

Ultra-compact Low Power Consumption Portable Clock T-ESTM

80 x 80 x 35mm package

Features:

T-ESTM is an energy saving timing module that realizes advantages of high precision, low power consumption, small volume and superior reliability. With intelligent optimization algorithms of time and internal atomic clock disciplined by tracking and locking external 1PPS or DCLS signals, **T-ESTM** can reach the holdover performance of better than 1us/day. Moreover, **T-ESTM** supports the dynamic optimization on its holdover performance to adapt to the variation in the ambient in a short time.



In order to meet the requirement under stringent environment such as wide temperature range, high strength and high shock etc., **T-ESTM** strictly follows the applicable standards during its structural layout and material selection in its original stage. **T-ESTM** also meets the dust-proof & water resistant requirements of the IP68 Protection Rating.

T-ESTM is designed with charge/discharge management circuit and battery for wide operating temperature, and ensure the battery of continuous working time of over 24 hours without external power supply. **T-ESTM** can support the upgrade on battery capacity according to customer's actual demand.

MAIN PROFERMANCE

- ✧ Multiple Reference Signals : DCLS/1PPS
- ✧ Accuracy : $\leq 50\text{ns}$
- ✧ 1PPS+NMEA Output
- ✧ DCLS Output
- ✧ Overall Power Consumption Reduced to 300mW
- ✧ Build-in Charge/Discharge Management Circuit
- ✧ Installed with Li-Ion Battery for wide temperature range

T-ESTM SPECIFICATIONS

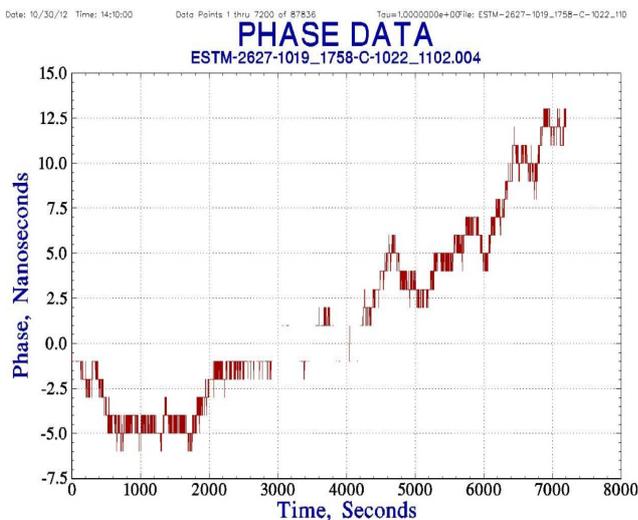
- ✧ Input : IRIG-B DCLS x1 or 1PPSx1
- ✧ Output : 1PPS+NMEA or DCLS x1 ;
- ✧ 10MHz LVTTTL x1
- ✧ Key Features :
- ✧ Accuracy : 50ns
- ✧ Holdover : 1 us (24 hours)
- ✧ Rechargeable battery : 2300mAh (Available to upgrade capacity)

- ✧ Working Time : >24 Hours
- ✧ (Continuous working time without power supply after charging to capacity)
- ✧ Operating Temperature :
- ✧ -20°C~60°C (At the discharge of battery)
- ✧ -40°C~85°C (without battery)
- ✧ Outline Dimensions : 80x80x35mm

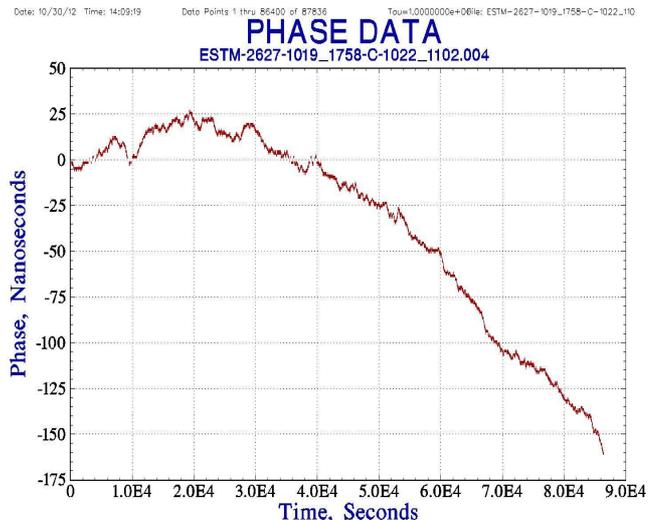
PIN DESCRIPTION

Symbol	Pin No.	Definition	Remark
+5V	1	+5V Output	4.35V ~ 5.5V
Gnd	2	Ground	
MasterLink	3	Link for Interface Devices	TTL/LVTTL, Active High
SlaveLink	4	Link for Terminal Devices	TTL/LVTTL, Active High
Rs232Tx	5	RS232 Transmit	
Rs232Rx	6	RS232 Receive	
TimeCode	7	Time Code	Time Code or 1PPS Output
ClkOut	8	Clock Output	10MHz
Gnd	9	Ground	
1PPS_In	10	1PPS/Time Code Input	TTL/LVTTL, Active Rising Edge
NC	11~15	Undefined	Suspended. Do not connect anything.
Gnd	16	Ground	

TYPICAL PROFRMANCE OF T-ESTM



2-hr Holdover Performance (1PPS)



24-hr Holdover Performance (1PPS)