

GPS REFERENCE

GPS-REF



The GPS controlled receiver for time/frequency reference allows you to provide up to 6 reference 10 MHz signals and up to 6 signals 1 PPS (Pulse Per Second) thanks to the integrated GPS receiver. It can therefore be used in all scenarios in which the customer needs a common time reference to multiple devices, for example laboratory instrumentation or digital DVB-T transmitters in SFN (Single Frequency Network). The GPS-REF is internally equipped with a GPS receiver for professional use. It is in fact able to receive from a maximum of 50 channels and provides excellent performance for the output 10MHz and 1 PPS signals. The latter are split into 6 10MHz outputs and 6 1 PPS outputs through the use of two multipliers, allowing the user to change the output frequency in case a 10MHz reference is not necessarily needed. The GPS-REF was created in conjunction with the ever increasing diffusion of SFN (Single Frequency Network) in the field of broadcasting. In addition to DVB-T SFN, the GPS-REF can also be used for laboratory instrumentation as high precision temporal source.

TECHNICAL SPECIFICATIONS*

* specifications may be changed in accordance with the technical department

GPS RECEIVER

Number of channels	60
Acquisition and tracking time	1 min
Sensitivity	-160 dBm

1 PPS

Number of outputs	6 (BNC connectors)
Holdover PPS 10µs duration	24 h ($\pm 10^{\circ}\text{C}$ or $\pm 25^{\circ}\text{C}$)
Phase stability when locked	± 30 ns typical
Level	3.3 Vpp / 1 kΩ

10 MHz

Number of outputs	6 (BNC connectors)
Phase alignment	± 5 ns @ 25°C
Phase noise (10 MHz sine)	-125 dBc @ 10 Hz -140 dBc @ 100 Hz -140 dBc @ 1 kHz
Level of 10 MHz square	3.3 Vpp / 1 kΩ

TRACKING, FILTERING, HOLDOVER

OCXO performance ageing	1E-10
OCXO performance thermal	1E-9 peak to peak

COMMUNICATION INTERFACES

Ethernet	100baseT - TCP/IP, HTTP
RS232	9600, 8, N, 1

GENERAL

Antenna connector	N, female, 50 Ω
Primary power supply	100 ÷ 240 Vac
DC Backup	36 ÷ 72 Vdc
Operating temperature	-20 ÷ +65 °C
Storage temperature	-25 ÷ +80 °C
Storage relative humidity	10% ÷ 80%
Operating pressure	86 ÷ 106 kPa
Altitude	up to 3000 m
Dimensions	Rack 19" 1U (483 × 45 × 270 mm)