



**MICROREF-ZL** is the smallest Time & Frequency reference generator available today on the market. It is designed for OEM Customers where high integration at low cost is required.

**MICROREF-ZL** is supplied without rack in order to permit to insert the card in already developed equipments where synchronization option is required. The 127 x 55 mm mechanical format let easily insert this board on Eurocard slots as well as on 19"/1U racks. The board has many interface like RS232 with customizable commands, 10/100 Ethernet with SNMPv2 protocol and a web-browser or custom GUI integration.

- High stability sine wave 10 MHz output with possibility to tune output level from -2dBm to 16 dBm,
- 1PPS TTL output with 50 ohms impedance,
- Internal OCXO having +/- 1E-10 aging day in holdover condition,
- 12 channels GPS receiver with automatic tracking and timing error management system,
- 4 independent TTL signal output that can be used as telesignaling of board status,
- RS232 serial connection,
- Ethernet 10/100 interface with TCP/IP protocol,
- Power Supply from 8 VDC to 30 VDC,
- 55 x 127 x 30 mm size mechanical format,
- Management software developed for Windows OS.

**Frequency Reference**

Signal Type: 10 MHz sine wave  
Harmonics and spurious: -70 dBc at maximum output power (harmonics),  
-75 dBc at maximum output power (not harmonics)  
SSB Phase Noise: -95 dBc/Hz @ 1 kHz  
Outputs: N° 1 with digital power tuning  
Output level: from -2dBm to +16 dBm  
Outputs impedance: 50 Ohms  
Output connector type: SMA  
Stability: 1E.12 average daily stability with OCXO locked to GPS.  
Standard OCXO: 1E-10 aging day in Holdover. Option with OCXO SC cut: 2E-10 aging day.

**Time reference**

Signal: 1 PPS, 100  $\mu$ s Duty, Rising Edge.  
Output: 1  
Output level: TTL 5 Vpp, Square wave.  
Output impedance: 50  $\Omega$ .  
Output Connectors: SMA.

**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.

**Power supply**

Direct: + 5 VDC – 200 mA, 3.3 VDC – 150 mA  
Uncoupled: 8 VDC – 30 VDC EMI/RFI integrated filter.

**Signaling**

Serial Connection: RS-232 with 5 x 2 connector 100 mills step, +/- 15 kV (ESD)  
Network: Ethernet 10/100 interface with TCP/IP Protocol.

**Size**

LxDxH (mm): 127x55x30  
Weigh: 0.2 Kg.