

PRECISION AND PORTABILITY

OPEN TIME APPLIANCE MINI

SYNC • TEST • VALIDATE



PRODUCT DESCRIPTION

The Open Time Appliance Mini joins the Timebeat Grandmaster Clock portfolio as the most compact and resilient solution to date — engineered for continuous operation anywhere. Featuring a multiband GNSS receiver and an integrated power pack, it operates as a resilient Grandmaster Clock that survives outages or as a portable reference standard to validate your network. With elite DOCXO holdover performance, it maintains strict accuracy even when GNSS is unavailable.

KEY FEATURES

- Dual Ethernet ports for synchronisation redundancy
- Full PTP Profile support
- PTP, NTP, PPS & Frequency distribution from device
- Multi-band GPS/GNSS receiver
- Integrated OCXO capability
- Battery-powered for operational resiliency
- USB Type-C serial port
- Wifi antenna compatible

APPLICATIONS

Broadcast

Streamlined design with redundant power supply integrates seamlessly into existing broadcast setups, guaranteeing accurate timing for live broadcasts and content scheduling.

Telecom / 5G

Space-saving form factor and redundant power architecture offer a dependable timing reference, enhancing network performance with seamless handovers and precise antenna synchronisation.

PTP

NTP

PPS

SyncE

DOCXO

Multi-Band GNSS



PROTOCOL SUPPORT

SUPPORTED
PROTOCOLS

COMPREHENSIVE PTP & NTP CAPABILITIES

PTP PROFILES

Default Profiles

- Default E2E	IEEE 1588-2008
- Default P2P	IEEE 1588-2008
- Enterprise PTP	RFC 9760

Power Profiles

- IEEE C37.238-2011	incl. extensions
- IEEE C37.238-2017	incl. extensions
- IEC/IEEE 61850-9-3	Power Utility
- IEC 62439-3	L2P2P & L3E2E

Broadcast Profiles

- DOCSIS 3.1	Supported
- SMPTE ST 2059-2	incl. extensions
- AES67 Media	Supported
- IEEE 802.1AS	TSN/AVB

Telecom Profiles

- ITU-T G.8265.1	incl. extensions
- ITU-T G.8275.1	incl. extensions
- ITU-T G.8275.2	Supported

PTP SUPPORT

PTP Versions	PTPv2, PTPv2.1, PTPv1
--------------	-----------------------

IEEE1588-2008 CLOCK MODE

Unicast Master	Supported
Multicast Master	Supported
Unicast Slave	Supported
Multicast Slave	Supported

NTP SUPPORT

Protocol	NTP
----------	-----



OSCILLATOR OPTIONS

DOCXO & VERSION COMPARISON

PRECISION TIMING VS PRECISION TIMING LITE

ADDITIONAL OSCILLATOR OPTION

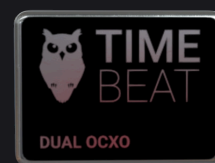
Timebeat Open Time Appliance provides the option to upgrade the device with a Double Oven-Control Crystal Oscillator (DOCXO). This is an ultra-high-precision frequency source that uses two temperature-controlled ovens to stabilise a quartz crystal, offering ppt (parts per trillion) for critical applications.

● DOCXO HOLDOVER

Type

Timebeat DOCXO

Holdover Performance

1.5 μ s / 24 Hrs without GNSS

● VERSION COMPARISON

SPECIFICATION	PRECISION TIMING	PRECISION TIMING LITE
Time pulse signal accuracy	Up to 5ns	Up to 10ns
Time-mark resolution	8ns	16ns
GNSS acquisition	GPS + GL0 + GAL + BDS L1/L2/L5	GPS + GAL + BDS L1/L2/L5
Integrated OCXO holdover	1.5 μ s / 8 Hrs without GNSS	—



DEVICE GENERAL INFORMATION

DEVICE
OVERVIEW

DIMENSIONS & CONNECTIVITY

● PHYSICAL DIMENSIONS

Length	144 mm
Width	82.5 mm
Height	43.82 mm

● FRONT PANEL

Dual RJ45 Ports	1GbE PTP/NTP
USB Type-C	Console + 27W power
Mini HDMI	Display output
Power Button	With LED ring

● REAR PANEL

DC Power Input	30W (12V 2.5A) barrel jack
Freq In	SMA, 1Hz - 16Hz
1PPS Out	1Hz (1PPS) SMA
Wifi Antenna	SMA
GNSS Antenna	L1/L2/L5 Multiband SMA
10MHz Out	SMA
Freq-B Out	1Hz - 16Hz SMA
Freq-A Out	1Hz - 16Hz SMA

NOTE

Only 1 RJ45 network port will be usable with the Precision Timing Lite version. Multiple PTP profiles are supported on the same port.

TIMEBEAT

Unit J211
100 Drummond Road
London SE16 4DG
United Kingdom

CONTACT

Tel: +44 7989 140 622
Email: info@timebeat.app
Web: www.timebeat.app

