

ONCORE™ TIMING2000 ANTENNA



HIGH LEVELS OF FILTERING FOR CELLULAR BASE-STATION APPLICATIONS

Key Features of the Oncore Timing2000 Antenna

- 25dB Active Antenna
- 5 Volt operation
- 26mA typical current consumption
- High strength direct mount
- <1.5dB typical noise figure
- 40dB minimum filtering at +/- 50MHz

The Oncore Timing2000 Antenna, targeted at GPS timing applications, is designed for use with the Motorola's Oncore receivers as well as many GPS receivers from other manufacturers.

High performance without interference

Consuming only minimal five-volt power, this new antenna design reflects Motorola's high standards for performance while operating in the presence of electromagnetic interference. GPS signals are received by the antenna, amplified within the antenna assembly, and then relayed via cable to the Oncore receiver module for processing.

Built to withstand weather

The conical radome housing, UV-resistant material and a tubular mounting nut specially designed for ease of weatherproofing, assure superior performance while operating in the world's challenging weather environments.

Motorola Matching M12+ Timing Oncore GPS Receiver

- 3 Volt operation
- 12 Channel simultaneous operation
- Fully calibrated to UTC at USNO
- Performance using clock granularity message
 - < 2nS 1 Sigma average
 - < 6nS 6 Sigma average
- Performance not using clock granularity message
 - < 10nS 1 Sigma average
 - < 20nS 6 Sigma average
- 185mW Power consumption
- Small 40 * 60 * 10 mm form factor
- 200 Seconds typical cold start TTFF
- 50 Seconds typical warm start TTFF
- 25 Seconds typical hot start TTFF <1s internal reacquisition
- Position hold mode for improved accuracy
- Automatic site survey for position hold
- Advanced T-RAIM features
- Antenna current sense detection



There's only one name for quality
and performance in GPS technology.



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Timing2000 Antenna Specifications



From Motorola, the leader in GPS technology

The Oncore family of GPS receivers demonstrates Motorola's quest for product and service excellence, and is further evidenced by our QS-9000 certification and Six Sigma quality achievements. Understand Motorola's reliability, responsive support and long-term commitment and you understand why Oncore is the receiver of choice. *After all, it's not where you are, it's where you're going.*

GENERAL CHARACTERISTICS	Antenna Description	Active microstrip patch antenna Molded UV- resistant plastic conical radome Aluminum die cast bottom housing Electrically shielded low noise amplifier assembly
	Operating Frequency	L1 (1575.42 MHz, +/- 2 MHz)
PERFORMANCE CHARACTERISTICS	Input Impedances	50 Ohm
	VSWR	1.5 (typical) @ 1575.42 MHz
	Bandwidth	25 MHz (typical) +/- 3dB points Filtering is 40dB not4dB at +/- 50MHz
	Polarization	Right hand circular
	Azimuth Coverage	360°
	Elevation Coverage	0° to 90°
	Gain Characteristics of Antenna Element	+2.0 dBic minimum at zenith -10 dBic minimum at 0° elevation
	Filtering	4dB minimum @ +/- 50 MHz
	LNA Gain	25dB (typical)
	Noise Figure	< 1.5dB (typical)
ELECTRICAL CHARACTERISTICS	Dynamics	Vibration: SAE J1455
	Power Requirements	5 +/- 0.25 Vdc
PHYSICAL CHARACTERISTICS	Power Consumption	26 mA @ 5 Vdc (typical)
	Dimensions	102.0 diameter x 82.0 height (mm)
ENVIRONMENTAL CHARACTERISTICS	Weight	312 grams
	Mount	Center mount (M28 nut)
	Connector	N-Connector (jack style)
	Operating Temperature	-40°C to +85°C
MISCELLANEOUS	Storage Temperature	-40°C to +85°C
	Humidity	85% noncondensing +30°C to +60°C
	UV Radiation	JIS D0202 (Sunshine Carbon Arc System)
	Salt Spray Test	Spray 5% NaCl solvent at +35°C
	Immersion Test	1 meter (with connector sealed)
NOTE	Transient Voltage Test	+/- 12 kV
	Optional Features	Post Mount Bracket (MNT62312B1)
All performance measurements are typical and referenced to 25°C unless indicated otherwise		



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