RSR GPS RF-Transcoder / 10-Channel GPS Simulator, 2.3 x 1.6 inches

"the next generation in frequency and timing"

- ➤ **Real-Time NMEA to GPS-encoding**
- ➤ **CSAC option for holdover**
- ➤ **10 channels GPS L1 C/A RF-output**
- ➤ **Transcode any GNSS to legacy GPS**
- ➤ **3V to 36V supply, 1.2W power**
- ➤ **PRELIMINARY SPECIFICATION**

TYPICAL ELECTRICAL SPECIFICATIONS:

Module Specification:	
Applications:	• Retrofitting legacy GPS systems with SAASM, M-Code, CSAC-Holdover, Glonass, Galileo, BeiDou, or Inertial Navigation System • 10-channel GPS simulation for manufacturing of GPS receivers, especially timing-related GPS • Low-Cost general-purpose Laboratory GPS-Simulation for R&D
Features:	• Generates a GPS L1-C/A code RF-output as if the signal where coming from a Live-Sky GPS antenna. Full-constellation GPS output • Compatible to SAASM receivers (L-3, Rockwell Collins, and others) • Low-latency NMEA position to GPS RF-Output encoding (<100ms) • Encodes time with nanosecond accuracy for GPS Timing Receivers • 10MHz and 1PPS output, as well as 1PPS external ref. timing input • Built-In fully-functional optional CSAC GPSDO, or high-stability TCXO • USB-powered (3V to 5.8V), 1.2W, or single LiIon/LiPo cell • Optionally externally powered (7V to 36V) • Emulates antenna current for products that sense external antennae such as the Rockwell DAGR • Glue-less connection to Rockwell Collins RSR SAASM GPS Puck, and u-Blox GNSS receivers as the PNT reference via RS-232 port • Fully controllable via SCPI commands over the optional USB port • Provides power and initialization to external GNSS receiver • Plug-and-Play: just plug in power, and the module will start the simulation and RF-output by itself
Data/Power connectors	Mini-USB for power and SCPI, 12-pin 2mm Hirose for power and external GNSS
Built-in Inertial Navigation System	9-degrees of freedom Accelerometer, Gyroscope, and Magnetometer INS
Outputs	One 3V CMOS 1PPS output, one 10MHz CMOS 3V output, disciplined by external 1PPS reference or internal CSAC Atomic Clock One RF SMA, GPS L1 C/A code, -100 to -125dBm
Spectral Purity (1MHz to 13.2GHz)	< -33dBc in-band (L1, +/-20MHz), < -80dBm out-of-band
Harmonics of L1 (1.57542GHz)	< -150dBm
USB Control	SCPI-99 Control at 9.6K, 19.2K, 38.4K, 57.6K, 115.2K
External GNSS receiver compatibility	Any NMEA compatible source, direct control of Rockwell Collins GB-GRAM and MicroGRAM SAASM GPS, and u-Blox GNSS receivers
USB SCPI Control/Monitoring Port	Compatible to any terminal program and JLT-GPSCon, NMEA output sentences
Operating Temperature	-40°C to +75°C with TCXO, -10 to +70C with CSAC
MTBF	> 600,000 Hours with TCXO

RSR Transcoder Module PN: 1005123/1005124   MADE IN USA