

Case Study

TimeTools Solutions

Calian® and TimeTools Enhance Reliability for Highly Precise Time References



Background

TimeTools servers are a leading source of highly precise time references for synchronizing computers and computer network infrastructure. They provide a wide range of advanced digital and analogue time displays, synchronized by utilizing Network Time Protocol over Ethernet networks.

Their GNSS based network time servers and time references can precisely synchronize time on anything from a single PC to a network of thousands of workstations and servers. All TimeTools T-Series NTP servers are supplied with Calian antennas.

The T100 and T300 use the TW3040 (GPS), while the T550 uses the TW3740 (Single-Band Multi-GNSS).



TimeTools T100 and T300 Servers

Challenge

Accurate and precise time synchronization has become an integral part of modern technology. Without precise time, cellular, electrical and computer networks would fail to function optimally. TimeTools faced the challenge to deliver precise and reliable timing applications in adverse conditions, such as harsh weather, interference, and long distances between antenna locations and time servers.



Customer

- TimeTools Ltd.
<https://timetoolsltd.com/>



Calian Partner

- Innovelec
<https://innovelec.co.uk/>



Application

- Timing



Featured Products

- TW3040 Antenna
- TW3740 Antenna

Calian's precision engineered antennas, combined with excellent reliability, high gain and multi constellation options perfectly complements our range of top-quality, precision time servers.

Andy Shinton, Director of TimeTools Ltd.

Solution



TW3040 Single Band GNSS Antenna

The TW3040 is a professional grade, permanent mount GPS L1 antenna, specially designed for professional precision timing applications.



TW3740 Single Band GNSS Antenna

The TW3740 is a precision high gain GNSS antenna employing Tallyman's unique Accutenna® technology providing truly circular polarized signal reception.

Product	Coverage	Mount	Gain (dB typ.)	Weight (g)
TW3040	GPS L1	Through-Hole	40	150
TW3740	GPS L1, GLONASS G1, Galileo E1, BeiDou B1	Through-Hole	40	150

Success Story

Calian's TW3040 and TW3740 met the demands of TimeTools' precise timing applications, providing high out-of-band signal rejection and high signal-to-noise ratio, delivering a clear GNSS signal with minimal interference. Both antennas offer high gain to avoid signal degradation between the antenna and the time server. Housed in a robust IP69K weather-proof enclosure, both antennas can operate in harsh weather conditions without compromising performance, ensuring TimeTools precise timing applications can be deployed worldwide.

About Calian

We keep the world moving forward. Calian® helps people communicate, innovate, learn and lead safe and healthy lives. Every day, our employees live our values of customer commitment, integrity, innovation and teamwork to engineer reliable solutions that solve complex problems. That's Confidence. Engineered. A stable and growing 40-year company, we are headquartered in Ottawa with offices and projects spanning North American, European and international markets. Visit calian.com to learn about innovative healthcare, communications, learning and cybersecurity solutions.

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