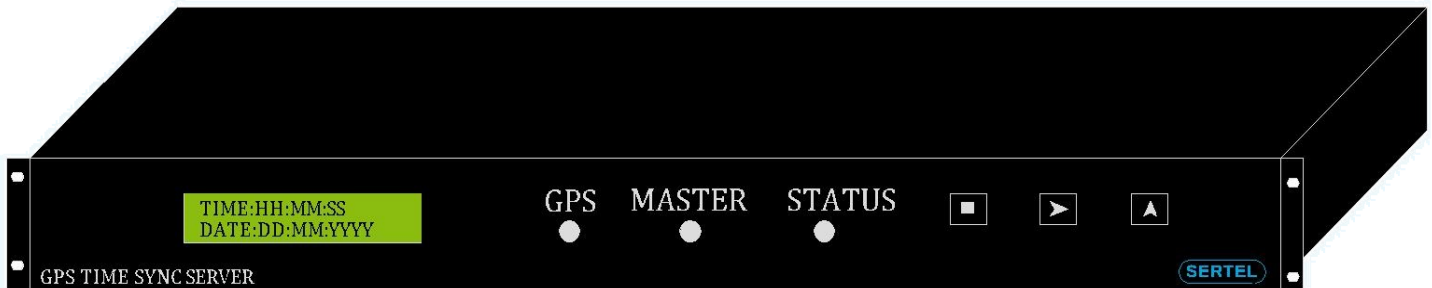


# GPSTIMESYNCSERVER

## T-GPS-300



**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 GPS based Time Synchronization System which generates precise time stamp signals that synchronizes various network of electrical, computer, communications devices such as DCS, PLCs, LANs, Computer Buses, RTUs etc.

Equipped with high precision and high stability OCXO, T-GPS-300 is capable of performing with greater accuracy and tenacity during temporary signal loss.

The time stamps in the signal could be transmitted over long distances maintaining synchronization in the whole network.

**OPERATION** The signal from the satellite is collected by T-GPA-014-S15, an active antenna, and transmits the signal to T-GPS-300 GPS Receiver.

Time base pulses as that in the UTC or the atomic clock in the GPS satellites are generated.

Master Clock is provided for continuous functioning of the system.

Pulses can be generated for every second, minute, ½minute, hour, day etc which are configurable.

LC display upfront shows the Julian Day, date, time and geographical location. These can be viewed with the help of keypad upfront.

Status LED indication can also be seen displaying the operating conditions of the receiver.

Highly precise and stable OCXO compensates for any interferences or loss of signal from the satellite thus making the operation of the receiver reliable.

### KEY FEATURES

- Compact size.
- 12 Channel GPS Receiver and 8 Channel Continuous Tracking.
- Equipped with high precision OCXO crystal for frequency maintaining micro second level accuracy.
- Accuracy of 187 nanosecond with GPS Signal.
- LCD Display : 2 x 16 characters
- Highly customizable Output configurable as per requirement.
- Configured to work as Stand Alone Time server.
- Offset adjustment.
- Universal Power Supply.
- Output Integrated to 3 decimal of frequency in Hz.
- Drive any number of Slave Clocks / Digital Clocks. (Customizable)
- Provides time/ date stamping through RS232 serial port in SERTEL format (Customizable).
- Low cost maintenance with durable performance.
- Propagation delay is better than 1µs.

## TECHNICAL SPECIFICATION

### 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	: 08 Channel / Parallel
Type	: Helical
Axial Ratio	: <4 Db
Supply Voltage	: 5V DC (Internal)
Gain	: Over 42 dB
Noise Figure	: Less than 1.3 dB
Operating Temp.	: 0 °C to +55 °C
Connector	: TNC/BNC
Mounting	: Wall Mounting

### GPS RECEIVER

Model	: T-GPS-300
Interface	: TTL (Normal High)
Input connector	: TNC/BNC
Output Rate	: Every second
Power Supply	: 90-260 V AC/DC
Display	: 2x16 LCD

### INPUTS

- GPS Antenna input.
- Power Supply : 90 – 260 V AC/DC

### OUTPUTS

- Dual NTP/SNTP outputs for NTP Client access (Default IP: 192.168.1.254) through RJ-45. (Customizable)
- IRIG-B AMoutput.
- Status information for GPS reception, fault, loss of signal.
- Julian days, HH-MM-SS, DD-MM-YYYY, Latitude, Longitude, Time Zone (+5.30), No of Satellites in LC Display
- Please refer ordering code for customizable outputs.

### ENVIRONMENT

Operating Temperature	: 0 to +55°C
Humidity	: 0 – 95% RH, non-condensing

### MECHANICAL SPECIFICATION

Dimensions	: 1U(h) x 485(w) x 325(d) mm
Mounting	: 19" rack mountable

### TEST AND STANDARDS

Dry Heat Test	: IEC 60068-2-2
Damp Heat (Steady State) Test	: IEC 60068-2-3
Sinusoidal Vibration Test	: IEC 60068-2-6
Bump Test	: IEC 60068-2-29
Dielectric Strength Test	: IEC 60255-5-0
Shock Test	: IEC 60255-21-2
Radiated Emission	: CISPR 11 Class A, 2006
Radiated RF Power Disturbance	: CISPR 14-1, 2005
Electrostatic Discharge Immunity Test	: IEC 61000-4-2, 2001
Radiated Susceptibility Test	: IEC 61000-4-3, 2006
Electrical Fast Transient Immunity	: IEC 61000-4-4, 2004
High Energy Surge Immunity Test	: IEC 61000-4-5, 2006
Conducted RF Immunity Test	: IEC 61000-4-6, 2004
Power Frequency Magnetic Field Test	: IEC 61000-4-8, 2001
Damped Oscillatory Wave Immunity	: IEC 61000-4-12, 2001

### STANDARD INFORMATION

Operating Characteristics	Ordering Code
NTP-2/IRIG-B(AM)-1/IRIG-B(TTL)-1/ RS 232-1	T-GPS-300-S09
NTP-2/IRIG-B(AM)-1/IRIG-B(TTL)-1/ RS 232-1/Freq-1	T-GPS-300-S09-FR
NTP/SNTP - 2	T-GPS-300-NTPS
IRIG-B (TTL) – 1/ PPS (FO) - 4	T-GPS-300-S30
NTP-4/IRIG-B(AM) - 8/TTL-8/DCF-77-2	T-GPS-300-EU



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