



GPS-DR-6 is a high-stability generator of Time and Frequency (PPS, 10 MHz) signals, formed by 2 independent GPS radios. The standard version has 6 independent outputs both for Time and Frequency.

GPS-DR-6 is extremely reliable because both GPS radios are completely independent. Each one of the Time and Frequency outputs is amplified independently, ensuring the electrical insulation. The philosophy behind the GPS-DR-6 is to monitor constantly both signals coming from the two GPS radios, excluding in case of failure one of the two. This functionality between both GPS radios ensures the security for short or permanent breaks.

GPS-DR-6 is particularly easy to use both for installation and maintenance. All functions are completely accessible through PC both in local mode, through serial communication RS-232, and in remote mode through communication on ethernet 10/100 with TCP/IP protocol. The equipment provides guidance on its operating status including through the use of 7 dry contact placed on the back of the apparatus.

The device allows remote managing through the use of 4 photo-coupled contact placed on the back of the apparatus. It's fully standardized to SNMP protocol which provides all the information on the electrical state of the apparatus and of the GPS receiver. It's equipped with double power supply.

Switch unit:

- 6 independents BNC connectors at 10 MHz frequency, with 13 dBm each of power level,
- 6 independents PPS connectors with TTL level terminated at 50 Ohm,
- 7 dry contact for electrical signaling of switch unit,
- 4 photo-coupled input for switch unit remotization,
- Serial connection in RS232 Standard,
- Standard network connection Ethernet 10/100 with TCP/IP protocol complete of descriptive MIB on SNMPv1 protocol,
- Web server integrated for direct browser management,
- Device's supply in logical OR,
- AC 85 Vac - 265 Vac 50/60 Hz,
- Rack 19" of 1U.

Generator module:

- 12 channels GPS receiver with automatic tracking and timing error management system,
- Removable drawer container 120x220 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: -130 dBc at 1 kHz.
Outputs: 6 independent.
Output level: 13 dBm each output.
Output impedance: 50 Ohm.
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: 6 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.

PTP Section

Protocol: IEEE1588-2008 (PTPv2)
Role: Grandmaster Clock Source (with GPS) or slave

Supply

Network: 85 Vac – 265 Vac, Plug IEC320 integrated, filter EMI/RFI.
Battery: 2 independent power suppliers

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.

Size

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