

## TimeTools NTP s5500 Dual GPS\Radio NTP Time Server

- Stratum 1 NTP/SNTP IP Network Time Server utilising dual GPS and Radio time sources.
- NTP version 4.2.0 (latest release).
- Highly accurate: Ethernet NTP output jitter typically within 50 microseconds of UTC.
- High Reliability: Convection cooled, solid-state design, no moving parts.
- Web based user interface.
- Free firmware upgrades.
- 3-Year Warranty.
- 30-day money-back guarantee.



### Product Overview

TimeTools NTP s5500 is a 1U high, rack-mountable stratum 1 dual GPS\Radio NTP Server. It utilises an unmodified version of the latest network time protocol distribution, NTP version 4.2.0.

An integral GPS receiver constantly tracks up to 12 satellites simultaneously to provide a highly accurate timing reference. A high-gain radio receiver also constantly monitors either the MSF or DCF-77 radio transmissions. An Ethernet NTP output jitter of less than 50 microseconds is typically achieved.

The unit is a low-power convection cooled device with no moving parts, aiding long-term reliability. Our confidence in the reliability of the NTP s5500 is reflected in the provision of a 3-year warranty.

An easy to use password-protected web interface is provided for system configuration and management. FTP can be utilised to download NTP statistics and upload firmware upgrades, provided by TimeTools free of charge.

### GPS Antennas



**Mini Patch GPS Antenna.** The mini patch GPS antenna is one of the smallest available providing a diminutive yet rugged GPS solution. The antenna is fully weather-proof and has a screw mount for ease of installation.



**Jam-Resistant GPS Antenna.** The jam-resistant GPS antenna is pole-mounting, fixed-site, jam resistant, roof mounted GPS antenna. The antenna is housed in a completely waterproof packaging designed to withstand exposure to shock, excessive vibration, extreme temperatures, rain, snow and sunlight.

## Radio Antennas

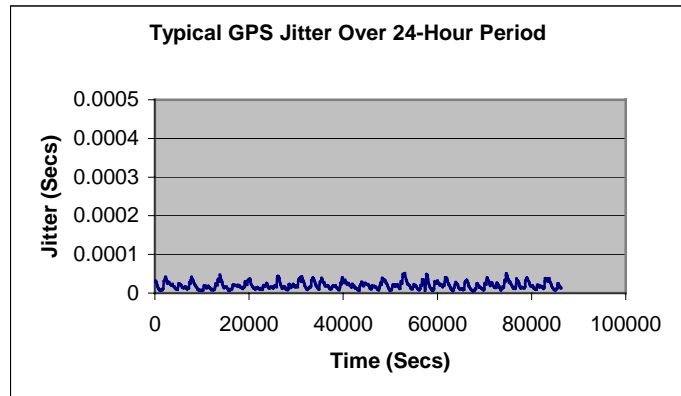
The NTP s5500 is available with MSF-60 or DCF-77 radio antennas. The MSF-60 time signal is available throughout the British Isles and North-Western Europe. The DCF-77 signal is available throughout central and western Europe. The weatherproof antenna supplied can be wall-mounted, outdoors if required, up to 100m from the NTP server with CAT3 or better structured cabling.

## Accuracy

With a consistent signal lock, the NTP s5500 dual GPS\Radio Time Server can maintain an accuracy of better than 50 microseconds UTC.

Jitter measures the variance between successive time queries.

The graph opposite shows the jitter between successive time queries of the GPS clock over a 24-hour period.



## Product Specification

Accuracy	Ethernet NTP GPS PPS	< 50 microseconds UTC typical 100 nanoseconds UTC typical
Protocols	NTP SNTP Additional	NTP 4.2.0 (RFC 2030), NTP v4, NTP v3, NTP v2 SNTP v4 HTTP (Web), FTP, Telnet, RS232 Console, Syslog
Connectivity	Ethernet RS232 GPS Radio Connection	10/100 Mbit BaseT , RJ45 auto-sensing RS232 DB9 Console Configuration Port Coaxial TNC Antenna Connection DB9/RJ45 with CAT3,4,5 connectivity
GPS	Integral GPS Receiver	12 Channel, L1 1575.42 MHz
Enclosure	Construction Dimensions Weight Operating Temperature	1U High 19" Rack mount, 1.8mm Aluminium 483 x 158 x 44 mm 2.2Kg -20C ~ +60C
	Relative Humidity	95% non-condensing
Power	Supply  Power Consumption	Universal 85-264 VAC 47-440 Hz CE/UL/CSA Approved PSU with standard IEC inlet, other power supply options available on request. 12W approx
Warranty	3 Year Warranty	Extended warranty options available.

## Product Codes

NTP s5500 with mini-patch GPS antenna and MSF radio antenna	S55-MNP
NTP s5500 with mini-patch GPS antenna and DCF-77 radio antenna	S55-DNP
NTP s5500 with pole mounting GPS antenna and MSF radio antenna	S55-MNT
NTP s5500 with pole mounting GPS antenna and DCF-77 radio antenna	S55-DNT

## Accessories

Suppressors	Multi-strike Lightning suppressors for antennas	SPP-GPS
S55-*NP Cable	20m Antenna Extension Cable for Patch Antenna	TCX-020
S55-*NT Cable	30m Antenna Extension Cable for Pole Antenna	TCX-030
	50m Antenna Extension Cable for Pole Antenna	TCX-050
	100m Antenna Extension Cable for Pole Antenna	TCX-100
Radio Cable	20m Antenna Extension Cable	TMC-020
	100m Antenna Extension Cable	TMC-100
Antenna Mounts	Flat roof mount for pole antenna	MT1-GPS
	Wall mount for pole antenna	MT2-GPS