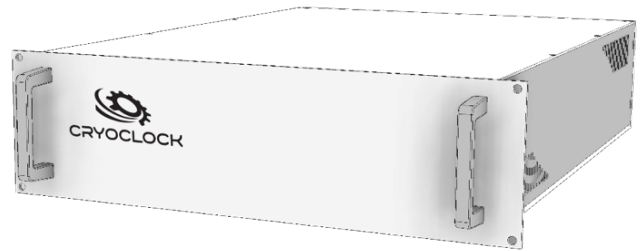


The **X-LNO product** is a microwave reference oscillator in development that produces an ultra-low phase noise reference signal at X-band frequencies. By utilising the high Q of a temperature-controlled sapphire, the X-LNO oscillator generates a +10 dBm signal with a phase noise of below -165 dBc/Hz (typical) at 10 kHz offset. The Test & Measurement variant of the X-LNO is packaged in a milled, aluminium 3U enclosure. A key application for the X-LNO is as the master oscillator in microwave communications and radar systems, such as Precision Approach Radars and surface detection radars.

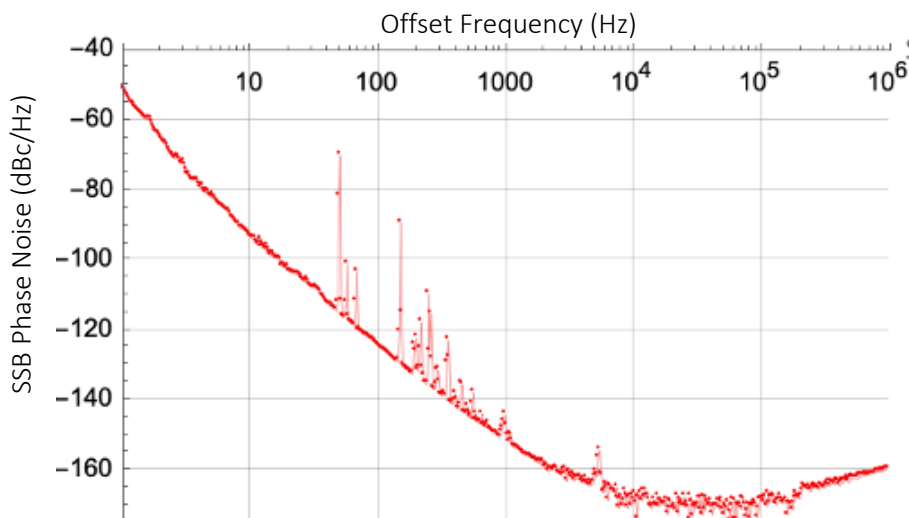
The ultra-low phase noise of the X-LNO can enable significantly greater sensitivity in these radar systems.



| General Parameters | |
|----------------------|--------------------------|
| Operating Frequency | 8.97 GHz (nominal) |
| Operating Freq range | 8 to 12 GHz (on request) |
| Tuning range | < 3 MHz |
| Time to lock | ~ 20 minutes |
| Output power | + 10 dBm |
| Input power | + 24 VDC |
| Dimensions | 3U 19" rack enclosure |

| Frequency Stability | Integration Time (sec) | Square Root Allan Variance |
|---------------------|------------------------|----------------------------|
| | 1 | 1×10^{-11} |
| | 10 | 7×10^{-11} |
| | 100 | 5×10^{-10} |

| Phase noise | Offset Frequency (Hz) | SSB Phase Noise (dBc/Hz) |
|-------------|-----------------------|--------------------------|
| | 1 | -50 |
| | 10 | -93 |
| | 100 | -125 |
| | 1000 | -150 |
| | 10,000 | -168 |
| | 100,000 | -168 |
| | 1,000,000 | -160 |



Specifications subject to change. Alternate operating frequency and output power can be set by customer requirements