

GNeTiMe

GPS and IEEE1588 timing and synchronization unit

The GNeTiMe timing and frequency module is a state-of-the-art, high quality and cost effective source of an accurate system clocks. It was especially developed to meet the demands of LTE and WiMAX telecom applications, and due to its inherently low cost is suitable for use in the femtocells.

The GNeTiMe locks on GPS satellites signals or IEEE 1588 timing packets stream and provides several clock outputs. When locked, the outputs are traceable to Stratum 1 (PRC). GNeTiMe can be configured as IEEE 1588 Master clock, providing the ordinary clocks with a high quality reference.

Additionally, the GNeTiMe is able to use external timing references as its alternative source of timing. The system can automatically switch to the alternative reference when the current one becomes invalid.

The system holdover performances can be tailored to the customer requirements.

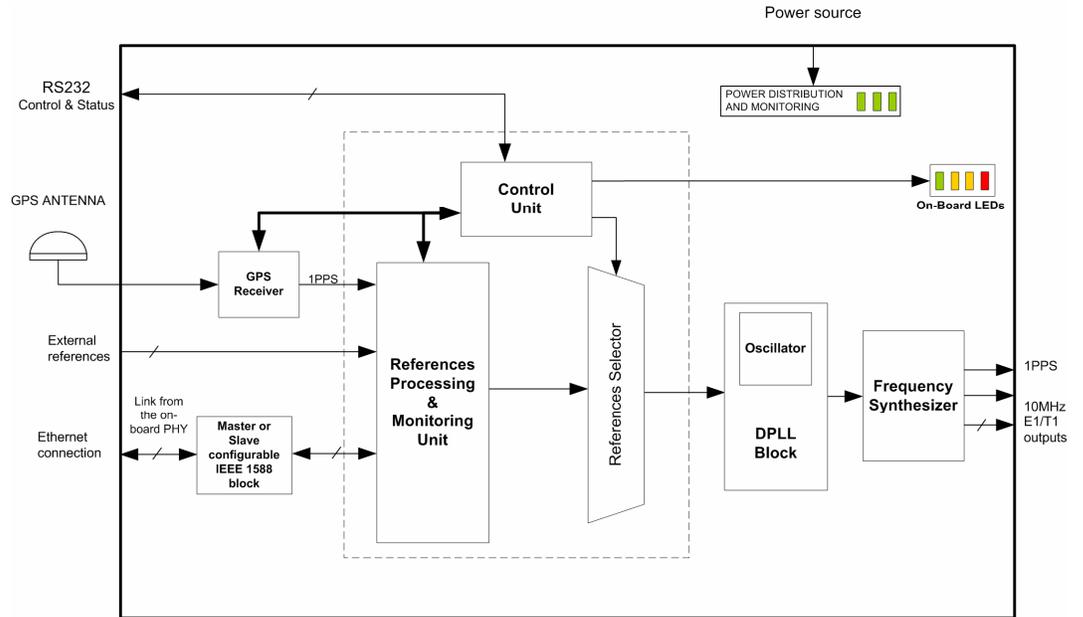
The system is controlled and monitored via Ethernet port or via UART (RS-232 port). Hardware alarms and indications are also available.

GNeTiMe can be provided as an OEM module of 40x40 mm size or as a reference design.

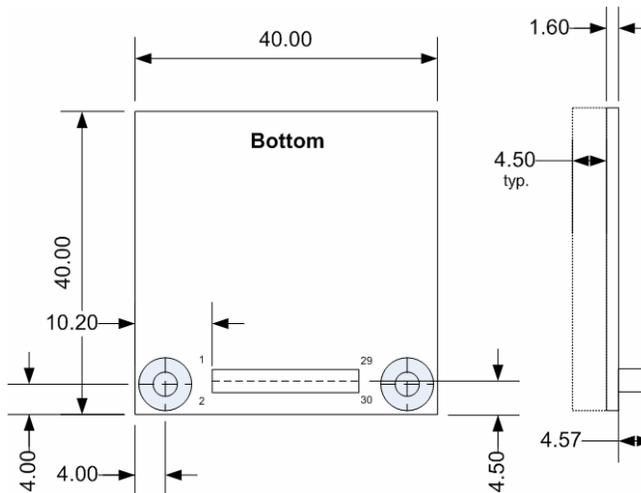
Appearance



Block diagram



Mechanical dimensions (mm)



<p>TeraSync Ltd. 9 Altaief Street P. O. Box 160 Yehud 56000, Israel</p>	<p>Tel: +972 3 536-0202 Fax: +972 3 536-0020 http://www.terasync.net e-mail: info@terasync.net</p>
---	---

TECHNICAL SPECIFICATIONS

Input Signals:

GPS antenna.....1575 MHz

External reference.....Optional (1PPS, T1/E1 frequencies, etc.)

Output Signals:

Default:

OUT1.....1PPS (aligned with UTC when tracking satellites).

OUT2.....10MHz

*Low phase noise output is available as an option

Additional outputs (optional):

OUT3-4.....User selectable frequencies (E1/T1 multiples, etc.
- consult factory).

Signal Type.....LVTTTL/LVCMOS or others by request.

Fast Ethernet network interface for IEEE 1588

Option 1..... Direct PHY interface (can be connected to Ethernet line with a suitable magnetics

Performance:

Lock Accuracy..... $<1 \times 10^{-11}$ (1 hour averaging)

Typical Holdover Accuracy:

TCXO.....10 usec/2 hours

DOCXO (off-board).....10 usec/24 hours

*Various options are available, consult factory for details

Power:

Power supply options.....3.3VDC, 5VDC

Power consumption3W max (TCXO option)

Environmental specifications:

Operating temperature.....0°- 65° C (-40° to 85°C option available for some configurations)

Operating humidity.....95% (non-condensing).

Mechanical:

Dimensions.....40x40mm

Others:

User interface.....UART (RS232)