



**OVERVIEW**

Time synchronization creates a platform for an entire system comprising wide range of applications to operate in synchronous with time.

The demand for improving the effectiveness of any system in place is met with time synchronization system deployed in the field. Troubleshooting is simplified by the application of time synchronization in the event of fault analysis.

SERTEL manufactures GNSS/GPS based Time Synchronization System Equipment's that generates precise time stamp signals that synchronizes various networks of electrical, computer, communications devices such as SCADA, DCS, IEDs, PLCs, LANs, Computer Buses, RTUs etc.

Equipped with high precision redundant GNSS Receiver with high stability OCXO crystal, T-GPS-300-EU-S27 is capable of performing with greater accuracy and tenacity during temporary signal loss

**OPERATION**

T-GPS-300-D18, an Antenna of its kind, receives signals from the GPS satellites and generates time base pulses as that in the UTC or the atomic clock in the satellites.

This data is transmitted to GPS Receiver T-GPS-300-D18 that provides the time synchronizing signal in the form of IRIG B (AMPLITUDE MODULATION) output & Ethernet output.

**KEY FEATURES**

- Compact size. DIN Rail mountable.
- 24 Channel GPS Receiver and 12 Channel Continuous Tracking.
- Provides time/ date stamping through IRIG B (AM) & ETHERNET.
- Low cost maintenance with durable performance.
- Compiled with IP-V4/V6 Ethernet
- Highly customizable Output as per requirement
- Low-cost maintenance with durable performance.
- Have provision to Slave display units over long distance communication with differential pulse clocks

GPS TIME SYNC SERVER  
**T-GPS-300-D18**



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# GPS TIME SYNC SERVER

## T-GPS-300-D18

### TECHNICAL SPECIFICATIONS

#### GPS ANTENNA

Model	T-GPA-014-S15
Receiving Frequency	1575.42 MHz +/- 1 MHz
Tracking code	'L' Band CA code
Geodetic System	WGS – 84
No. of Channels	24 Channel / Parallel
Type	Helical
Axial Ratio	<4 dB
Supply Voltage	+5V DC (Internal)
Gain	Over 40 dB
Noise Figure	Less than 1.5 dB
Operating Temp	-40 °C to +85 °C
Connector	BNC
Dimension	80(h)x55(d) x 82(w) mm
Mounting	Fixed (Roof mount)

#### ENVIRONMENT

Storage Temperature	-40 to +85 °C
Operating Temperature	-10 to +55 °C
Humidity	0 – 95% RH, non-condensing
Power Drain	45 w max.
Power Supplies	L = 14 - 36 Vdc M = 20 - 75 Vdc H = 90 - 300 Vdc

#### GPS RECEIVER

Model	T-GPS-300-D18
Interface	TTL (Normal High)
Input connector	BNC
Output Rate	Every second
Power Supply	24V/48V DC 90 to 260v AC&DC Operation
Display	2 x 16 LCD small*
Type	GPS: L1 C/A, L2C, GLO: L1OF, L2OF, GAL: E1B/C BDS: B1I, B2I 32 Channel Parallel-tracking receiver
Frequency	1575.42 Mhz
Sensitivity (Acquisition)	-148 dBm
Sensitivity (Tracking)	-167 dBm
Mount	Din Rail
Output Connector	BNC & RJ45
Output	IRIG B (AM) & NTP/SNTP
Status Indicator	Power ON, Lock

#### MECHANICAL SPECIFICATION

Dimensions	(W) 72 mm x (D) 60 mm x (H) 90 mm
Mounting	Din Rail
Weight	1.5 KG

#### Programmability

Platform	Windows based configuration software
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Programmable output options

- IRIG-B (B00x / B22x) time code with selectable C37.118.1 and AFNOR S87-500 extensions.
- DCF77 time code
- 1 kHz square wave
- User defined pulse sequences:
  - 1PPS/PPM/PPD/PPPH
  - Offsets and durations from 10 ms to 24 hours

**INPUT** \*Feature Available only on Specific requests and suitable price points

GNSS Antenna inputs	L1Band GNSS, BNC [F]
Ethernet Connections	RJ45 1GbE/Fast Ethernet SFP 1GbE/Fast Ethernet <small>*Feature Available only on Specific Requests and suitable price points</small>
Input	GNSS Signal [BNC]
Antenna Input	BNC 5V GNSS Input
Alarm Relay	3-Pin Form-C NO/NC alarm relay*

**OUTPUT** \*Feature Available only on Specific requests and suitable price points

1PPS	TTL, 50 Ω Impedance, BNC [F]
IRIG-B	AM [B125], BNC [F]
Impedance	50 Ω Sine Wave
Protocols supported	ARP, UDP, ICMP

**NETWORK TIME SERVER OPTION**

NTP/SNTP	Stratum-1 NTP & SNTP time server
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**TEST AND STANDARDS**

Dry Heat Test	IEC 60068-2-2	Electrostatic Discharge Immunity Test	IEC 61000-4-2,2008
Cold Test	IEC 60068-2-1	Radiated Susceptibility Test	IEC 61000-4-3,2010
Damp Heat (Steady State) Test	IEC 60068-2-3	Electrical Fast Transient Immunity	IEC 61000-4-4,2012
Sinusoidal Vibration Test	IEC 60068-2-6	High Energy Surge Immunity Test	IEC 61000-4-5,2014
Dielectric Strength Test	IEC 60255-5-0	Conducted RF Immunity Test	IEC 61000-4-6,2013
Pulse Magnetic Field Test	IEC 61000-4-9,2016	Power Frequency Magnetic Field Test	IEC 61000-4-8,2009
Radiated RF Power Disturbance	CISPR 14-1,2009	Damped Oscillatory Sinusoidal Immunity Test	IEC 61000-4-18,2011
Voltage Fluctuation and Flicker Emission Test	IEC 61000-3-3,2013	Voltage Dips and Interruption Immunity Test	IEC 61000-4-11
Harmonics, Inter Harmonics and Low Frequency Immunity Test	IEC 61000-4-13,2002		

\*Feature Available only on Specific Requests and suitable price points  
 \*Output ports are customizable based on the requirements  
 \*Product development is continuous process, subject to change without prior notice



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