



SAFRAN 2406-XYZ SecureSync Time and Frequency Reference System User Guide

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SAFRAN 2406-XYZ SecureSync Time and Frequency Reference System



Product Information

The SecureSync 2400 Master Clock is a versatile electronic device designed for defense and electronics applications. It offers precise timekeeping and synchronization capabilities, ensuring accurate timekeeping across various systems and networks.

Form Factor Options

- **2406-XYZ:** Features six option card slots
- **2402-XYZ:** Features two option card slots

Backup Oscillator Options

- **240W-XYZ:**
 - 0 = TCXO (Temperature-Compensated Crystal Oscillator)
 - 1 = OCXO (Oven-Controlled Crystal Oscillator)
 - 2 = OCXO LPN (Low Phase Noise Oven-Controlled Crystal Oscillator)
 - 3 = Rubidium
 - 4 = Rub LPN (Rubidium Low Phase Noise)

Accuracy and Holdover

The SecureSync 2400 Master Clock offers accuracy to UTC (locked to GPS) at 1 sigma. It also provides holdover stability, maintaining consistent timekeeping even after 2 weeks of GPS lock, with specified accuracy after 4 hours and 24 hours.

Power Options

The SecureSync 2400 can be powered using two different configurations:

- **Single Fixed Power 240W-XYZ:**
 - **X options:** 0 = 100-240 VAC, 3 = 12 VDC, 4 = 24/48 VDC
- **Hot Swap Power 240W-6YZ:**
 - Requires at least one power module in addition to the base unit
 - Power module options: 2400-HS-A1 = 100-240VAC, 2400-HS-D1 = 12 VDC, 2400-HS-D2 = 24/48 VDC

I/O Options

The SecureSync 2400 supports network expansion and connectivity through optional I/O cards:

- 1204-49 Dual Nic Option Card (SFP): Provides NTP-only ports
- 1204-4A Quad Nic Option Card (SFP): Provides NTP-only ports

NENA Compliance

To meet NENA Master Clock specifications and synchronize legacy Spectracom TimeView Display Clocks over RS-485 Terminal Block, the following options can be added:

- SFP-Copper Module(s)
- CA08R-0000-0010 NENA Breakout Cable
- 1204-0F Alarm Relay Option Card: Enables Relay/Alarm* OUT (Terminal Block) (*Requires 1204-0F installed)

Accessories

Various accessories can be added to enhance the functionality of the SecureSync 2400 Master Clock.

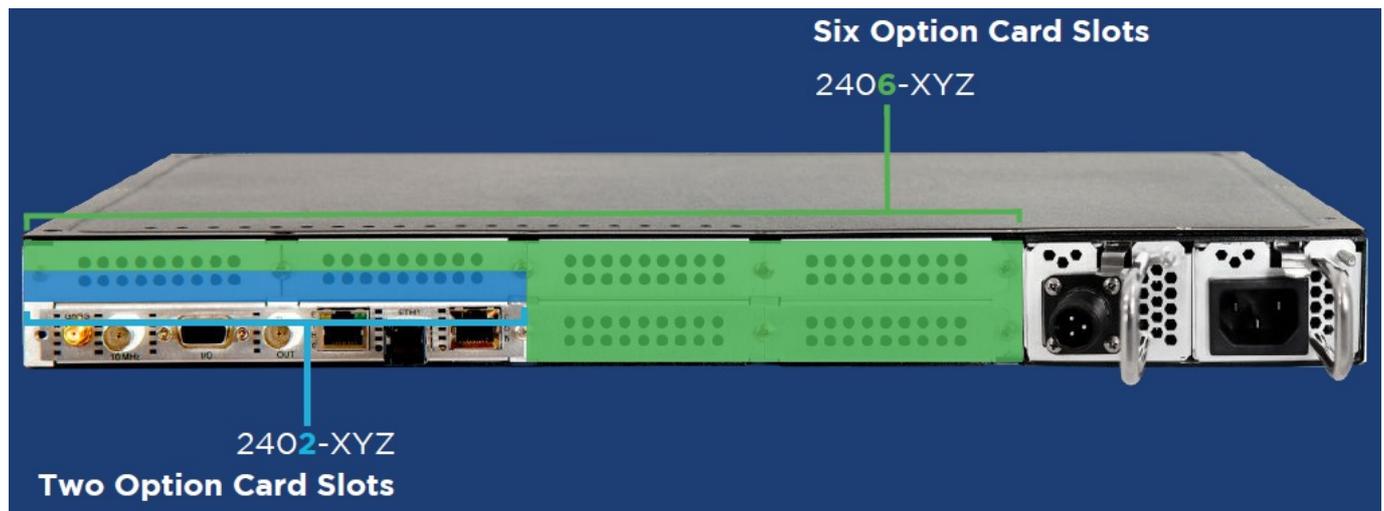
Product Usage Instructions

To use the SecureSync 2400 Master Clock, follow these steps:

1. Choose the desired form factor option based on the number of option card slots required.
2. Select the appropriate backup oscillator option based on your needs.
3. Build the power configuration by either opting for Single Fixed Power or Hot Swap Power. For Single Fixed Power, populate the X with the desired power option. For Hot Swap Power, order at least one power module in addition to the base unit.
4. If network expansion is required, select the desired I/O option card(s) based on your connectivity needs.
5. If NENA compliance is necessary, order the SFP-Copper Module(s), CA08R-0000-0010 NENA Breakout Cable, and/or 1204-0F Alarm Relay Option Card.
6. Add any desired accessories to enhance the functionality of the SecureSync 2400 Master Clock.

For more detailed setup information on specific options, please refer to the SecureSync2400_NetClock_Option_Guide_rev1 document.

Choose the Form Factor



Select the Backup Oscillator

240W-XYZ	0 = TCXO	1 = OCXO	2 = OCXO L PN	3 = Rubidium	3 = Rub LPN
Accuracy to UTC (locked to GPS, @ 1 sigma)	±50 ns	±25 ns	±15 ns	±15 ns	±15 ns
Holdover (constant temp after 2 weeks of GPS lock)					
After 4 hours	12 µs	1 µs	0.5 µs	0.2 µs	0.2 µs
After 24 hours	450 µs	25 µs	10 µs	1 µs	1 µs
Signal Waveform & Levels: TTL (5 V _{P-P}), into 50 ohm, BNC					

Build the Power

Single Fixed Power

240W-XYZ

Populate the X with the a power option below:

- 0 = 100-240 VAC
- 3 = 12 VDC
- 4 = 24/48 VDC

Integral power supply, ships with line cord or mating connector

Hot Swap Power

240W-6YZ

Dual Hot-Swap requires ordering at least one power module, on top of power option 6 for the base unit. Order (1) or (2) of the these power supply line items with the base unit, in any combination:

- 2400-HS-A1 = 100-240VAC
- 2400-HS-D1 = 12 VDC
- 2400-HS-D2 = 24/48 VDC

**Order
Power
Modules**



Pick the I/O

Expand Network Capacity



1204-49 Dual Nic Option Card (SFP)
(NTP-Only Ports)



1204-4A Quad Nic Option Card (SFP)
(NTP-Only Ports)

Order Option Card(s)

- 2400 includes two Gbe Network ports on chassis (1) RJ-45, (1) SFP.
- Add additional network cards to increase processing capacity and the number of ports from 2 (Base) to 4, 6, 8, or 10 network ports in a single 1RU chassis.
- The ethernet ports of the base chassis unit provide NTP, PTP, and Management capabilities.
- Field upgradeable.

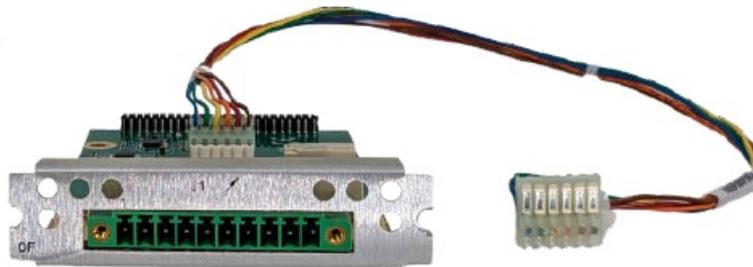


Add NENA Compliance

CA08R-0000-0010 NENA Breakout Cable



1204-0F Alarm Relay Option Card



- IRIG Out (BNC)
- ASCII RS-232 OUT (DB9F)
- ASCII RS-485 OUT AND Relay/Alarm* OUT (Terminal Block)

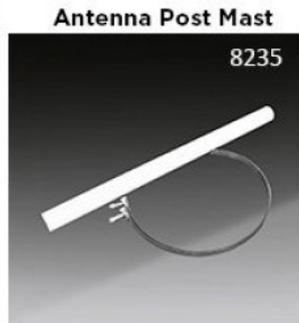
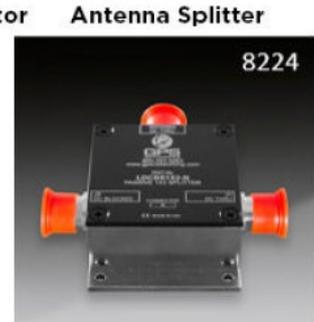
Requires 1204-0F installed

With these options installed, SecureSync meets NENA Master Clock spec: NENA-STA-026.5-2016 and offers compatibility to synchronize legacy Spectracom TimeView Display Clocks over RS-485 Terminal Block. For more information on set up of these options, see SecureSync2400_NetClock_Option_Guide_rev1.

Example Configuration

- (1) SecureSync 2406-613 (1) 2400-HS-A1
- (1) 2400-HS-D2
- (1) 1204-4A
- (1) 1204-49
- (1) CA08R-0000-0010 (1) 1204-0F

Add on the Accessories



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Documents / Resources



[SAFRAN 2406-XYZ SecureSync Time and Frequency Reference System](#) [pdf] User Guide 2406-XYZ, 2402-XYZ, 240W-XYZ, 240W-6YZ, 1204-49, 1204-4A, CA08R-0000-0010, 1204-0F, 2406-XYZ SecureSync Time and Frequency Reference System, SecureSync Time and Frequency Reference System, Time and Frequency Reference System, Frequency Reference System, Reference System, System

References

- [S Safran | Navigation and Timing - The World Leader in Resilient PNT](#)

Manuals+.