21.2 GHz
EIRP	65.0 dBW (with 40W BUC) 62.0 dBW (with 20W BUC) 59.8 dBW (with 12W BUC)
Polarity	Circular RHCP / LHCP, mechanical pol. change
Flange for connections	WR28 WR42
Cross Polarization Discrimination (XPD)	30 dB for both TX and RX
Return-loss Tx/Rx	20 dB
Isolation Tx-Rx	80 dB
Tx gain @midband	49.6 dBi
Rx gain @midband	46.5 dBi
Tx AR	0.9 dB
Rx AR	0.8 dB
G/T Rx	24.9 dBi/K
Tracking error	< 0.5 dB with no wind < 1.0 dB with operational wind speeds
Sidelobe	PSD Tx FCC 25.218

M&C Box for fast satellite acquisition

The M&C box houses the ACU, Driver unit, and all sensors required for system monitoring and control. The ACU runs ReQuTechs proprietary Mercury software suite; its GUI can be accessed Web interface via Ethernet.



Mechanical details	
Azimuth	adjustment ± 100°, with pointing accuracy 0.1°
Elevation	adjustment 0-90°, with pointing accuracy 0.1°
Pointing stability	≤ 0.16°
Beam drift	Under wind flow 75 km/h - beam drift below 0,35°
Time to acquisition	Typically 5 minutes
Assembly Time	< 20 mins
The Mean Time To Repair (MTTR)	<1 hour
Retrace time	Non-single-antenna systems: • The terminal has an average retrace speed of at least 3°/s to minimize overall retrace time during satellite handovers or repositioning events. Single-antenna systems: • The terminal has a retrace time shorter than 0.5 seconds.
Weight	
Packaging: Option of soft or hard cases	Total system weight. (2 antennas 180 kg) Singel antenna operation has weight of 96 kg and a retrace time of 30 seconds and is integrated with BUC, LNB, PSU. M&C Box and Modem. secondary antenna weight 84kg.

Requitech AB, based in Linköping, Sweden, is at the forefront of satellite communication technology. We specialize in developing high-performance, reliable satellite communication systems. Our mission is to revolutionize communication capabilities, enhancing global connectivity through innovative solutions.

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Electrical Power and Grounding	
AC Power Input	- Operates from 100–240 VAC (±3%), 50/60 Hz (±3 Hz), single-phase delta or wye configurations. - Requires a facility- or integrator-provided uninterruptible power source (UPS).
Optional DC Power Input	- Supports –48 VDC (positive-grounded, Telco-compliant) power systems. - Compatible with ETSI EN 300 132-2 normal voltage range: –40.5 to –57 VDC.
Peak Power Consumption	1.2 m terminals: peak ≤ 250 W per antenna (excluding CFE).
Power Distribution	The terminal internally distributes all required power from the mains interface to all subsystems, including outdoor / antenna-mounted CFE.
Surge Protection	Equipped with user-replaceable surge protection devices.
Grounding	- All relevant antenna system components shall be grounded to a dedicated grounding lug on each antenna mount. - Supports 6–12 AWG ground wire.
MTBF	
Reliability	- Our antenna system delivers an MTBF of ≥ 80,000 hours, ensuring long-term, dependable operation. - For single-antenna configurations, the system maintains full performance by reliably executing Break-Before-Make handovers without interruption. - We validate reliability through accelerated life testing, using measured failures (MTTF) and total accumulated operating hours to confirm MTBF performance.
Operational Availability and Life	
Availability & Service Life	- Our terminal is designed for ≥ 0.999 operational availability, ensuring less than 526 minutes of downtime per year under normal operating conditions. - This availability assumes proper on-site spares and personnel. - Downtime accounts for component replacement or maintenance that affects user traffic, but excludes weather events, loss of prime power, spacecraft outages, and non-critical maintenance. - Our terminal delivers a minimum operational life of 10 years, provided standard maintenance and repairs are performed. - User-replaceable components are engineered for damage-free serviceability over the full design life, with fasteners, brackets, and connectors selected to withstand worst-case environmental conditions and allow repeated disassembly without degradation.
Maintenance Interval	≥ 1 year
Certifications	CE, FCC and ITU-R S.465-6

Environmental details	
Environmental Durability	Built to perform in extreme conditions. Dry, dusty deserts, coastal salt exposure, and UV-intense environments. IP67-rated harnesses and pest-resistant materials ensure long-term reliability.
Temperature - Operating Range	-20°C to +60°C (-4°F to +140°F).
Temperature - Storage Range	-40°C to +70°C (-40°F to +160°F)
Solar Loading	- Black: 98 W/m² (9 W/ft²) - Gray: 76 W/m² (7 W/ft²) - Light Color: 33 W/m² (3 W/ft²) - White/Metallic: 11 W/m² (1 W/ft²)
Humidity	100% with condensation
Altitude	- The terminal operates without degradation up to 3048 m (10,000 ft) above sea level. - For altitudes above 3048 m, the design supports temperature de-rating of 2°C per additional 305 m (1,000 ft) elevation.
Lightning Protection	The terminal withstands ±5 kV close lightning strikes.
Electrostatic Discharge (ESD)	±15 kV
Wind Resistance	Operational; 56 km/h (gusts 75 km/h), degraded performance up to 100 km/h Survival: Up to 120 km/h (in pos. 90 deg. for beam) Antenna must be bolted or tied to the ground above 50 km/h wind load
Seismic Survivability	Designed to withstand seismic events up to 0.3 G horizontal and 0.15 G vertical
Corrosion Protection	Corrosion-protected via galvanizing

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