

SGS824-T1SSM(WI) TRANSeon 5-in-1 antenna, 4 Tri-band GNSS and 1 WiFi

- **Durable - rugged design and UV stabilized radome for longevity**
- **Ease of installation - one antenna serving 4 GNSS devices**
- **Performance - high precision tri-band active GNSS antenna**
- **Reliable – innovative smart splitter embedded**



Introducing Sinclair’s cutting-edge SGS824 antenna, engineered with an embedded tri-band GNSS antenna, a smart splitter, and dual-band Wi-Fi support. This pioneering design not only enables the antenna to generate four concurrent GNSS signal outputs, but also supports both 2.4GHz and 5GHz Wi-Fi bands, thus enhancing its interoperability with a multitude of GNSS-enabled and Wi-Fi devices.

The tri-band GNSS antenna supports all navigation constellations: GPS L1/L2/L5, Galileo E1/E5a/E5b, GLONASS G1/G2/G3, and BDS B1/B2/B3, making it an indispensable tool for applications requiring high-accuracy location data.

Crafted from superior quality materials, this antenna assures the stability and reliability of signals under diverse environmental conditions. The embedded smart splitter, a unique feature, constantly detects the receivers’ status. Upon a failure, it switches to the next receiver as the power source and therefore maintains the uptime of the whole system.

This antenna’s standout capability lies in delivering four GNSS signal outputs alongside dual-band Wi-Fi support. This versatile design supports simultaneous connections to multiple devices, providing an efficient and cost-effective solution that caters to modern navigation, location-based services, and wireless communication needs.

The integrated design simplifies installation and saves space by reducing the need for multiple separate components. The smart splitter maintains uniformity and integrity of signals across all four GNSS outputs, ensuring optimal performance for each connected device.

Step into the future of navigation and wireless technology with this state-of-the-art GNSS antenna. With its smart splitter, dual-band Wi-Fi functionality, and support for a wide range of constellations, users can expect a seamless navigation experience, enhanced wireless connectivity, improved multitasking capabilities, and a significant boost in productivity and operational efficiency. This antenna represents the epitome of technological innovation in the world of navigation and wireless communication.

A la carte customizations are available. Please call your Sinclair Sales Representative or Customer Service for details.

Region	United States	Europe, Middle East, and Africa	Canada, Caribbean, and Latin America	Asia-Pacific
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ELECTRICAL SPECIFICATIONS

	GNSS element	
Frequency Range	1164-1286 MHz	1525-1615MHz
Number of Ports	4	
Connector	SMA Male	
Polarization	RHCP	
Impedance	50 Ohm	
VSWR	1.5:1 typ / 1.8:1 max	
Peak Gain	≥ 4.0 dBi	
LNA Gain	38 dB ¹	
Axial Ratio	≤ 1.5 dB at Zenith	
Supply Voltage	3 to 16 VDC ²	
Current Consumption	55 mA typ	
Noise Figure	2 dB typ ³	
Port to Port Isolation	25 dB	
Out of Band Rejection	>55 dB @ <1050 MHz >30 dB @ <1125 MHz >45 dB @ >1350 MHz >40 dB @ <1450 MHz >35 dB @ >1690 MHz >45 dB @ >1730 MHz	

	WiFi Element	
Frequency Range	2400-2500 MHz	4900-5900 MHz
Gain	3 dBi ⁴	5 dBi ⁴
Number of Ports	1	
Pattern	Omni	
VSWR	1.5:1 typ / 2:1 max	
Impedance	50 Ohm	
Connector	SMA Male	
Polarization	Vertical	

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Product Specification Sheet		SGS824		Issue A Dated: 6-2-2023

MECHANICAL SPECIFICATIONS

Diameter	5.57 in (146 mm)
Height	1.95 in (50 mm)
Cable – WiFi port	ENVIROFLEX_142
Cable – GNSS Port	ENVIROFLEX_316_D
Radome	UV stabilized ABS, UL94 HB
Radome Color	White
Ingress protection	IP67 ⁵

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	-40 to +140 °F / -40 to +60 °C
Compliance	EMC: IEC 61000-4-3

Note:

1. ± 3 dB. Splitting loss and the loss of the cables are compensated by LNA
2. On each GNSS output port
3. At 77°F / 25°C
4. ± 1 dB; excluding cable loss
5. After installation following the installation manual

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