



GPS-SU-8 is the solution designed by Digital Instruments mainly for broadcasters who use *GPS-DS-8*, since they are made of the same detachable GPS module. In case of failure, the technician can go to the site with the box ready, and remedy the problem with an intervention of a few seconds, done in complete autonomy. It has the same sophisticated technological structure of the *GPS-DS-8*, but at lower prices, designed for emergency operations in the secondary transmitting stations.

GPS-SU-8 is a multi-output reference generator of Time and Frequency (PPS, 10 MHz). It consists of a GPS receiver with high-stability oscillator (OCXO). In the standard version there are 8 independent outputs of the reference frequency of 10 MHz and the same of time reference PPS (pulse per second).

GPS-SU-8 is extremely reliable because the equipment is completely independent, since it's equipped with internal power supplies and signal amplification of 10 MHz and PPS. Upon the occurrence of failure of the generator module, occur a series of electrical signals and generate SNMP traps.

GPS-SU-8 is particularly easy to use both for installation and maintenance. All functions are fully accessible via PC in local mode, means of communication RS-232, or remote communication through 10/100 Ethernet network with TCP / IP. Provides information about its operating status including through the use of 7 dry contact on the back of the unit. Allows remote management from 4 to be coupled contacts photos on the back of the unit. It is fully standardized SNMP protocol in which we provide from the exchange all information pertaining to the electrical state of the two modules.

- High-stability inner oscillator OCXO with a full frequency drift of $\pm 1 \times 10^{-10}$ free run day operation,
- 12 channels GPS receiver with automatic tracking and timing's error management system,
- New design DPLL fast lock,
- 8 independent sine wave outputs at 10 MHz frequency with 13 dBm power level each,
- 8 PPS outputs with TTL level terminated at 50 Ohm,
- Device supply in logical OR,
- AC 110Vac at 240 Vac 50/60 Hz,
- Removable drawer container 130x220x38 mm.

Frequency reference

Signal: 10 MHz sine wave.
Spectral purity: -70 dBc at full output power. (harmonics), -75 dBc at full output power (non-harmonics).
Phase noise: -125 dBc at 1 kHz.
Outputs: 8 independent.
Output level: 13 dBm each output.
Output impedance: 50 Ω .
Output connectors: BNC.
Stability: 1e-12 daily average OCXO locked at GPS in SA.
OCXO Standard: 1e-10 daily average OCXO in free run,
OCXO SC: 2e-11 daily average OCXO on free run.

Time reference

Signal: 1 PPS, 100 μ s Duty, Rising Edge.
Output: 8 independent.
Output level: TTL 5 Vpp, Square wave.
Output impedance: 50 Ω .
Output Connectors: BNC.

GPS section

Receiver: 12 Channels L1 1575.42 MHz.
Tracking: correlation over 12 satellites.
PPS precision: < 50 ns on SA.
Antenna connector: TNC.
Capture time: < 4 min.

Signaling

Serial connection: RS-232 Connector DB9 Male \pm 15 kV (ESD).
Network connection: Ethernet interface 10/100, TCP/IP protocol.
Signaling: 7 dry contact over Weidmuller connector step 3.5 mm.
Remote: 4 photo-coupled contact over Weidmuller connector step 3.5 mm.

Supply

Network: 95 Vac – 240 Vac, Plug IEC320 integrated, filter EMI/RFI.
Battery: 2 independent power suppliers.

Size

Width: 1 Unity 19".
Depth: 300 mm connectors excluded.
Weight: 1.5 Kg.