SecureSync

1200 MODEL

Getting Started Guide

Document Part No.: 1200-5000-0051

Revision: 12.0

Date: 7-May-2021

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About this Guide

This Getting Started Guide is a supplement to the main user manual for SecureSync 1200 Time and Frequency System. The latest version of the main user manual can be found online under manuals.spectracom.com.

Orolia USA, Inc.

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Product Overview

This section is designed to help you become familiar with the structure, features, and functions of the SecureSync 1200 Time and Frequency System.

1.1 SecureSync Front Panel

The front panel of a SecureSync unit consists of:

- three separate illuminated status LEDs
- a front panel control keypad
- an LED time display
- an LCD information display
- an RS-232 serial interface
- and a temperature controlled cooling fan.

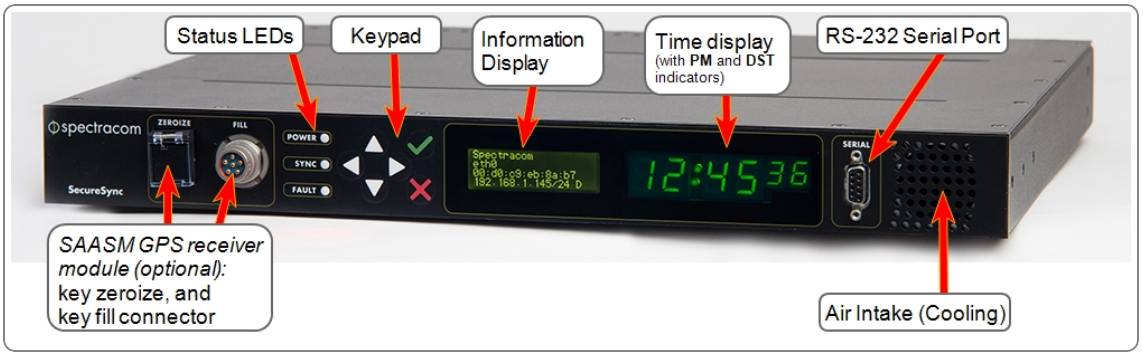


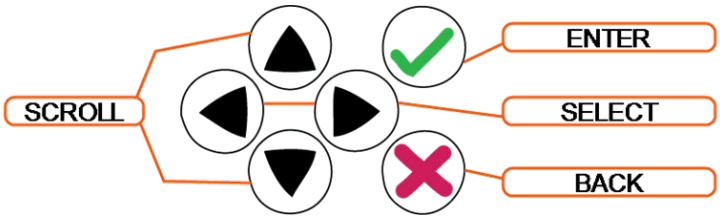
Figure 1-1: SecureSync front panel layout (SAASM version)

1.1.1 Front Panel Keypad, and Display

To simplify operation and to allow local access to SecureSync, a keypad and a 4-line LCD information display are provided on the front panel of the unit.

The front panel keypad and display can be used to configure basic network settings e.g., en-/disabling DHCP, or setting an IP address and subnet mask.

1.1.1.1 Using the Keypad



- ◀▶ **arrow keys**: Navigate to a menu option (will be highlighted)
- ▲▼ **arrow keys**: Scroll through parameter values in edit displays
- ✓ **ENTER** key: Select a menu option, or load a parameter when editing
- ✖ **BACK key**: Return to previous display or abort an edit process

1.1.1.2 Navigating the Front Panel Display

The main menu options and their primary functions are as follows:

- **Display**: Used to configure the information display
- **Clock**: Displaying and setting of the current date and time
- **System**: Displaying version info, system halt and reboot, reset `spadmin` password
- **Netv4**: Network interface configuration
- **Lock**: Locks the front panel keypad to prevent inadvertent operation.

1.1.2 Status LEDs

Three Status LEDs (see "SecureSync front panel layout (SAASM version)" on the previous page), located on the unit's front panel, indicate SecureSync's current operating status:

- POWER: Green, always on while power is supplied to the unit
- SYNC: Tri-color LED indicates the time data accuracy
- FAULT: Two-color, three-state LED, indicating if any alarms are present.

At power up, the unit automatically performs a brief LED test run during which all three LEDs are temporarily lit.

1.2 Unit Rear Panel

The SecureSync rear panel accommodates the connectors for all input and output references.

- Optional AC connection for the power input
- Optional DC power connector
- Ethernet and USB connections
- 1PPS output
- 10 MHz output
- Six bays for option cards
- One optional antenna connector.

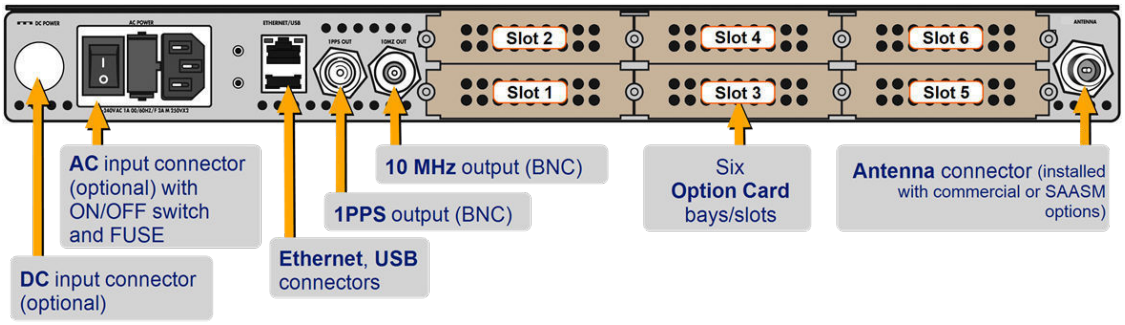


Figure 1-2: Standard rear panel

Typically, **option cards** will be installed at the factory.

The **DC Power** port connector is only installed if your unit was ordered with a DC input power option.

Note: DC input power does not have an ON/OFF switch.

- The **AC Power** connector is the input for the AC power and provides an AC power ON/OFF switch. This connector assembly is only installed if SecureSync was ordered with AC input power option.
- The **Ethernet** connector provides an interface to the network for NTP synchronization and to obtain access to the SecureSync product Web UI for system management. It has two small indicator lamps, "Good Link" (green LED), and "Activity" (orange LED).

Table 1-1: Ethernet status indicator lights

LED	State	Meaning
Orange	On Off	LAN Activity detected No LAN traffic detected
Green	On Off	LAN Link established, 10 or 100 Mbps No link established

- The **USB** connector is reserved for future expansion.
- The **1PPS** BNC connector offers a once-per-second square-wave output signal.
- The **10 MHz** BNC connector provides a 10 MHz sine-wave output signal.
- The optional **ANTENNA** connector is a type "N" connector for the GNSS input from your GNSS antenna via a coax cable.

1.3 Specifications

The following specifications apply to the standard configuration of SecureSync. Information on option card specifications can be found in the main user manual.

1.3.1 Input Power

AC power source:

- 100 to 240 V_{AC}, 50/60 Hz, ±10 %, or
- 100 to 120 V_{AC}, 400 Hz, ±10% via an IEC 60320 connector (power cord included)

DC input (option):

- 12-17 V_{DC} -15%, +20%, or
- 21-60 V_{DC} -15%, +20%, secure locking device

Maximum power draw:

- TCXO/OCXO oscillator installed: 40 W normal (50 W start-up)
- Rubidium (Rb) oscillator installed: 50 W normal (80 W start-up)
- Low-Phase Noise (LPN) Rubidium oscillator installed: 52 W normal (85 W start-up)

Battery:

- BR3032 lithium coin-cell (3V DC- 500mAh)

1.3.1.1 Fuses

Type: T 2A L 250 V

Model:

- Orolia recommends: LITTELFUSE 0213002.MXP
- [Orolia part number: F010R-0002-000 E FUSE,2A,SB,IEC SURGE,GLASS]

Number: 2 (two) per unit

SecureSync label on rear panel of unit:

- "**AC POWER/F 2A T 250V (2)**"
  - LEGEND:
    - F = Fuse
    - 2A = Current Rating: 2 Ampères
    - T = Speed: Time Delay (Slow-Blow)
    - L = Breaking Capacity: Low (Glass)
    - 250V = Voltage Rating
    - (2) = Fuses used: 2 (two)

Caution: Before testing fuses, remove AC power by disconnecting the AC power cord.

Note: In the event that the unit does not power up with AC power, these fuses should be tested.

1.3.2 GNSS Receiver

Model: u-blox M8T

Compatible signals:

- GPS L1 C/A Code transmissions at 1575.42 MHz
- GLONASS L1 0F transmissions centered at 1602.0 MHz
- Galileo E1 B/C transmissions at 1575.42 MHz
- BeiDou B1 transmissions centered at 1561.098 MHz
- QZSS L1-SAIF transmissions at 1575.42 MHz

Satellites tracked: Up to 72 simultaneously

Update rate: up to 2Hz (concurrent)

Acquisition time: Typically < 27 seconds from cold start

Antenna requirements: Active antenna module, +5V, powered by SecureSync, 16 dB gain minimum

Antenna connector: Type N, female

1.3.3 RS-232 Serial Port (Front Panel)

Function: Accepts commands to locally configure the IP network parameters via CLI for initial unit configuration.

Connector: DB9 F, pin assignments conform to EIA/TIA-574, data communication equipment

Character structure: ASCII, 9600 baud, 1 start, 8 data, 1 stop, no parity

1.3.4 10/100 Ethernet Port

Function: 10/100 Base-T, auto-sensing LAN connection for NTP/SNTP and remote management and configuration, monitoring, diagnostics and upgrade

Connector: RJ45, Network IEEE 802.3

1.3.5 1PPS Output

Signal: One pulse-per-second square wave (ext. reference connected to GNSS receiver)

Signal level: TTL compatible, 4.3 V minimum, base-to-peak into 50 Ω

Pulse width: Configurable pulse width (200 ms by default)

Pulse width range: 20 ns to 900 ms

Rise time: <10 ns

Accuracy: Positive edge within ±50 ns of UTC when locked to a valid 1PPS input reference

Connector: BNC female

Table 1-2: 1PPS output accuracies

Oscillator Type	Accuracy to UTC (1 sigma locked to GPS)	Holdover (constant temp. after 2 weeks of GPS lock)	
		After 4 hours	After 24 hours
Low-phase noise Rubidium	±25 ns	0.2 µs	1µs
Rubidium	±25 ns	0.2 µs	1µs
Low-phase noise OCXO	±25 ns	0.5 µs	10 µs
OCXO	±50 ns	1µs	25 µs
TCXO	±50 ns	12 µs	450 µs

1.3.6 10 MHz Output

- **Signal**: 10 MHz sine wave
- **Signal Level**: +13 dBm ±2dB into 50 Ω
- **Harmonics**: -40 dBc minimum
- **Spurious**: -70 dBc minimum TCXO
- **Connector**: BNC female
- **Signature Control**: This configurable feature removes the output signal whenever a major alarm condition or loss of time synchronization condition is present. The output will be restored once the fault condition is corrected.

Table 1-3: 10 MHz output — oscillator types and accuracies

Oscillator Type	Accuracy
Low-phase noise Rubidium	$1x10^{-12}$ typical 24-hour average locked to GPS
	$1x10^{-11}$ per day ($5x10^{-11}$ per month) typical aging unlocked
Rubidium	$1x10^{-12}$ typical 24-hour average locked to GPS
	$1x10^{-11}$ per day ($5x10^{-11}$ per month) typical aging unlocked
Low-phase noise OCXO	$1x10^{-12}$ typical 24-hour average locked to GPS
	$2x10^{-10}$ per day typical aging unlocked
OCXO	$2x10^{-12}$ typical 24-hour average locked to GPS
	$1x10^{-9}$ per day typical aging unlocked
TCXO	$1x10^{-11}$ typical 24-hour average locked to GPS
	$1x10^{-8}$ per day typical aging unlocked

1.3.7 Mechanical and Environmental Specifications

- **Dimensions**:
  - Designed for EIA 19” rack mount:
  - Housing w/o connectors and brackets:
    - 16.75” W x 1.72” H [1U] x 14.33” D actual
    - (425 mm W x 44 mm H x 364 mm D)
- **Weight**:
  - 6.0 lbs (2.72 kg)

- **Temperature**:
  - **Operating:**
    - –20°C to +65°C (+55°C for Rubidium option)
  - **Storage:**
    - –40°C to +85°C
- **Humidity**:
  - 10% - 95% relative humidity, non-condensing @ 40°C
- **Altitude**:
  - **Operating:**
    - 100-240 V_{AC}: up to 6560 ft (2000 m)
    - 100-120 V_{AC}: up to 13123 ft (4000 m)
    - 12-17 V_{DC} and 21-60 V_{DC}: up to 13125 ft (4000 m)
  - **Storage range:**
    - up to 45000 ft (13700 m)
- **Shock**:
  - Individual positive and negative shock loads in X, Y, and Z axes directions
    - **Operating**: 15 g, 11 msec
      - SAASM GPS storage shock specs: MRU 35 g, GB-GRAM 40 g
    - **Storage**: 75 g, 11 msec
- **Vibration**:
  - Sine sweep 1.0 octave/min
    - **Operating**: 10-55 Hz 0.07 gpeak; 55-500 Hz 1.0 gpeak
    - **Storage**: 10-55 Hz 0.15 gpeak; 55-500 Hz 2.0 gpeak
- **MIL-STD-810F**: 514.5, 516.5

1.4 The SecureSync Web UI

SecureSync has an integrated web user interface (referred to as "Web UI" throughout this documentation) that can be accessed from a computer over a network connection, using a standard web browser. The Web UI is the most complete way to configure the unit, and for status monitoring during everyday operation.

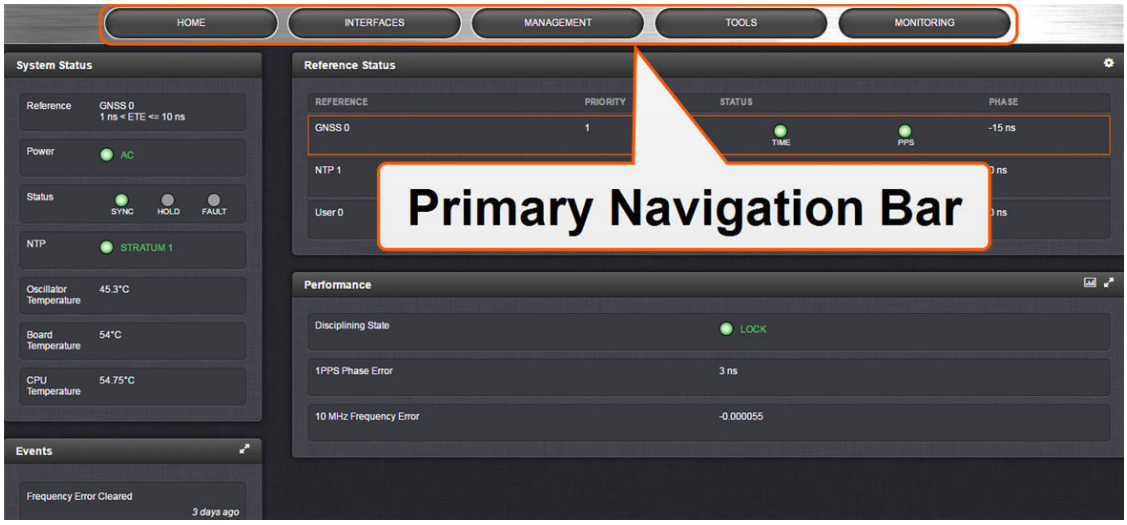
> **Note:** If you prefer, an integrated Command-Line Interpreter interface (CLI) allows the use of a subset of commands.

1.4.1 The Web UI HOME Screen

The **HOME** screen of the SecureSync web user interface ("Web UI") provides comprehensive status information at a glance, including:

- vital **system** information
- current status of the **references**
- key **performance**/accuracy data
- major **log events**.

The **HOME** screen can be accessed from anywhere in the Web UI, using the HOME button in the **Primary Navigation Bar**:



The **Primary Navigation Bar** provides access to all menus:

- **HOME**: Return to the HOME screen (see above)
- **INTERFACES**: Access the configuration pages for ...
  - ... references (e.g., GNSS, NTP)
  - ... outputs (e.g. 10 MHz, PPS, NTP) and
  - ... installed input/output option cards.
- **MANAGEMENT**: Access the NETWORK setup screens, and OTHER setup screens e.g., to configure Reference Priorities, System Time, and the Oscillator.

- **TOOLS**: Opens a drop-down menu for access to the system maintenance screens and system logs.
- **HELP**: Provides Orolia Service Contact Information and high-level system configurations you may be required to furnish when contacting Orolia Service.

Installation

2.1 SAFETY

Safety: Symbols Used

Table 2-1: Safety symbols used in this document, or on the product

Symbol	Signal word	Definition
	DANGER!	Potentially dangerous situation which may lead to personal injury or death! Follow the instructions closely.
	CAUTION!	Caution, risk of electric shock.
	CAUTION!	Potential equipment damage or destruction! Follow the instructions closely.
	NOTE	Tips and other useful or important information.
	MULTIPLE POWER SOURCES	This equipment may contain more than one power source: Disconnect AC and DC power supply cords before removing the cover to avoid electric shock.
	ESD	Risk of Electrostatic Discharge! Avoid potential equipment damage by following ESD Best Practices.
	CHASSIS GROUND	This symbol is used for identifying the functional ground of an I/O signal. It is always connected to the instrument chassis.
	Analog Ground	Shows where the protective ground terminal is connected inside the instrument. Never remove or loosen this screw!
	Recycle	Recycle the mentioned components at their end of life. Follow local laws.

SAFETY: Before You Begin Installation

DANGER! If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

DANGER! — INSTALLATION OF EQUIPMENT:

Installation of this product is to be done by authorized service personnel only. This product is not to be installed by users/operators without legal authorization.

Installation of the equipment must comply with local and national electrical codes.

DANGER! — DO NOT OPEN EQUIPMENT, UNLESS AUTHORIZED:

The interior of this equipment does not have any user serviceable parts. Contact Orolia Technical Support if this equipment needs to be serviced. Do not open the equipment, unless instructed to do so by Service personnel. Follow Orolia Safety Instructions, and observe all local electrical regulatory requirements.

DANGER! — FUSING:

The equipment has Double Pole/Neutral Line Fusing on AC power.

For continued protection against risk of fire, replace fuses only with same type and rating of fuse.

DANGER! — GROUNDING: This equipment must be EARTH GROUNDED. Never defeat the ground connector or operate the equipment in the absence of a suitably installed earth ground connection. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.

The AC and DC power connectors of this equipment have a connection to the earthed conductor of the AC and DC supply earthing conductor through the AC and DC power cords. The AC source outlet must contain a protective earthing connection. This equipment shall be connected directly to the AC power outlet earthing pin or DC supply system earthing electrode conductor.

The DC supply source is to be located within the same premises as this equipment: The equipment shall be located in the same immediate area (such as, adjacent cabinets) as any other equipment that has a connection to the earthing conductor of the same AC or DC supply circuit earthing conductor, and also the point of earthing of the AC or DC system. The AC or DC system shall not be earthed elsewhere.

Switches or other disconnection devices shall not be in the earthed circuit conductor between the AC and DC source and the point of the connection of the earthing electrode conductor to SecureSync's AC and DC input power connectors earthing pin.

Caution: Electronic equipment is sensitive to Electrostatic Discharge (ESD). Observe all ESD precautions and safeguards when handling Orolia equipment.

SAFETY: User Responsibilities

- The equipment must only be used in technically perfect condition. Check components for damage prior to installation. Also check for loose or scorched cables on other nearby equipment.
- Make sure you possess the professional skills, and have received the training necessary for the type of work you are about to perform.
- Do not modify the equipment.
- Use only spare parts authorized by Orolia.

- Always follow the instructions set out in this Getting Started Guide, or in other Orolia documentation for this product.
- Observe generally applicable legal and other local mandatory regulations.

2.2 Unpacking and Inventory

Caution: Electronic equipment is sensitive to Electrostatic Discharge (ESD). Observe all ESD precautions and safeguards when handling the unit.

Unpack the equipment and inspect it for damage.

Note: Retain all original packaging for use in return shipments if necessary.

The following items are included with your shipment:

- SecureSync unit
- QuickStart Guide (printed version)
- Ancillary items (except for rack mounting items, the contents of this kit may vary based on equipment configuration and/or regional requirements)
- Purchased optional equipment; note that option cards listed on the purchase order will be pre-installed in the unit.

2.3 Required Tools and Parts

Depending on your application and system configuration, the following tools and parts may be required:

- Phillips screwdrivers to install the rack-mount ears, and to mount the unit in a 19"-rack
- If you plan on using DC power Orolia recommends an external ON/OFF switch.
- Ethernet cables.

2.3.1 Required GNSS Antenna Components

Should you plan on using a GNSS reference with your SecureSync, you will also need:

- Antenna cable with SMA connector, or conversion cable
- GNSS antenna with mounting bracket
- GNSS antenna surge suppressor (recommended)
- GNSS antenna inline amplifier (optional for short cable lengths)

For antenna installation guidelines, see the separate documentation shipped with the antenna components.

2.4 Mounting the Unit

SecureSync units can be operated on a desktop or in a rack in a **horizontal**, **right-side-up** position.

2.4.1 Rack Mounting

If installing the unit in a rack, install the rack-mount ears on the two sides of the front panel and mount the unit in a standard 19-inch rack cabinet.

The SecureSync ancillary kit contains the following parts needed for rack mounting:

- 2 each 1165-1000-0714 rack mounting brackets
- 2 each MP09-0003-0030 equipment rack handles
- 4 each H020-0832-0406 #8-32 flat head Phillips screws
- 6 each HM20R-04R7-0010 M4 flat head Phillips screws

The following **customer supplied items** are also needed:

- 4 each #10-32 pan head rack mount screws
- 1 each #2 Phillips head screwdriver
- 1 each 3/32" straight screwdriver

To rack mount the SecureSync unit:

1. Attach an MP09-0003-0030 equipment rack handle to the front of each 1165-1000-0714 rack mounting bracket, using the holes nearest the right angle bend of the 1165-1000-0714 rack mounting bracket, with the #2 size Phillips screwdriver, using 2 each of the H020-0832-0406 #8-32 flat head Phillips screws.
2. Attach the 1165-1000-0714 rack mount brackets to the sides of the SecureSync with the rack mounts ears facing outward, aligned with the front edge of the SecureSync front panel. Use the #2 Phillips screwdrivers, using 3 each of the HM20R-04R7-0010 M4 flat head Phillips screws.

3. Secure the rack mount brackets to the rack using the #10-32 rack mount screws and #2 Phillips head screwdriver, 2 each per side of the rack.

2.5 Connecting Supply Power

Depending on the equipment configuration at time of purchase, SecureSync can be powered from:

- an AC input
- a DC input
- with both AC, and DC input.

Supplying both AC and DC input power provides redundant and automatic power switchover in case one or the other input power sources is lost.

Before connecting power to the unit, be sure that you have read all safety information detailed in section "SAFETY" on page 15.

2.5.1 Power Source Selection

If both an AC, and a DC power source are connected to the unit, the following rules apply:

- If AC and DC power are both applied, AC power is used.
- If DC power is applied, but AC power is not, then DC power will be used.
- If AC and DC power are both present, but AC power is subsequently lost, SecureSync will automatically switch to using the DC power input.

DANGER! — This unit will contain more than one power source if both the AC and DC power options are present. Turning off the rear panel power switch will NOT remove all power sources.

The following sections discuss AC and DC power input. Connect AC and/or DC power, as required.

2.5.2 Using AC Input Power

Connect the AC power cord supplied in the SecureSync ancillary kit to the AC input on the rear panel and the AC power source outlet. The AC input is fuse-protected with two fuses located in the AC power entry module (line and neutral inputs are fused). The AC power entry module also contains the main power switch for the AC power applied to the equipment.

Caution: This equipment has Double Pole/Neutral Line Fusing on AC power.

Note: Important! SecureSync is earth grounded through the AC power connector. Ensure SecureSync is connected to an AC outlet that is connected to earth ground via the grounding prong (do not use a two prong to three prong adapter to apply AC power to SecureSync).

2.5.3 Using DC Input Power

If the rear panel DC port is present, connect DC power, per the voltage and current as called out on the label that resides above the DC power connector.

Note: DC power is an option chosen at time of purchase. The rear panel DC input port connector is only installed if the DC input option is available. Different DC power input options are available (12 V_{DC} with a voltage range of 12 to 17 V at 7 A maximum or 24/48 V_{DC} input with a voltage range of 21 to 60 V at 3 A maximum). Review the DC power requirement chosen, prior to connecting DC power (when the DC port is installed, a label will be placed over the connector indicating the allowable DC input voltage range and the required current).

DANGER! GROUNDING: SecureSync is earth grounded through the DC power connector. Ensure that the unit is connected to a DC power source that is connected to earth ground via the grounding pin C of the SecureSync DC power plug supplied in the ancillary kit.

Caution: The DC input port is both fuse and reverse polarity protected. Reversing polarity with the 24/48 V_{DC} option will not blow the fuse, but the equipment will not power-up. Reversing polarity with the 12 V_{DC} option will likely blow the internal fuse.

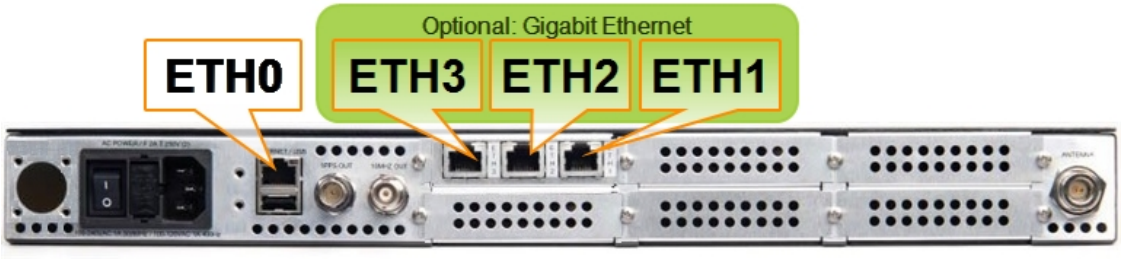
A DC power connector to attach DC power to SecureSync is included in the ancillary kit provided with the equipment. A cable of 6 feet or less, using 16AWG wire, with adequate insulation for the DC voltage source should be used with this connector. The cable clamp

provided with the DC power plug for strain relief of the DC power input cable should be used when DC power is connected to SecureSync.

> **Note:** Orolia recommends to use a dedicated DC power supply switch to energize/de-energize SecureSync externally.

2.6 Connecting Network Cables

SecureSync provides a base 10/100 Ethernet port for full NTP functionality, as well as a comprehensive web-based user interface ("Web UI") for configuration, monitoring and diagnostic support. Additional network ports are available with the Gigabit Ethernet option card (1204-06).



Before connecting the network cable(s), you need to decide which port(s) you want to use for which purpose (e.g., ETH0 for configuration only, etc.), and how you want to configure basic network connectivity e.g., the IP address:

a. Configure the unit via the front panel.

b. Configure SecureSync by means of a PC connected to an existing network.

   » When connecting to a hub, router, or network computer, use a straight-through wired, shielded CAT 5, Cat 5E or CAT 6 cable with RJ-45 connectors. Connect one end to the Ethernet port on the SecureSync rear panel, and the opposite end of the cable to a network hub or switch.

c. Configure SecureSync by connecting a stand-alone computer directly via a dedicated network cable (standard-wired, or crossover cable):

   » When connecting directly to a stand-alone PC, use a network cable. Connect the cable to the NIC card of the computer.
   Since no DHCP server is available in this configuration both SecureSync, and the PC must be configured with static IP addresses that are on the same subnet (10.1.100.1 and 10.1.100.2 with a subnet value of 255.255.255.0 on both devices, for example).

Once the unit is up and running, verify that the green link light on the Ethernet port is illuminated. The amber "Activity" link light may periodically illuminate when network traffic is present.

See "Network Setup" on the next page for more information.

2.7 Connecting the GNSS Input

Typical installations include GNSS as an external reference input.

1. Install a GNSS antenna, surge suppressor, antenna cabling, and GNSS preamplifier (if required). Refer to the documentation included with your GNSS antenna for information regarding GNSS antenna installation.
2. Connect the GNSS cable to the rear panel antenna input jack.

2.8 Powering Up the Unit

1. After installing your SecureSync unit, and connecting all references and network(s), verify that power is connected, then turn ON the unit using the switch on the rear panel (only if equipped with AC power input), and wait for the device to boot up.

   Note: DC input power is not switched, so SecureSync will be powered up with DC input connected, unless you installed an external power switch.

2. Observe that all of the front panel LEDs momentarily illuminate (the Power LED will then stay lit) and that the Information display LCD back light illuminates. The fan may or may not run, depending on the model year of your SecureSync unit.

   The time display will reset and then start incrementing the time. About 10 seconds after power-up, "Starting up SecureSync" will be displayed in the information display. After approximately 2 minutes, the information display will then show the current network settings.

   By default, the 4-line information display shows the unit's hostname, IPv4 address, mask, and gateway.
   The time display shows the current time: UTC (default), TAI, GPS or local timescale, as configured.

Figure 2-1: SecureSync front panel

3. Check the front panel status LED indicators:
   - The **Power** lamp should be solid green.
   - The **Sync** lamp will probably be red, since synchronization has not yet been achieved.
   - The **Fault** lamp will be OFF, or solid orange, indicating a minor alarm, or solid red, asserting a power-up frequency error alarm (until the disciplining state is reached.)

2.9 Network Setup

There are three methods that can be used to communicate with your SecureSync in order to set up an IPv4 address and configure inputs and outputs; the best method will depend on your specific setup and connections.

- The **web user interface** ("**Web UI**") is the most complete way to configure and monitor the unit. The Web UI is available through the Ethernet port via a network connection. Using the Web UI requires a web browser.
- The **Command Line Interpreter** ("**CLI**") is available through the RJ45 serial port (front panel) or through an Ethernet connection. The CLI can be either a means to configure the unit to allow access to the Web UI, or the principal means of communication with your SecureSync. Using the CLI requires a terminal emulator program.

  The command `helpcli` provides a list of helpful commands (press q or ctrl c to exit) as does the main user manual.
- The **front panel display menu** also allows monitoring and settings adjustments. Using the front panel display requires physical access to the unit.

Note: The default credentials for both the Web UI and the CLI are:
username: spadmin
password: admin123

Note: If DHCP is disabled, the default static IP address of the SecureSync unit is 10.10.201.x (x= dependent on ETH port).

2.9.1 Network connection (common tasks) :

Note: The SecureSync network settings have DHCP enabled by default.

Identify the IP address assigned to your SecureSync:

Since the SecureSync defaults to DHCP, when a unit is connected to a DHCP-enabled network, an IP address should be assigned automatically. To identify the IP address and communicate with the SecureSync, follow one of the methods below.

On the front panel display:

The IP address is continuously displayed on the last line of the front panel (default setting). More detailed network information can be found within the **Netv4** sub-menu.

In the CLI:

» The `net`, `net4` or `net6` commands will display the network settings for each Ethernet port.

In the Web UI:

1. Navigate to **MANAGEMENT** > **NETWORK** > **Network Setup**.
2. Click on the information icon next to an Ethernet port to view all network settings for that port.

Disable or Enable DHCP

In order to assign a static IP address to an Ethernet port, it is necessary to disable DHCP.

On the front panel display:

1. Press UP or DOWN on the keypad to enter the menu screen.
2. Select the **Netv4** sub-menu and press the ENTER key.
3. Highlight the interface to be updated (**Eth0**) and press the ENTER key.
4. Select the **DHCP** sub-menu and press the ENTER key.
5. The State field will list the current DHCP status. Scroll through and select Disable in the Action field and press the ENTER key.

In the CLI:

Use the following command to set DHCP:

» `dhcp4set <intfc> <on|off>`, where the `intfc` is **0** for Eth0

In the Web UI:

1. Navigate to **MANAGEMENT** > **NETWORK** > **Network Setup**.
2. Click on the gear icon next to an Ethernet port to change network settings for that port. If you are disabling DHCP, it is recommended to enter your settings before clicking Submit to avoid errors (see next section).

Set the IP address

Note: DHCP must be disabled before you can configure a static IP address (see above)

On the front panel display:

1. Press UP or DOWN on the keypad to enter the menu screen.
2. Select the **Netv4** sub-menu and press the ENTER key.
3. Highlight the interface to be updated (**Eth0**) and press the ENTER key.
4. Select the **IP Addr** sub-menu and press the ENTER key.
5. The "O" field (OLD) will list the current IP address. Highlight the "N" field (NEW), scroll each number to the new address, and press the ENTER key.
6. If necessary, you can also configure the main default gateway, and the gateway for each Ethernet port. See the main user manual for details.

In the CLI:

» Use the command: `ip4set <intfc> <addr> <mask> [<gateway>]` where **intfc** is 0 for Eth0; **addr** is the IPv4 address, (such as 192.168.100.12), **mask** is the subnet mask (for instance, 255.255.255.0) and the **gateway** is the (optional) network gateway.

In the Web UI:

1. Navigate to **MANAGEMENT** > **NETWORK** > **Network Setup**.
2. Click on the gear icon next to an Ethernet port. The **Edit Ethernet Port Settings** window will open. To change network settings for that port, including the IP address,

enter your static IP address, netmask, and gateway (if needed).

3. Click Submit after all your changes have been entered, and start a new Web UI session by entering the new IP address into your browser and logging in.

To continue with other settings, such as NTP preferences, references, outputs, etc., see the main user manual: manuals.spectracom.com.

It is also recommended that you review your security settings and update your administrative passwords.

Technical Support

To request technical support for your SecureSync unit, please go to the"Timing Support" page of the Orolia website (https://www.orolia.com/support/timing), where you can not only submit a support request, but also find additional technical documentation.

You can also email us directly at timingsupport@orolia.com.

Phone support is available during regular office hours under the telephone numbers listed below.

To speed up the diagnosis of your SecureSync, please send us:

- the current **product configuration**, and
- the **events log**, if applicable.

Thank you for your cooperation.

2.10 Regional Contact

Orolia operates globally and has offices in several locations around the world. Our main offices are listed below:

Country	Location	Phone
France	Les Ulis	+33 (0)1 64 53 39 80
USA	West Henrietta, NY	+1 585 321 5800

Additional regional contact information can be found on the Contact page of the Orolia website (https://www.orolia.com/contact-us).

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