

## » MC2000

SECURE AND STABLE TIMING ACROSS TWO INDEPENDENT NETWORKS



### KEY BENEFITS

Synchronised timing across two networks

Triple processor architecture with two fully independent network interfaces

Flexible synchronisation options to combat GPS jamming

Reliable performance

The MC2000 addresses the challenges of time synchronisation across multiple or large networks.

With two fully independent network ports, flexible synchronisation options and reliable performance, the MC2000 is the solution for secure enterprise grade timing on large networks.

#### MULTIPLE NETWORK TIMING

The MC2000 provides high accuracy timing across two independent networks. With its triple processor architecture and high performance design, the MC2000 dual LAN NTP server enables the accurate synchronisation of devices across multiple networks. The high stability TCXO ensures timing accuracy is maintained, even during periods of antenna synchronisation loss.

#### FLEXIBLE SYNC OPTIONS

The MC2000 gives you flexible synchronisation options. The system is available with a wide choice of antenna systems and technologies (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 MC2000 is powered up and serving time on your networks.

#### COMBAT GPS JAMMING

The MC2000 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 MC2000 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 MC2000 has been engineered to offer reliable performance. The system is based around a triple processor architecture, with separate CPUs handling each network interface and time processing. As well as ensuring maximum network throughput with accurate system timing, the triple 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 MC2000 on a local area network.

**Supported Protocols:**

<b>Protocols:</b>	NTP v2 (RFC 1119), NTP v3 (RFC 1305), NTP v4 (RFC 5905), SNTP v3 (RFC 1769), SNTP v4 (RFC 4330), DHCP*, HTTP*, TELNET* (* can be disabled by user)
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**I/O Connections:**

<b>Ethernet connection:</b>	2 x 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

