

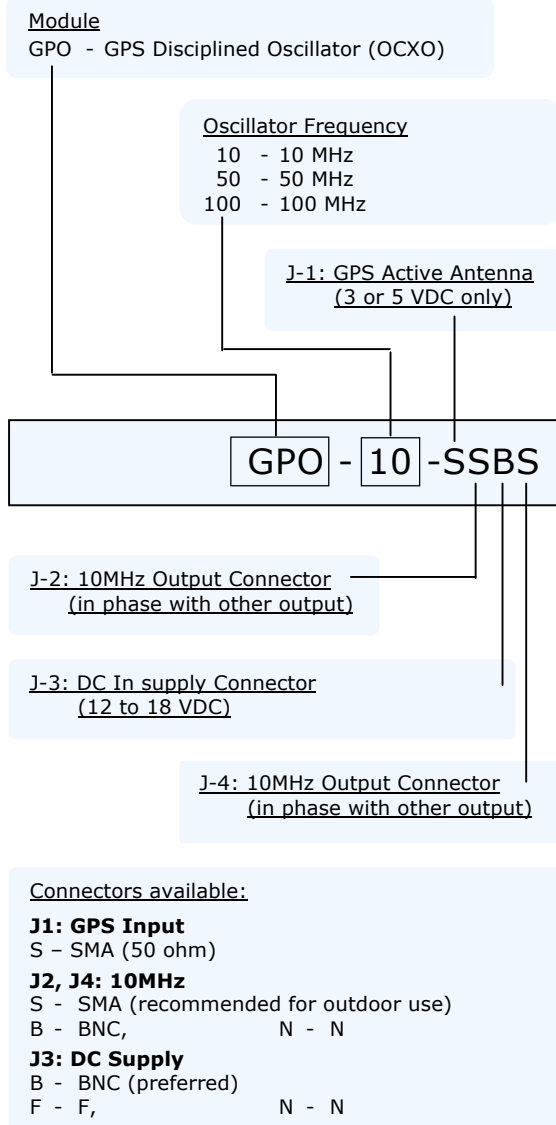
Orbital Reference Oscillators

GPO GPS Disciplined Oscillator (OCXO)



10MHz GPS Disciplined Oscillator (OCXO)

How to order a GPO - GPS Disciplined Oscillator (OCXO)



BNC-to-pigtail adapters and BNC-to-binding post adapters for DC sold separately. Contact Orbital Research for part number and price.

Quiet, Stable, Pure, and Enduring

Orbital Research's GPS Disciplined Oscillator (OCXO) is designed for low phase noise with exact frequency control and the ability to have all your locations exactly on frequency. We focus on frequency, not timing, for the GPS. This means low phase noise performance of the Oscillator for superior BER, EVM and much faster acquisition times.

The Orbital Research **GPO** can be used alone or combined with our other products such as the MT25/40 - Mux/Tee or SP10 - 10MHz Splitter. By using the GPO at all your sites, you can be assured that they are all locked, within tolerances, to the GPS Cesium reference.

If the Satellite signal is lost, the GPO will still have a great Oscillator with good stability and phase noise.

GPO Features

Ovenized Oscillator (OCXO)

- Low phase noise -140 dBc/Hz @ 1 kHz
- High output level for service as master system oscillator
- Sine wave purity, filtered low harmonic content

Functional

- Will operate with LNBS, BDCs, VSATs, BUCs, and Modems
- Variable attenuators on each output
- LED (through gasket) indicators for loss of lock, hardware failure or output level (optional)

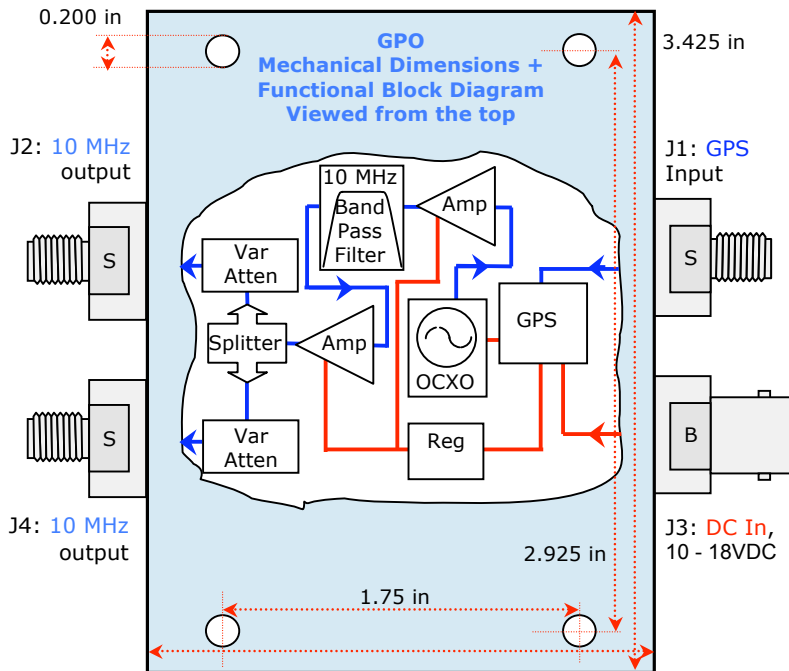
Structural

- Machined from solid aluminum billet for strength and stability
- Allodyne finish for corrosion protection and excellent RF shielding/grounding
- 'Back O Rack' mounting for ease of installation and lead dress (Reduces the mess of cables at the back of the rack and provides stability for cables)
- Connectors are 'O' ring sealed for weather resistant operation

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System Interface Product (SIP): GPO - Specifications



PS-2 Switching Power Supply

Featuring an ovenized oscillator (OCXO), the GPO - GPS Disciplined Oscillator has been designed specifically for the satellite industry. Its sturdy case, anodized finish, small size and back-o-rack mounting system make it both enduring and easy to use. The Murray-style connectors guarantee the best possible connections for the life of the product.

Specifications

GPS

TTF: <45 Sec (cold start)
 Frequency: L1, C/A 1574MHz
 Receiver: 12 Channel
 Indicators: LED – Lock and HW failure (through gasket)
 Ref. Accuracy: +/- 100 nSec (GPS Locked)
 15 nSec (typical)

Other

Filtering: Bandpass with notch at 20 MHz

Oscillator

Frequency: 10, 50 or 100 MHz
 Output Level: +9 dBm to -4 dBm
 Variable Atten: 15.5 dB in 0.5 dB steps
 Stability: $\pm 2.5 \times 10^{-8}$, 0 to +50°C (unlocked)

Accuracy: 1×10^{-9} in <5min startup
 Harmonics: <-60 dBc

Phase Noise

10 MHz:	10Hz	-100 dBc/Hz
	100Hz	-130 dBc/Hz
	1kHz	-140 dBc/Hz
	10kHz	-145 dBc/Hz
50 MHz:	1kHz	-155 dBc/Hz
100 MHz:	1kHz	-155 dBc/Hz

Power Specifications

Input DC Voltage: +10 to +18 VDC, supplied via DC input connector
 Current Drain: 350 mA max (warm-up)
 100 mA nominal (after warm-up)

Mechanical Specifications

Size (case): 87L x 64W x 32.5H mm.
 (with connectors: 87L x 98W x 32.5H mm.)
 Weight: 16 oz
 Paint / Colour: Blue Anodized finish
 Mounting holes: 3/8" (5mm)
 Accepts standard rackmounting screws:
 10/32 or 10/34

Environmental Specifications

Operating Temp: 0 to +50° Celsius
 Relative Humidity: Up to 100% condensation and frost

Power Supply (not included with GPO)

See: PS1 brochure for North America
 PS2 brochure for Global

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