STL-FG-000020-S1

ACCESS Function Signal Generator, DC – 2.5 MHz

STL-FG-000020-S1 is a portable, programmable, touchscreen-controlled Function Signal Generator designed and manufactured for standard test instrumentation, communication, and radar systems as a local function signal source. It is a sine/cosine wave generator optimized for driving single-sideband modulators. The generator provides two outputs, in-phase and quadrature (I/Q), with adjustable DC offset, relative phase, and gain. The generator's output spans up to 2.5 MHz, sufficient to simulate a Doppler shift of Mach 10 at 94 GHz. The output amplitude can drive I/Q mixers with an input requirement of ±4 Vp-p at over 20 mA. This instrument integrates an advanced embedded processor, which runs stably and responds quickly. It supports direct touchscreen control via an easy-to-access HMI or remote control via the USB and Ethernet ports from a computer. It can perfectly support Eravant's Radar Target Simulator, and when combined, they can achieve the best testing performance.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	DC		2.5 MHz
Frequency Step Size		0.596046 Hz	
Frequency Flatness		< 1 dB	
I/Q Adjustable Values		Amplitude, DC Offset, Phase	
Output Amplitude		< 4.1 Vp-p	
Output Amplitude Step Size		5 mV	
Output Offset		± 500 mV	
Output Offset Step Size		1.25 mV	
Output Current		< 40 mA	
Output Impedance		10 Ω	
Current Monitor Scale Factor		10 mA/V	
Selectable Sideband		Upper, Lower, Double	
Phase Trim		± 45º at each Sideband	
Phase Step Size		0.0055º	
Internal Reference Stability		± 30 ppb, after warmup	
Internal Reference Output		10 MHz/ ±9 dBm typ, 50 Ω	
External Reference Input		10 MHz/ 0 dBm ±3 dBm, 50 Ω	
Control Interface		Touch Screen/ Serial/ Ethernet	
Supply Voltage		+5 ±0.25VDC	
Current		1,100 mA	2,200 mA
Specification Temperature		+25 °C	
Operating Temperature	0°C		+50°C

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FEATURES

- Easy Control
- Portable
- Low Phase Noise

APPLICATIONS

- Test Lab
- Instrumentations
- System Reference Source

SUPPLEMENTAL DETAILS

Mechanical Specifications:

Item	Specification
IF-I Output	SMA (F) Connector
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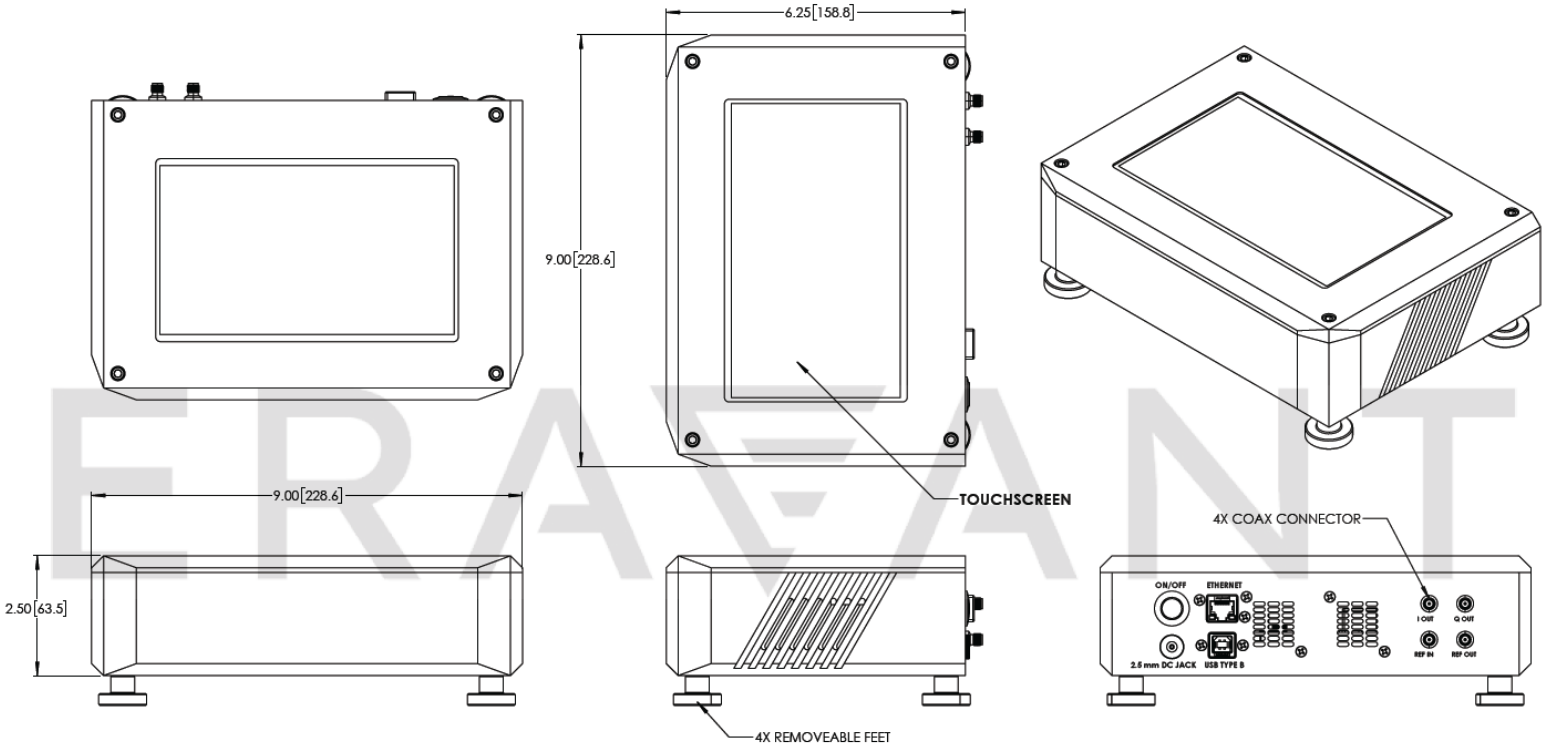
Internal Ref. Output	SMA (F) Connector
External Ref. Input	SMA (F) Connector
Communication Port	USB Type-B, Ethernet RJ-45
DC Bias	2.5 mm DC Jack (AC-to-DC power converter included)
Body Material	Aluminum
Finish	Black Anodized
Dimension	9.00’’(L) x 6.25’’(W) x 2.50’’(H)
Outline	TL-FG-S1

Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



NOTE:

- Test data provided is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.

MAKING MILLIMETERWAVE ACCESSIBLE