



# NTS20

## GPS Network Time Server

Accurate. Reliable. Compact



NTS20 Network Time Server is an accurate, low cost, extremely compact Din Rail mount GPS for network time synchronisation.

Network Time Server takes the time from GPS satellites and provide accurate time output over NTP protocol, to synchronize slave devices with 1 milliseconds accuracy or better with respect to universal UTC time. NTP is an "open source" (royalty free) time synchronization distribution and this feature is freely/already available in computer servers with different OS support, IP cameras and NVR's

NTS20 is a compact Network Time Server having time signal output like NTP for time synch applications.

NTS20 provides accurate reference time signals for synchronization of security related applications that includes time synchronization of DVR and NVR, servers, access control servers, operator workstations, and even IP cameras. More general applications include time-synchronisation of windows, Mac and Linux PCs and servers.

NTS20 Network Time Server is supplied with GPS magnetic antenna with built in LNA. It is supplied with 3 meter of RG174 cable terminated with an SMA male connector. It can be fixed to any window which has a clear view of the sky. Optionally roof top antenna and antenna cable with extended length is provided if required.

NTS20 Network Time Server can be powered up over the network by PoE or by a 5V DC power supply.

### Features

- Reliable and cost effective
- 12 Satellite parallel tracking
- Highly accurate TCXO type crystal (OCXO Optional)
- Supports synchronization of IED61850 compliant devices via NTP/SNTP protocol
- Synchronization software for server & client
- PoE option
- Supporting timing protocols:
  - NTP/SNTP(v2/v3)
- IPv4, UDP, TCP, SNMP, HTTP, Telnet networking protocols
- Remote alarm notification by SNMP
- Remote configuration using webserver, telnet
- Firmware Upgrade: Supported through Bootloader over (Ethernet)

### Applications

- Time synchronization of
  - Various security devices such as IP camera, CCTV, DVR, NVR, biometric identification devices, Access control system.
  - Microsoft windows, Linux, Servers/Clients, workstations and network infrastructure.
  - Automation systems, SCADA, Network monitoring and control systems (PLC/DCS)

# TECHNICAL SPECIFICATIONS

| GPS Receiver                 |                                                                             |                          |              | Interface                                                                                                                                         |                                                       |                           |
|------------------------------|-----------------------------------------------------------------------------|--------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------|
| Timing Accuracy              | < 15 ns with GPS receiver (Receiver is locked on fixed position)            |                          |              | Ethernet Connector Type                                                                                                                           | 10/100Mbps (RJ45)                                     |                           |
| Horizontal Position Accuracy | < 10 m                                                                      |                          |              | Supporting TCP/IP and UDP Protocol                                                                                                                | IPv4, TELNET, SNMP, DHCP, Web Server                  |                           |
| Tracking Satellite           | 12 parallel channels                                                        |                          |              |                                                                                                                                                   |                                                       |                           |
| Input Operating Frequency    | 1575.42 MHz L1 C/A code                                                     |                          |              |                                                                                                                                                   |                                                       |                           |
| Hot Start                    | 5 second                                                                    |                          |              | <b>Monitoring and Reporting</b>                                                                                                                   | SNMP v1/v2c trap alarms (can be disabled), status LED |                           |
| Warm Start                   | 38 second                                                                   |                          |              |                                                                                                                                                   |                                                       |                           |
| Cold Start                   | 45 second                                                                   |                          |              |                                                                                                                                                   |                                                       |                           |
| <b>Status LED</b>            | Power, PPS, GPS lock, Watch dog                                             |                          |              |                                                                                                                                                   |                                                       |                           |
| Time Server                  |                                                                             |                          |              | NTP / SNTP Client Software                                                                                                                        |                                                       |                           |
| Time Source                  | GPS                                                                         |                          |              | Platform support: Windows 10 & above, Windows server 2016 & above, Unix, Linux, Solaris server for Time Synchronization Using Net T Sync Software |                                                       |                           |
| Antenna                      |                                                                             |                          |              | Power                                                                                                                                             |                                                       |                           |
| Antenna Type                 | Magnetic                                                                    | Roof Top (Optional)      |              | Power Adaptor (5V/1A)                                                                                                                             | 5V DC (MSTB connector)                                |                           |
| Connector                    | SMA                                                                         | SMA                      |              | PoE Type                                                                                                                                          | Optional (RJ45 connector)                             |                           |
| Antenna Type                 | 28 dB                                                                       | Active L1 GPS 40 dB gain |              | Power Consumption                                                                                                                                 | <2.5W                                                 |                           |
| Antenna Cable Type           | RG174                                                                       | RG 6/RG 11               |              |                                                                                                                                                   |                                                       |                           |
| Operating Temperature        | -40 to 85 °C                                                                |                          | -40 to 85 °C |                                                                                                                                                   | <b>Physical</b>                                       |                           |
| Humidity                     | 95%                                                                         |                          | 95%          |                                                                                                                                                   | Dimension (in mm)                                     | 27 X 66 X 100 (H X W X L) |
| Ingress Protection           | IP67                                                                        |                          | IP67         |                                                                                                                                                   | Mounting                                              | Din Rail, Wall mount      |
| Weight                       | 60 g                                                                        |                          | 150 g        |                                                                                                                                                   | Ingress Protection                                    | IP20                      |
|                              |                                                                             |                          |              |                                                                                                                                                   | Weight                                                | 0.3 Kg approx             |
| Time Signal Output           |                                                                             |                          |              | Environmental                                                                                                                                     |                                                       |                           |
| Output Type                  | Description                                                                 | Connector                | Accuracy     | Operating Temperature                                                                                                                             | 0 to 55 °C                                            |                           |
| NTP                          | NTPv2/v3/v4 (RFC1119, RFC1305, RFC5905)<br>SNTP (RFC4330, RFC2030, RFC1769) | RJ45                     | ±1ms         | Storage Temperature                                                                                                                               | -20 to 80 °C                                          |                           |
|                              |                                                                             |                          |              | Humidity                                                                                                                                          | 20-90% non-condensing                                 |                           |

## Ordering Code

| Model | PoE Option | Mounting | Antenna        | Antenna Cable Length |
|-------|------------|----------|----------------|----------------------|
| NTS20 | X          | X        | X              | X                    |
|       | N          | None     | W0             | Wall mount           |
| Y     | Yes        | D0       | Din Rail mount | 1                    |
|       |            |          |                | 2                    |
|       |            |          |                | 3                    |
|       |            |          |                | 4                    |
|       |            |          |                | S                    |

Note: For magnetic antenna 3 meter RG174 antenna cable will be provided  
For rooftop antenna specify antenna cable length

## Standard Accessory

| Non PoE Option                      | PoE Option                          |
|-------------------------------------|-------------------------------------|
| Power adaptor with USB Cable        | 1 no mounting clamp                 |
| 1 no mounting clamp                 | 2 Meter RJ45 Ethernet Cable - 1 No. |
| 2 Meter RJ45 Ethernet Cable - 1 No. |                                     |

Note: 0.5 Meter SS Antenna mounting rod integrated - 1 No. ( In case Rooftop Antenna is Selected)

## Application Diagram

