

## SMA 2000 Series Master Clock (V8.6)

### Features

- Available in Rack or Wall Mount designs
- LED display for a clear, accurate readout
- Automatic bi-annual Daylight Saving Time changes (if applicable)
- Capable of interfacing and providing time data to third-party clock systems
  - Supports 59 minute correction, 58 minute correction, National Time/ Rauland, Rauland Digital
  - Dukane Digital, input only
- Bias seconds output
  - Adjust the time plus or minus a few seconds or minutes to fit your application
- RS485 input and output for time correction and synchronization
- 12 or 24 Hour Mode
- Microprocessor based



### Highlights

- Built-in web interface – Each master clock has a built-in web interface allowing the user to program, control, and monitor the master clock from any computer connected to the same LAN without the need for additional software
  - Settings include: Network settings, NTP server selection, Email alerts, UTC/GMT offset selection, automatic Daylight Saving Time adjustments, and more!
- All versions of the clock receive accurate time from one of ten pre-programmed third party NTP servers (user changeable) for maximum reliability and redundancy. Alternatively, the master clock can be set to receive the time data from an in-house NTP server or via an optional GPS receiver.
- Email alerts for:
  - NTP Synchronization Timeouts
  - Power Resets
  - GPS Synchronization Timeouts (if applicable)
- Ten year battery backup for internal real-time clock timekeeping

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### Additional Optional Features

- GPS receiver
- Transmitter for correction of Sapling SAL(G) Series Wireless Analog Clocks or SBL(G) Series Wireless Digital Clocks
- (S)NTP Server
  - With the (S)NTP server upgrade, the Sapling SMA Master Clock can be used as an (S)NTP server to provide (S)NTP time to any IP device capable of receiving it

### Specifications

**Housing:**

Smooth surface metal case

**Color:**

Black

**Mounting:**

Wall Mount or Rack Mount

**Display:**

0.56" (1.42 cm) LED display

**Calendar:**

Built-in calendar with leap years

**Housing Dimensions (LxWxD):**

11.0" x 17.5" x 1.75"

(27.94 cm x 44.45 cm x 4.45 cm)

**Weight:**

6.5 lbs. (2.95 kg)

**Time Base:**

Crystal

**Memory:**

Non-volatile EEPROM

**Temperature Range:**

Operating: 32°F - 113°F (0°C - 45°C)

Shelf: 5°F - 167°F (-15°C - 75°C)

**Voltage Input:**

85 VAC – 264 VAC, 50/60 Hz

**Current Consumption:**

0.2A at 120V and 0.1A at 230V

**Power Consumption:**

20 Watts

**Inputs:**

RS485, 59 minute correction, 58 minute correction, National Time and Rauland, Rauland digital, Dukane digital, Once a Day Pulse, GPS (optional), (S)NTP, Wireless Repeater (optional)

**Outputs:**

RS485, 59 minute correction, various 58 minute corrections, National Time and Rauland, Rauland Digital, Once a Day Pulse, Once an Hour Pulse, Once a Minute Pulse

**Includes:**

1 – 6 foot (1.82 m) power cord

1 – Wall Mount Kit (Wall Mount only)

1 – Remote Antenna

(Rack Mount and transmitter option only)

1 – 75 foot (22.86 m) GPS cable

(with GPS option; longer cables available)

1 – Dome Antenna (with GPS option)

**Ethernet Speed:**

10/100 Mbps Full Duplex

**Ethernet Port:**

RJ45

**Compliance:**

UL and cUL listed

FCC part 15 B "class B digital devices"

specification sheets may change without prior notice

## SMA 2000 Series Master Clock (V8.6)

### Options – Transmitter

**Input Sensitivity:**

-112 dBm

**RF Signal Output:**

30 dBm (1 watt)

**Transmission Frequency:**

Either 900 MHz or 2.4 GHz  
frequency-hopping technology

### Options – GPS

**GPS Antenna:**

Bullet shaped active antenna that mounts to 3/4" conduit (please refer to Sapling's GPS Mounting Kit Spec Sheet)

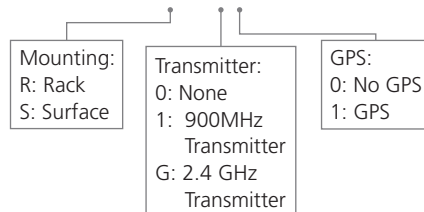
**Antenna Dimensions:**

Diameter: 3.04" (7.72 cm)

Height: 2.94" (7.47 cm)

### Ordering Information:

SMA 2000 Series Master Clock: SMA-2X0-XX00-1



SMA 2000 Series Software Upgrade to (S)NTP Server: SMA-000-SERV-0