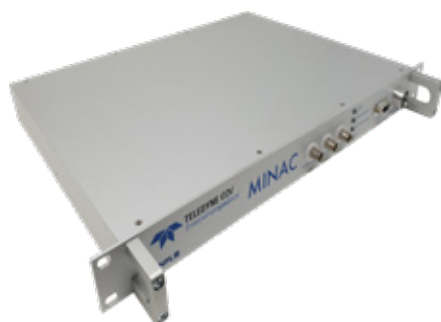


MINAC

Caesium Atomic Clock Timing Products



Key Features

- » Caesium atom disciplined
- » UK manufactured
- » Stratum 1 (T)
- » 1 PPS out
- » 10 MHz out
- » 1 PPS in
- » Auto lock feature
- » Built-in monitoring
- » Non-ITAR
- » RoHS compliant
- » Rack mountable

Typical Applications

- » Telecoms
- » Broadcast
- » Utilities
- » Finance
- » Transport
- » Aerospace
- » Defence
 - Land, Sea and Air

Options suited to Alt Nav applications

Teledyne e2v has extensive heritage in providing standard and customised systems for a wide range of applications. Please discuss any requirements for customised variants to meet your needs

Atomic Clock for Precision Timing Reference Applications

The MINAC product family are easy-to-use precision timing references for a wide range of applications. Standard outputs include 1PPS & 10 MHz with the option for 1 PPS in synchronization.

Designed and manufactured in the UK these clocks provide an excellent timing source using Teledyne e2v produced high performance physics packages and low noise electronics.

The clock features full auto start with lock to atomic reference being established within a short time of turn on and indicated by visual indication on the front panel.

The clocks are designed to provide holdover in GNSS challenging environments or where maintained timing precision is essential if GPS signals become unavailable or denied.

MINAC offers a new compact route to a caesium timing standard with low power consumption and configuration options.

Multiple options for customisation to tailor the device to specific applications around performance and environmental requirements are available.

2020	2021	2022	2023	2024
TRL6	TRL7	TRL8	TRL9	TRL9

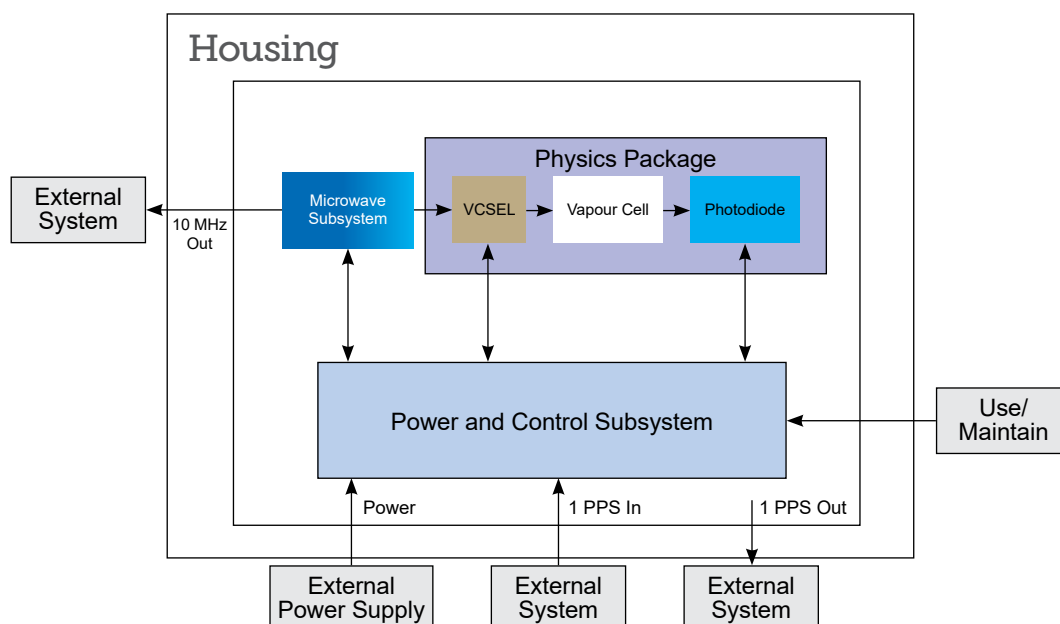
Performance Specifications	MINAC
Frequency Accuracy on Shipment	+/- 5E-11
ADEV at 100 sec	3e-12
ADEV at 1000 sec	1e-12
ADEV at 10000 sec	8e-13
10 MHz Phase Noise at 100 Hz	- 140 dBc / Hz
10 MHz Phase Noise at 10 kHz	-155 dBc / Hz
Magnetic Field	< 2 Gauss
Power Dissipation	10-11 W at steady state / normal operation

Provisional Specification

UK Export control -variant dependant

Information subject to change – values typical unless otherwise stated.

ARCHITECTURE



Typical 1U rack configuration



MINAC is continuing to evolve and higher performance and environmentally robust variants will become available.

UK Export control -variant dependant

Information subject to change – values typical unless otherwise stated.

Europe

Essex, United Kingdom
+44 (0) 1245 493 493
quantum@teledyne-e2v.com