

Long Distance GPS Antenna System

Cat 5/5e/6 cable compatible

The Long Distance GPS Antenna System is ideal in situations where the antenna is placed a long way from the Time & Frequency System. As it is compatible with standard Cat 5/5e/6 cable, this antenna system can be used with a wide range of TFS Time & Frequency Standards, Distribution Units and Network Time Servers.



Optional extra:

Waterproof Lightning Surge Protector

Please contact us for details



Features

- Overcomes loss of signal when antenna is a long distance from the timing system
- Can be used with up to 500 metres of Cat5/5e/6 cable
- Compatible with many TFS time & frequency systems*, including:
 - NTP80 Network Time Server (all models)
 - PTP80 & PTP80 Elite GrandMaster Clock
 - GPS8 Time & Frequency Standard
 - UMC40 Network Time Server

**please check with Sales team regarding compatibility with other systems before ordering*

Applications

Certain installations require the GPS Antenna to be mounted a long distance from the Master Clock or Time & Frequency System. This may be due to a complex cable route or the location in a tall building.

In such cases, it is recommended that the Long Distance GPS Antenna system is used, as this configuration will overcome the signal loss experienced when routing the GPS L1 carrier over long cable lengths.

Key Benefits

GPS Antenna/Receiver

This weatherproof unit houses both the GPS Antenna and Receiver together with a modulator which converts the L1 carrier to an RS422 signal carrying all the data necessary to synchronise the timing system to GPS.

Cable lengths of up to 500m of Cat 5/5e/6 cable may be utilised with the GPS Antenna/Receiver compared with only 35 metres with the High Performance Active GPS Antenna.

GPS Decoder

The GPS Antenna/Receiver works in conjunction with a GPS Decoder interface card that is located within the Time & Frequency System. The decoder receives and decodes transmissions from the GPS antenna for accurate synchronisation to Universal Coordinated Time (UTC).



Technical Specifications

System Connections

- Time Broadcast Signal to Master Clock System: Cat 5/5e/6 cable (15m supplied for system testing purposes)
- A terminal block is provided within the Antenna/Receiver for termination of the connecting cable.
- A cable gland is provided on the outside of the box for cable support and prevention of water ingress.
- An RJ45 connector is provided at the Timing System for termination of the connecting cable

Typical Performance

Time Accuracy (when GPS signal available): ± 500 nanoseconds from UTC (Assuming adequate satellite visibility)

Time Accuracy (when GPS signal unavailable): Timing System specification applies.

Time to first fix: Less than 2 minutes from cold start (90% probability).

Environmental

Environment (Operation & Storage)	GPS Antenna/Receiver
Temperature	-20°C to +60°C
Humidity	100% RH
Water Ingress	Sealed to IP67 (IEC529)
EMC	CE Compliant