

## Atomic Frequency Reference

Tiqker™ bridges the gap between hydrogen maser short-term performance and cesium-beam level holdover. Tiqker™ is designed to operate continuously in various environments, minimizing signal instability due to vibration and temperature variation. Tiqker™ Prime comes ready for use in a form factor that is a drop-in replacement for cesium-beam frequency references.

### Applications



Holdover for GNSS/GPS-reliant timing solutions, allowing uninterrupted access to accurate time for data centers and telecommunications infrastructure



High-precision rf, microwave, and optical outputs for clock and data recovery in high-throughput optically-switched networks



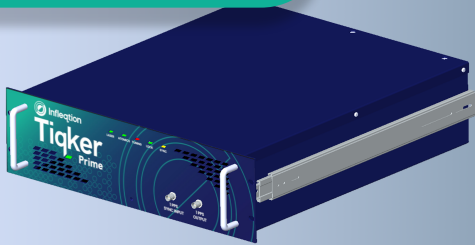
Integrated optical frequency comb enables sub-picosecond clock synchronization through optical two-way time and frequency transfer and dense multiplexing for optical communications.



Augmentation of time synchronization systems in wired or wireless high-speed data transfer, e.g., 6G base stations and backbone networks

### Tiqker Prime

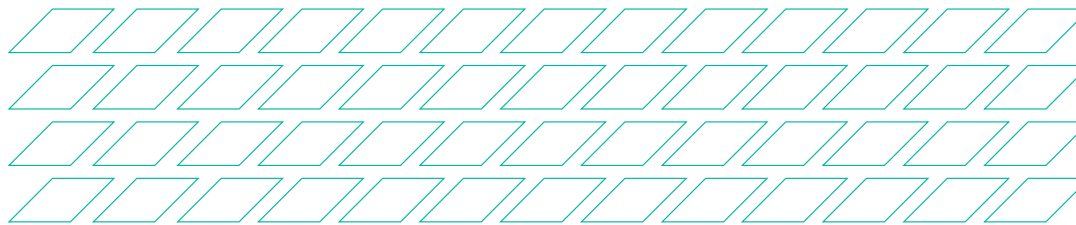
Available for pre-order



- 3U form factor for standard rack applications

- Hydrogen maser like stability with Cs-beam holdover, form-factor, and environmental tolerance





# Tiqker Prime Specifications

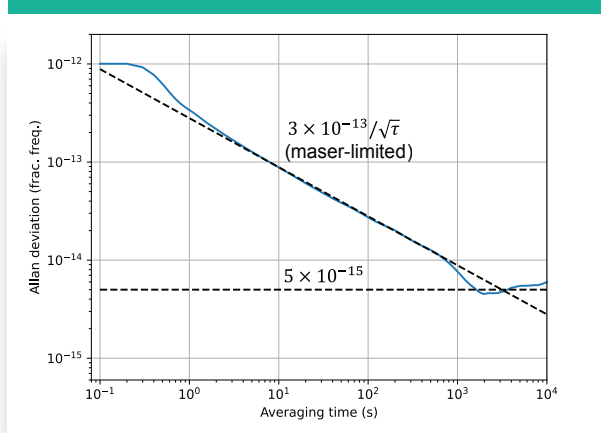
## Frequency Stability

Average Time (s)	Allan Deviation
1	$\leq 1.0 \times 10^{-13}$
10	$\leq 1.0 \times 10^{-13}$
100	$\leq 3.0 \times 10^{-14}$
1,000	$\leq 1.0 \times 10^{-14}$
10,000	$\leq 5.0 \times 10^{-15}$
100,000	$\leq 5.0 \times 10^{-15}$
Flicker Floor	$\leq 5.0 \times 10^{-15}$

## Holdover (projected)

Level (ns)	Minimum Period
1,000	9 days
100	4.5 days
10	2.3 days
1	1 day

## Performance (typical)



Tiqker is 50 times more stable at 10 second averaging time and 1000 times faster to  $10^{-13}$  frequency stability as compared with standard cesium beam references

## Frequency Outputs

Frequency	5 MHz, 10 MHz, 100 MHz, Optical 1556 CW
Format	Sine
Amplitude	$\geq 1$ Vrms

## Timing Outputs

Format	1 PPS
Load Impedance	50 $\Omega$

## Operating Environment

Temperature	15 °C - 35 °C
Humidity	0 to 85% RH (40 °C max)
Magnetic Field	DC, 55, 60 Hz, 2G peak any orientation

## Dimensions

Height x Width x Depth	133.4 mm x 425.5 mm x 532.9 mm
Weight	<30 kg

## Programming

Software Command Set	SCPI adapted to RS-232C & Ethernet
Alarm (TTL)	BNC
Output	TTL High, Normal TTL Low, Fault