CLAW GPS Simulator/Transcoder Desktop Unit

"the next generation in frequency and timing"

- ➢ **Full-Constellation GPS Simulation**
- ➢ **18 channels GPS L1 C/A RF-output**
- ➢ **USB or externally powered**
- ➢ **Accurate RF power control**
- ➢ **No external PC required**
- ➢ **PRELIMINARY SPECIFICATION**

TYPICAL ELECTRICAL SPECIFICATIONS:

Module Specification:	
Applications:	• Up to 18-channel GPS simulation for testing of GPS receivers, especially timing-related GPS • Low-Cost general-purpose Laboratory GPS-Simulation for R&D • GPS Spoofing and Jamming testing • Retrofitting (transcoding) of GPS units with SAASM, M-Code, CSAC, Glonass, Galileo, BeiDou, INS • Testing of production GPS receivers for Leapsecond-, and/or week 1023 rollover-events
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 • Fully controllable RF output power for receiver sensitivity testing • Built-in RF Signal generator function for jamming and interference testing • Compatible to external GNSS receivers as PVT source (uBlox, Rockwell Collins, etc) • Low-latency NMEA position to GPS RF-Output encoding (<100ms) • Encodes time with nanosecond accuracy for GPS Timing Receivers • 10MHz and 1PPS inputs and outputs, can be connected to external 10MHz reference • USB-powered, 1.2W allows long-term battery operation • Optionally externally powered (6.5V to 32V) • Configurable antenna DC load simulation for receivers requiring antenna current draw • Fully controllable via SCPI commands over the optional USB port • Automatic detection and initialization of externally connected GNSS receiver sources • Plug-and-Play: just plug in power, and the module will start the simulation and RF-output by itself • Internally stored waypoint vector file can be used to execute complex simulation scenarios
Data/Power connectors	Mini-USB for power and SCPI, 16-pin 2mm Hirose for power and external GNSS
RF output Accuracy	GPS Signal accuracy better than 0.5m rms, better than 5ns rms, better than +/-1.5dB
Internal monitoring GNSS receiver	Built-in 8th generation GNSS receiver for background monitoring of RF output power, and RF signal quality
Outputs	One CMOS 1PPS output, one 10MHz CMOS output, disciplined by external 10MHz or 1PPS reference One RF SMA, GPS L1 C/A code, -100 to -145dBm, +/-1.5dB accuracy
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	Extended Temperature range of -40°C to +70°C
MTBF	> 600,000 Hours at +40°C

CLAW GPS Simulator Desktop Unit PN: 1005125   MADE IN USA