

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
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IEEE1588-2008 CLOCK MODE

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

NTP SUPPORT

Protocol	NTP
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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.

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