

Navigating New Frontiers with TAITIEN's DTA-450: The Atomic Clock Reimagined

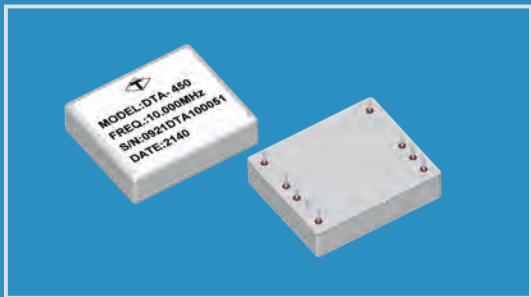
Features

- Ultra-low power consumption (<130 mW)
- Compact design: Volume 17 cc, 41mm × 35mm × 12mm
- 10 MHz CMOS-compatible output
- 1PPS output/input for precise synchronization
- RS-232 interface for enhanced control and monitoring

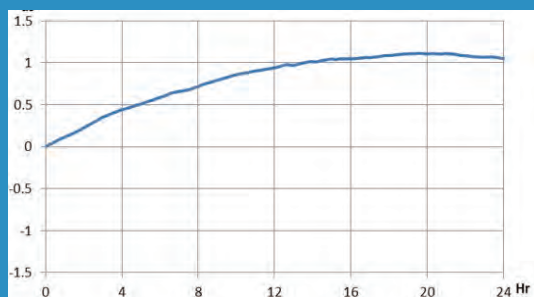
Applications

- Oil and Gas Exploration
- Underwater Sensor Systems
- Mining and Seismic Research
- Satellite Timing and Frequency
- GPS Receivers, Backpack Radios

DTA-450



Holdover (24 Hours Holdover: 1.2µs)



Presenting TAITIEN's DTA-450 Chip Scale Atomic Clock (CSAC), a trailblazer in portable precision timekeeping. With a power consumption of under 130 mW and a compact volume of 17 cc, the DTA-450 brings unmatched atomic clock accuracy and stability to portable formats, skillfully blending innovation with practicality.

The DTA-450 shines with a 10 MHz CMOS-compatible output, seamlessly fitting into various advanced applications. Its 1PPS output/input significantly enhances synchronization with external clocks, achieving ± 50 nanoseconds precision. This device is crafted for utmost precision in vital applications.

In precision, the DTA-450 excels. Its short-term stability, indicated by an Allan Deviation of 3.0×10^{-10} at $\tau = 1$ sec, and a typical long-term aging of less than 3×10^{-11} per day, ensures consistent performance. It withstands frequency variations of $\pm 1 \times 10^{-9}$ across a temperature range of -10 °C to 70 °C, proving its resilience in extreme environments.

The DTA-450's 1PPS input/output functionality streamlines synchronization with external reference clocks, maintaining ± 50 nanoseconds accuracy. It fine-tunes its phase and frequency control to within 1 nanosecond and 1.0×10^{-12} , reinforcing its status as a precision timekeeping cornerstone.

Featuring an RS-232 interface, the DTA-450 offers unparalleled control and calibration, complemented by a comprehensive status monitor set. This interface is key to maintaining peak system performance with the highest precision.

In today's era where precision and reliability are vital, the DTA-450 CSAC stands as a definitive solution. Ideal for a spectrum of applications, from oil and gas exploration to GPS receivers, it enhances operation dependability and safety. Adhering to RoHS standards, the DTA-450 meets strict environmental regulations.

To sum up, TAITIEN's DTA-450 CSAC is not just a timekeeper; it's an advancement that keeps you a step ahead. Interested in integrating this state-of-the-art technology? Contact Taitien's sales team to discover how the DTA-450 can elevate your timekeeping needs.

