masibus®

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, 1PPS and Serial used for various time synch applications. It is having USB port for Configuration.

NTS20 provides accurate reference time signals for synchronisation of security related applications that includes time synchronisation 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

- Accurate, Compact Network Time Server
- 12 Satellite parallel tracking
- USB port for Configuration
- PoE option
- Supporting Timing Protocols:
    - NTP/SNTP
    - NMEA (GPRMC)
- NTP v2/v3 With MD5/SHA Authentication
- IPv4, UDP, TCP, SNMP, HTTP,Telnet networking protocols
- Remote Alarm notification by SNMP

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)
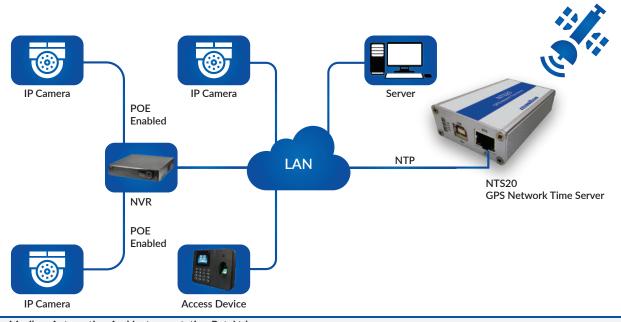
TECHNICAL SPECIFICATIONS

GPS Receiver

Timing Accuracy	<60 ns
Horizontal Position Accuracy	10 meter
Tracking Satellite	12 parallel channels
Input Operating Frequency	1575.42 MHz L1 C/A
Hot Start	5 second
Warm Start	38 Second
Cold Start	45 Second
Status LED	Power, PPS, GPS Lock, Watch dog

Time Server

Time Source	GPS

Antenna

Antenna Type	Magnetic	Roof Top (Optional)
Connector	SMA	SMA
Antenna Type	28 dB	Active L1 GPS 40 dB
Antenna Cable Type	RG174	RG 6
Operating Temprature	-40 to 85 °C	-40 to 85 °C
Humidity	95%	95%
Ingress Protection	IP67	IP67
Weight	60 g	150 g

Time Signal Output

Output Type	Description	Connector	Accuracy
NTP	NTPv2/v3/v4 (RFC1119, RFC1305, RFC5905) SNTP (RFC4330, RFC2030, RFC1769)	RJ45	<=1ms
1PPS	1 Pulse per second Pulse Width: 200ms	MSTB	±100ns
Serial	RS485 (NMEA 0183) Fix configuration: 9600-8-N-1	MSTB	-

Interface

Ethernet Connector Type	10/100Mbps (RJ45)
Supporting TCP/IP and UDP Protocol	IPv4, TELNET, SNMP, DHCP
USB (Configuration Only)*	USB Type B
Monitoring and Reporting	SNMP v1/v2c Trap Alarms (Can be disabled), Status LED
Firmware Upgrade	Ethernet Bootloader (10/100 Mbps (RJ45))
NTP / SNTP Client Software	Platform Support: Windows 10/8.1/7 SP1/ Windows Server 2012 R2/ 2008 R2 SP1 Unix Linux, Solarisserver synchronization

Power

Power Adaptor (5V/1A)	5V DC (MSTB Connector)
PoE Type	Optional (RJ45 Connector)
Alternate Power Supply	5VDC/1A Power Adaptor with USB Type B Cable
Power Consumption	2.5W

Physical

Dimension (in mm)	27 X 66 X 100 (H X W X L)
Mounting	Din Rail, Table Top, Wall mount
Ingress Protection	IP20
Weight	0.3 Kg Approx

Environmental

Operating Temprature	0 to 55 °C
Storage Temprature	-20 to 80 °C
Humidity	20-90% non-condensing

Ordering Code

Model	PoE option	
NTS20	X	
	N	None
	Y	Yes

Standard Accessory

Power Adaptor
USB Type B Cable
1 Magnetic antenna with 3 meter RG174 Antenna cable
1 set Mounting Kit

Optional Accessory (Extra cost)

Roof top Antenna
Antenna cable for Roof top Antenna (specify in meters)

Application Diagram

IP Camera
POE Enabled
IP Camera
Server
NVR
POE Enabled
IP Camera
Access Device
LAN
NTP
NTS20
GPS Network Time Server