

# STL SATELLITE TIME & LOCATION SERVICE

Powerful, secure, resilient  
GPS/GNSS backup solution



## Problem

You have a datacenter with limited rooftop access, making it difficult to deploy a traditional outdoor antenna.

You have a critical application that requires GPS backup. You cannot afford the risk of a system failure due to intentional or unintentional interruption of GPS service.

## Solution

STL (Satellite, Time & Location) is a revolutionary source for precision time broadcast from the Iridium® satellites constellation. Orolia has partnered with Satelles to integrate this signal into the SecureSync platform, providing a secure and accurate timing reference that can augment or take the place of GPS in RF denied environments. STL works indoors using a small patch antenna that mounts right near your server rack – no rooftop antenna needed. The STL signal can extend deep into buildings where GPS signals are too weak to reach. As a bonus – because the signal is encrypted and uses a license key specific to each receiver, it is almost impossible to spoof. When used in tandem with GPS and other GNSS signals, STL provides a powerful, resilient backup for critical timing applications.

- Works indoors
- Mounts right near your server rack ... no rooftop antenna needed
- 1000x stronger than GPS
- Delivers timing even in GPS-denied environments
- Encrypted signal resists jamming and spoofing
- Incredibly accurate ... +/- 500 ns to UTC
- Specifically designed for timing applications

**Safran Electronics & Defense is with you every step of the way, building in the intelligence that gives you a critical advantage in observation, decision-making and guidance.**



**The Only Global, Encrypted Signal Reference Commercially Available Today**



**Mechanical**

- Size 57 mm dia. X 15 mm H

**Cable**

- 96" cable standard

**Physical/Environmental**

- Weight: 160 g
- Enclosure: Radome: ASA plastic, Base: Zamak white metal
- Attachment method: Magnet
- Oper Temp. Range -40 to +85 oC
- IP67 and RoHS compliant
- Shock: Vertical axis: 50 G, other axes: 30 G
- Vibration: 3 axis, sweep = 15 min, 10 to 200 Hz sweep: 3G

**How to order**

STL is available as an annual or multi-year subscription service. Choose the STL option card or order it already integrated into a SecureSync.

**1204-3E STL option card**

The STL card adds the ability to use encrypted satellite signals as an input reference. Such satellite signals are suitable for use indoors.

**Signal Comparison to GPS**

	GNSS	STL
Timing accuracy	-20 ns	-200 ns
Anti-jam	Low signal level – easily jammed	30-40 dB stronger signal – difficult to jam
Anti-spoof	Encrypted signals for military users only	Encrypted signal available to all users
Coverage	Global precision degrades at poles	Global coverage increases at poles
Indoor operation	Very limited	Widely available

**STL Antenna Specifications**

- Active magnet mount Iridium® antenna
- Custom high gain, 5 dBic dual-feed patch
- Axial ratio < 2 dB over full bandwidth
- 15 KV ESD circuit protection
- IP67 weather proof housing
- Robust industrial grade enclosure
- RoHS compliant, ideal for harsh environments
- Magnet or screw mount
- Antenna gain (dBic,100mm ground plane) 4.5

**Electrical**

- Frequency bandwidth 1615 to 1626.5 MHz
- Polarization RHCP
- LNA Gain 26 dB (min)
- Input voltage 2.5-12 VDC
- Current 19 mA
- Cross polarization rejection typically 20 dB
- VSR (at antenna) < 1.5:1 typ
- ESD circuit protection 15 KV air discharge
- Noise figure 1 dB typ



	Input
Quantity	1
Connector	SMA
Maintenance Port	RJ45
Supplied with Iridium indoor antenna with 96" cable	

**Ordering Information**

**1204-3E:** STL signals module

**STL-SS-1Y:** STL annual subscription service Ancillary kit available for already-fielded unit. Multi-year subscriptions are also available. Contact your Safran salesperson for details.

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BY TRUST**



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