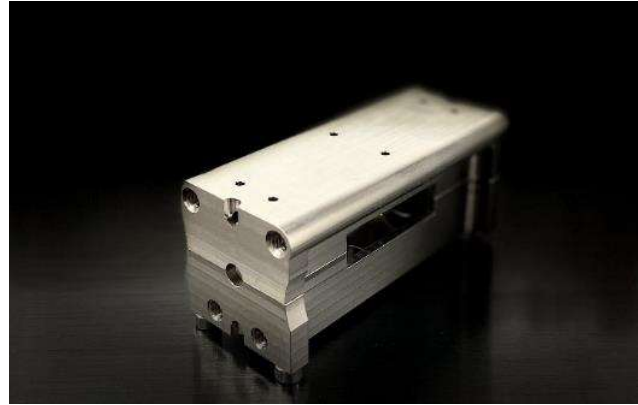


C-ROC



Compact Rubidium Optical Clock

The Compact Rubidium Optical Clock (C-ROC) is an upcoming product that aims to simultaneously improve on the stability of current commercially available microwave atomic clocks while also providing the flexibility of a greatly reduced size, weight, and power (SWaP). This advancement is made possible through a combination of state-of-the-art compact laser development and innovative and patented optical interrogation techniques.



Key Features

- Next generation timing and frequency performance through optical interrogation
- Low size, weight and power for mobile and space applications
- Predominantly monolithic optical systems for high reliability, environmental insensitivity and robustness.

Applications

- Space vehicle on-board timing
- Assured PNT for GPS-denied environments
- Power and communication infrastructure
- Master reference for timing networks
- Civilian and military radar

	R&D (current)	Gen 1[#]
Outputs	10 MHz, 1PPS	10 MHz, 1PPS, serial diagnostics
Inputs	Sync	External control
Operating temperature	10 °C - 50 °C	-10 °C - 50 °C
Operational pressure	90 - 110 kPa	90 - 110 kPa (option: vacuum)
Supply voltage	110/240 V AC or 24-48 V DC	24-48 V DC
Power	100 W max.	40 W max.
Stability (1s)	1×10^{-13}	1×10^{-13}
Stability (10 ⁵ s)	2×10^{-15}	2×10^{-15}
Size	6U 19" rack	20 L
Weight	100 kg	20 kg

Preliminary/target specification only. Specifications subject to change. Space-compliant version under development.

