

Features

- Low Phase Noise / Jitter
- Internal and/or External Reference
- GPS Disciplined – internal clean up circuits lock to a GPS reference* and generate low phase noise outputs
- Multiple Outputs with high isolation between channels
- Remote operation options
 - Ethernet Interface/RS232/ USB
- Lock Time <5 seconds after applying mains power
- Rack Mount or Modular with Shock Isolation
- Temperature (Operating) 0 to +45degC**
- Temperature (Operating) -20 to +70degC**
- BIT / Status Indicators to monitor PLL status and failure of the clock inputs and outputs eg Clock Present, Lock Detect , Temperature , Power Levels

* eg Trimble Thunderbolt E GPS Disciplined Clock

** Options available outside this range dependent on sealing methods / crystal oscillator specifications

Applications

- Radar systems

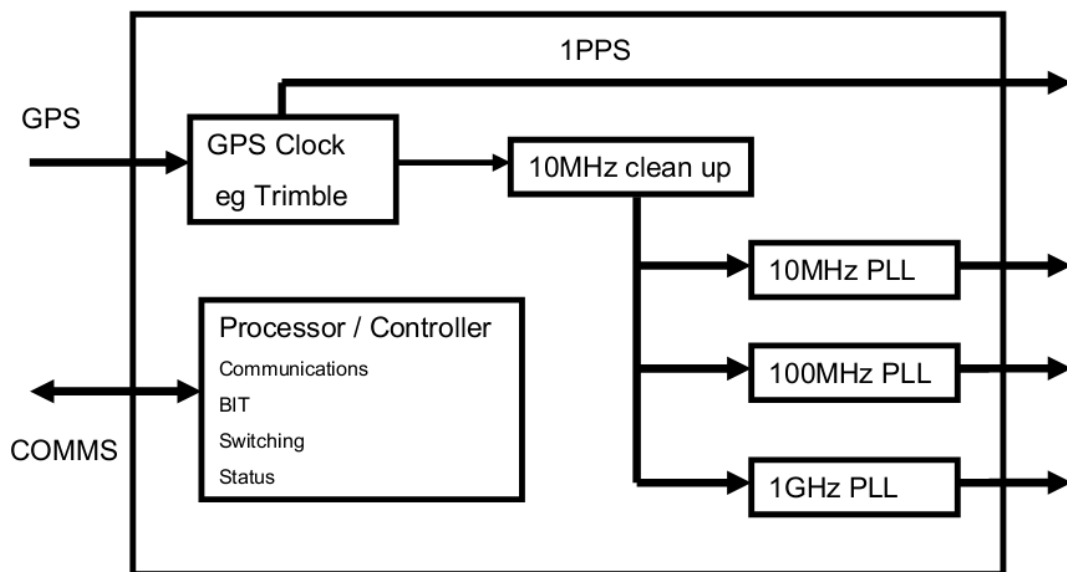
Product Description

The compact oscillator module is designed for a range of timing applications. The high stability and low phase noise coupled with the ability to lock to an external reference enables the unit to be utilised on various platforms with little additional overhead. This is enhanced further with the flexibility and confidence of knowing there is an on board built in back up. The module is temperature compensated to provide stable performance over temperature. External heat management is not required in the majority of applications.

Ease of use and integration is accomplished through the incorporation of multiple output references via industry standard RF connectorisation. Flexibility and ease of use is provided by remote configuration and control via either the integrated Ethernet, USB or RS232 interfaces. Power supply sequencing automatically protects the device from incorrect power supply application or failure and internal vibration and shock mounting minimises external environmental effects affecting primary performance.

Typical Clock System

Other frequencies and combinations are available.
Please contact Linwave with your requirement.



Typical Clock System

Typical RF Performance

10MHz Clock Output

Phase noise profile at 10MHz:

Frequency Offset From Carrier	SSB Phase Noise Level (dBc/Hz)
1 Hz	-90
10 Hz	-115
100 Hz	-130
1 kHz	-135
10 kHz	-145
100 kHz	-145
1 MHz	-145
10 MHz and greater	-145

Non-harmonically related spurious signals < -60dBc

Harmonics of the 10 MHz clock outputs < -40dBc

100MHz Clock Output

Phase noise profile at 100MHz:

Frequency Offset from Carrier	Guaranteed Phase Noise Level (dBc\Hz)
10Hz	-102
100Hz	-137
1kHz	-164
10kHz	-176
≥100kHz	-178

Non-harmonically related spurious signals < -80dBc

Harmonics of the 10 MHz clock outputs < -40dBc

1GHz Clock Output

Phase noise profile at 1GHz:

Frequency Offset from Carrier	Guaranteed Phase Noise Level (dBc\Hz)
10Hz	-82
100Hz	-117
1kHz	-144
10kHz	-156
≥100kHz	-159

Non-harmonically related spurious signals < -70dBc

Harmonics of the 10 MHz clock outputs < -40dBc

Jitter integrated from 1 MHz to 2GHz <50fs.

Operating Information

Notes:

1. ESD Sensitive Material. Please ensure the correct ESD precautions are observed when handling and using.
2. Connect all power supplies before powering the clock module.