

## » MC1000

A SECURE AND STABLE TIME SOURCE FOR YOUR NETWORK



### KEY BENEFITS

Accurate timing across your network

A secure stratum one time source behind your firewall

Flexible synchronisation options to combat GPS jamming

Reliable performance

The MC1000 is the ideal synchronised timing solution for small to medium sized mission critical networks.

By providing secure high accuracy timing, flexible synchronisation options and reliable performance, the MC1000 offers an advanced solution for network time synchronisation.

#### HIGH ACCURACY TIMING

The MC1000 provides high accuracy timing for your network. With its dual processor architecture and class-leading high performance design, the MC1000 NTP server enables the accurate synchronisation of all devices on your network. The high stability TCXO ensures timing accuracy is maintained, even during periods of antenna synchronisation loss.

#### A SECURE TIME SOURCE

The MC1000 provides secure timing behind your firewall. When partnered with a GNSS or low-frequency antenna, the MC1000 becomes a trusted stratum one time server that you control. For installations requiring enhanced security, the MC1000 supports symmetric key cryptographic authentication.

#### FLEXIBLE SYNC OPTIONS

With the MC1000, you get a timing system with flexible synchronisation options. A wide choice of antenna systems and technologies are available (including GPS, GLONASS, WWVB, MSF and DCF).

The common communication protocol used by all antennas gives you maximum flexibility. You can connect, disconnect and upgrade antennas – all whilst the MC1000 is powered up and serving time on your network.

#### COMBAT GPS JAMMING

The MC1000 helps you combat GPS jamming. You can use the flexible synchronisation system to reduce the effects of GPS jamming by installing a secondary low-frequency antenna. With two antennas connected, the MC1000 time server continually monitors the status of both antennas selecting the most accurate as its primary reference. The second antenna is used as a live backup.

#### RELIABLE PERFORMANCE

The MC1000 has been designed to offer reliable performance. The system is based around a dual processor architecture, with separate CPUs handling the network interface and time processing. As well as ensuring maximum network throughput with accurate system timing, the dual processor architecture also provides advanced status monitoring. System reliability is further enhanced by a continual product improvement program providing free-of-charge lifetime software updates.

**Typical Performance Specifications:**

<b>Synchronised internal timing accuracy:</b>	Dependent on synchronisation source accuracy, time elapsed from first lock and cable lengths. Typically within 100nsec of synchronisation source after 30 mins.
<b>Unsynchronised holdover (TCXO):</b>	3.6 msec/hour (86 msec/day)
<b>Client synchronisation accuracy:</b>	Dependent on network architecture, utilisation, delays and jitter. Clients typically synchronised to within 200 µsec to 2 msec of MC1000 on a local area network.

**Supported Protocols:**

<b>Protocols:</b>	NTP v2 (RFC1119), v3 (RFC1305) & v4 (RFC5905), SNTP v3 (RFC1769) & v4 (RFC4330), MD5 authentication*, DHCP*, HTTP*, TELNET* (* can be disabled by user)
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**I/O Connections:**

<b>Ethernet connection:</b>	10BASE-T / 100BASE-TX auto-sensing
<b>USB connection:</b>	USB Specification 2.0 compliant full-speed (12 Mbit/s)
<b>Synchronisation inputs:</b>	2 x dual-redundant 1000 series antenna connection ports
<b>Mains power:</b>	IEC C14 inlet

**Mechanical & Electrical Specifications:**

<b>Enclosure dimensions:</b>	1U high 19" rack mounting - 483 x 44 x 164 mm (19.0" x 1.73" x 6.46")
<b>Weight:</b>	2.5 kg
<b>Power supply:</b>	100-240 VAC (50/60 Hz) universal power supply with IEC mains inlet
<b>Power consumption:</b>	0.06-0.04 AMPS

**Environmental Specifications:**

<b>Operating temperature:</b>	0 to 50 °C
<b>Relative humidity:</b>	0% - 95%, noncondensing

**Warranty & Support:**

<b>Warranty:</b>	5 years
<b>Support:</b>	Free-of-charge lifetime technical support

**Standards Compliance:**

<b>Electrical Safety:</b>	BS EN 60950-1:2006
<b>Radio Disturbance:</b>	BS EN 55022:2006 (class B)
<b>Immunity Characteristics:</b>	BS EN 55024:2003
<b>RoHS:</b>	RoHS-Compliant



Front view



Rear view