



SDL-1000 SPACE DATA LINK

ADVANCED COMMUNICATION BACKBONE

Supporting secure, multi-domain data transfer

In today's challenging operational environments, reliable, protected communications are critical for mission success. The Space Data Link (SDL)-1000 from Collins Aerospace offers a data transfer infrastructure that supports Joint All Domain Command and Control (JADC2) requirements for real-time information exchange between Low-Earth Orbits (LEO) and the terrestrial domain in the connected battlespace. A trusted, reliable capability, the SDL-1000 is currently supporting the U.S. Space Development Agency's (SDA) Tranche 1 Transport Layer (T1TL) program.

Based on our TacNet™ Tactical Radio, a proven solution with more than 35 years of operational deployments and technological development, the Collins SDL-1000 is the most compact and advanced space-based, Link 16 transceiver available. Built for agility, SDL-1000 uses superior multi-netting technology, allowing it to receive up to four nets in a single slot or four slots on the same net in a single slot.

Providing modified Link 16 capabilities for LEO applications, SDL-1000 securely transfers data between constellations and airborne, ground or maritime Link 16 networks, with low-latency data transport, sensor-to-shooter connectivity and direct-to-weapon platform connectivity.



KEY FEATURES & BENEFITS

- Low-Earth Orbit Link 16 solution
- Optimized for rapid network entry
- Meets challenging SWaP requirements
- Mission-focused payload configurations capable of joining multiple networks per orbit
- Radiation-tolerant for low-Earth orbit environment
- CMN-4/CCR-4 small form factor
- RF output power 63 watts





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ADDITIONAL CAPABILITIES

CMN-4: Concurrent Multi-Netting x4	Receive up to four nets in a single slot
CCR-4: Concurrent Contention Receive x4	Receive up to four messages on the same net in a single slot
OTAR: Over-the-air rekeying	Enables key load from the Link 16 network in addition to host loading

CHARACTERISTICS

Performance	<ul style="list-style-type: none"> • L Band (969 MHz to 1206 MHz) • Power input 28 VDC • RF Power out 63 W • Power consumption < 225 W peak < 65 W average • Interfaces Ethernet, RS-422 • Waveforms with doppler and timing compensation for LEO operation
Environmental	<ul style="list-style-type: none"> • Storage temperature -54 C to +77 C • Operating temperature -40 C to + 71 C • Designed for LEO operations • Radiation-tolerant for 5 years on orbit • Acceleration \leq 45 g • Environmental MIL-STD-810F • EMI MIL-STD-461E • Power MIL-STD-704E • Passive cooling utilizing conductive mounting surface
Physical	<ul style="list-style-type: none"> • Weight: 5.3 lbs or 2.4 kgs • Size: 6.3 in x 4.4 in x 3.6 in • Volume 85 in³ (1,400 cc) • Connectors Micro D and TNC

Specifications subject to change without notice.