



## QUICK START GUIDE

# CNGE2+2SMS[POE][HO]

## 10/100/1000 MBPS INTELLIGENT REDUNDANT RING GIGABIT SWITCH WITH OPTIONAL POE+

**This manual serves the following ComNet Model Numbers:**

CNGE2+2SMS  
CNGE2+2SMSPOE  
CNGE2+2SMSPOEHO

The ComNet CNGE2+2SMS[POE][HO] is a four port intelligent switch with light management functionality. It provides two 10/100/1000Base-T(X) copper ports and two 100/1000Base-FX SFP ports. The CNGE2+2SMS[POE][HO] provides exclusive functionality for easy field deployment including DIP switch based operation of RSTP for creating redundant network topologies as well as preventing network video flooding of multicast traffic with IGMP snooping. Ports 1 and 2 can optionally supply up to thirty (30) watts of power per port based on the IEEE 802.3at standard. An optional High Output (HO) version is also available that can supply up to sixty (60) watts of PoE from ports 1 and 2. This product is fully compatible with the ComNet exclusive CopperLine® SFP modules for operation over extended distance UTP or Coax cable. The ComNet exclusive Port Guardian feature provides additional cyber security protection by enabling physical port lockout in the event that an existing cable is disconnected and prevents a potential network incursion using common spoofing techniques. The intrusion event is reported back to the operator using SNMP.

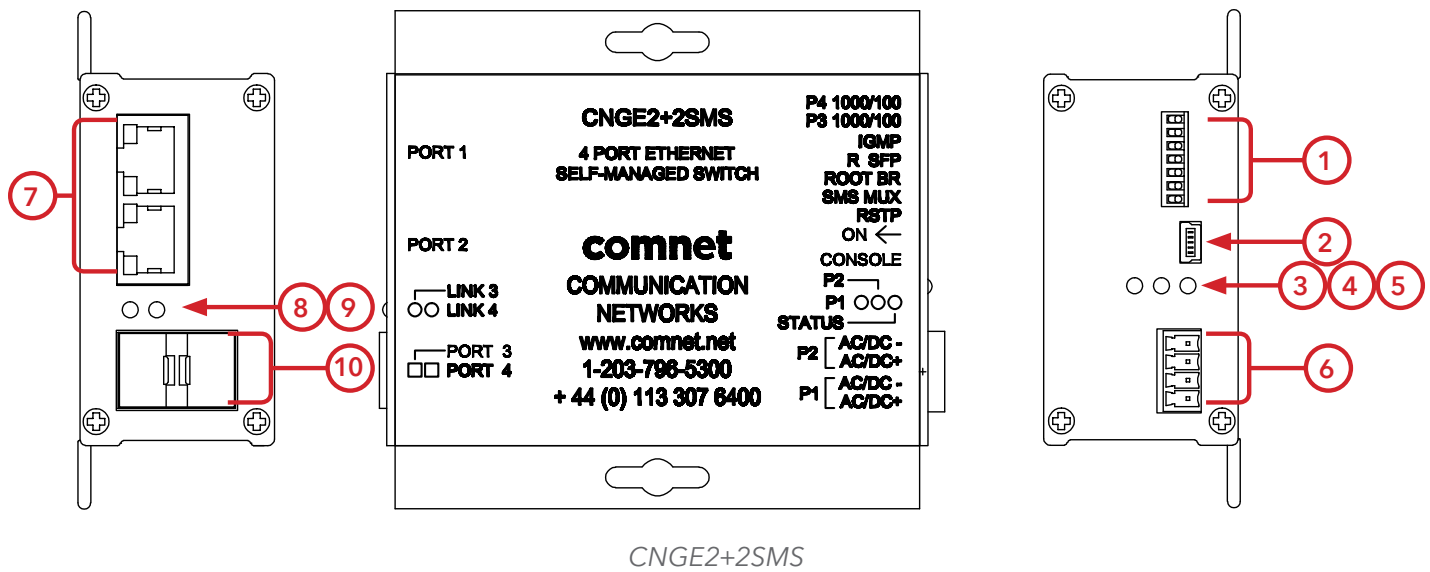
# Overview

## Software Features

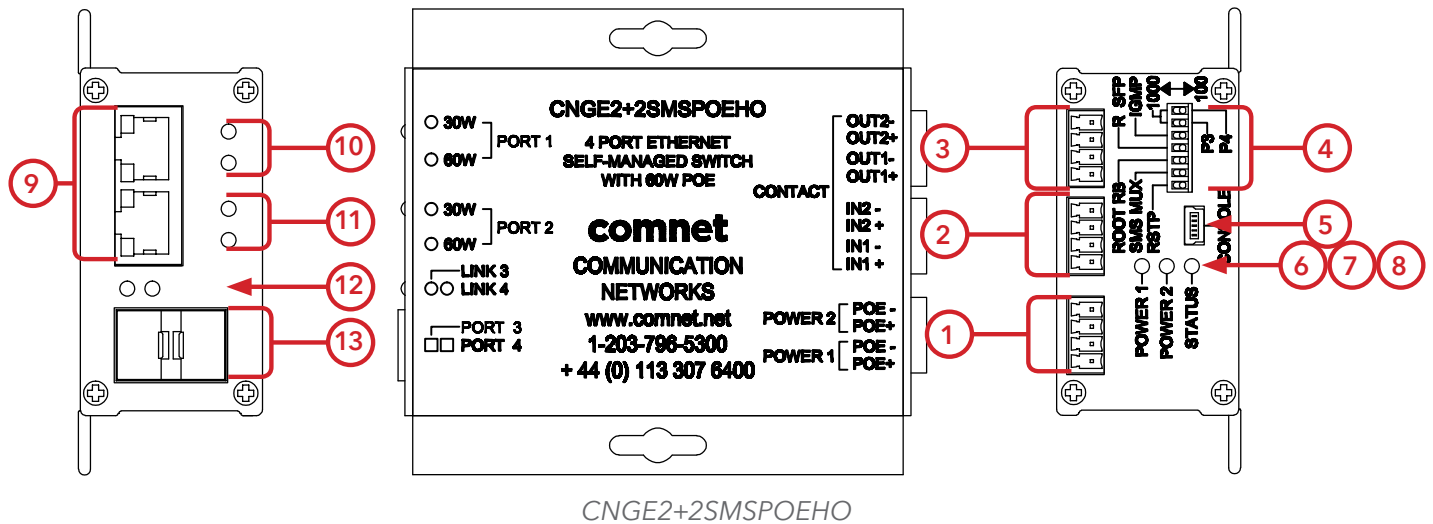
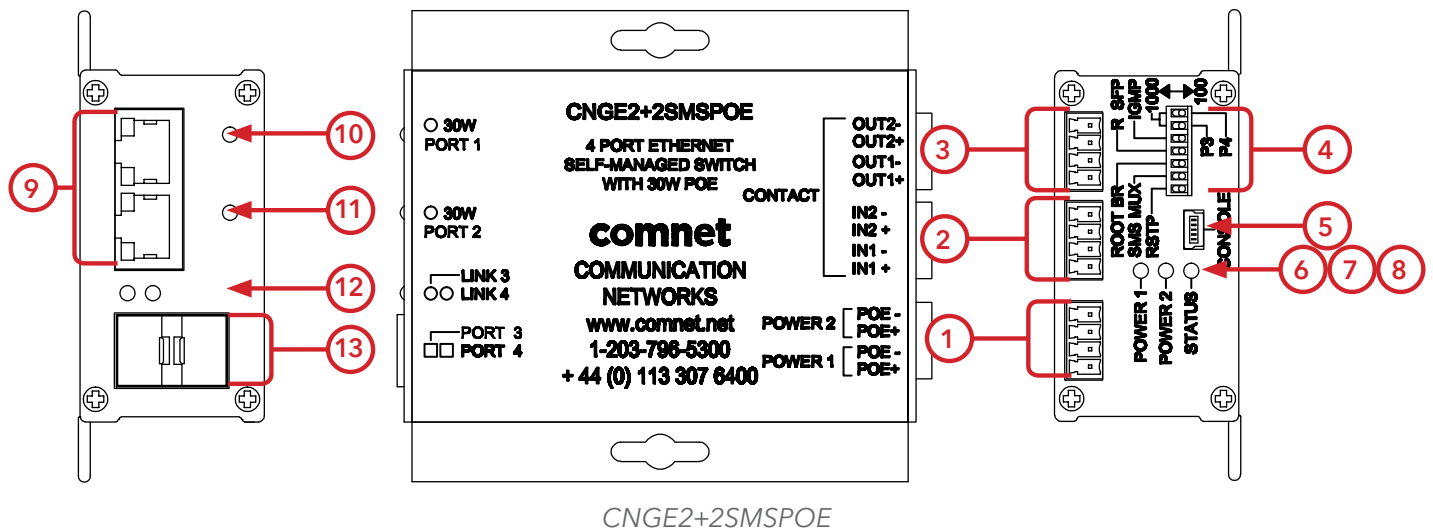
- » Supports SNMPv1/v2c
- » Event notification by SNMP trap and Relay Output (Relay Output for PoE models only)
- » Web-based GUI and USB Console CLI configuration
- » Enable/disable ports
- » LLDP (Link Layer Discovery Protocol) support (802.1AB)
- » PoE status monitoring and health check
- » RSTP (802.1w)
- » IGMP snooping v2 (64 groups)
- » Jumbo Frame support (10240 MTU)
- » Static MAC lock (per port)
- » Static multicast MAC routing
- » Field firmware upgrade capable
- » Port Guardian physical port lockout feature
- » Active ping check with SNMP trap, port reset & port shutdown capability

## Hardware Features

- » 7 × DIP Switches for quick feature selection
- » 2 × Redundant DC power inputs
- » Operating Temperature: -40 – 75°C
- » Storage Temperature: -40 – 85°C
- » Operating Humidity: 5% – 95%, non-condensing
- » 2 × 10/100/1000Base-T(X) Gigabit Ethernet port
- » 2 × 100/1000Base-X SFP
- » 2 × Dry Contact Inputs (PoE models only)
- » 2 × Form A Relays (PoE models only)
- » USB Console Port
- » Dimensions: 4.1 × 3.7 × 1.46 in (10.4 × 9.4 × 3.7 cm)



1. Configuration DIP switches
2. Console Mini USB
3. LED for PWR1
4. LED for PWR2
5. LED for STATUS
6. Power Connections
7. RJ-45 Ports
8. Link/Activity LEDs for SFP Port 3
9. Link/Activity LEDs for SFP Port 4
10. SFP Ports



1. Power connections
2. Contact IN terminal block
3. Contact OUT terminal block
4. Configuration DIP switches
5. Console Mini USB
6. LED for Power 1
7. LED for Power 2
8. LED for Status
9. RJ-45 Ports
10. PoE Status LEDs for RJ-45 Port 1
11. PoE Status LEDs for RJ-45 Port 2
12. Link/Activity LEDs for SFP Ports 3 and 4
13. SFP Ports 3 and 4

## DIP Switches

The CNGE2+2SMS's dip switches configure switch features. The DIP Switches are numbered from left to right when viewing the side of the Switch with the backplate on the bottom and the power connections on the left. If "Web Management Enable" is selected in the management software under System Settings, the DIP switch settings will be overridden by any settings made in the browser interface.

DIP Switch Position	Description
1	RSTP enable (down = disabled, up enabled)
2	Port SMS Mux
3	Root Bridge Select
4	Redundant SFP mode
5	IGMP enable
6	SFP Port 3 speed. Up: 1000M/Down: 100M
7	SFP Port 4 speed. Up: 1000M/Down: 100M

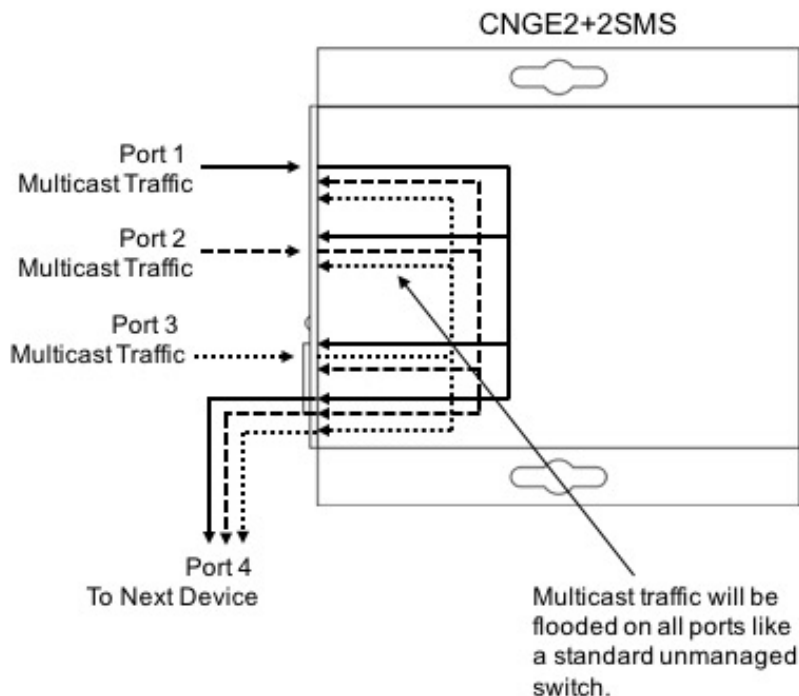
## Switch Function Listing

The switch functions may be set individually or may be combined in the following order to perform enhanced functions above the individual operation. The table below describes the operation of the switch functions. This same table is also available in the help menu of the system webpage.

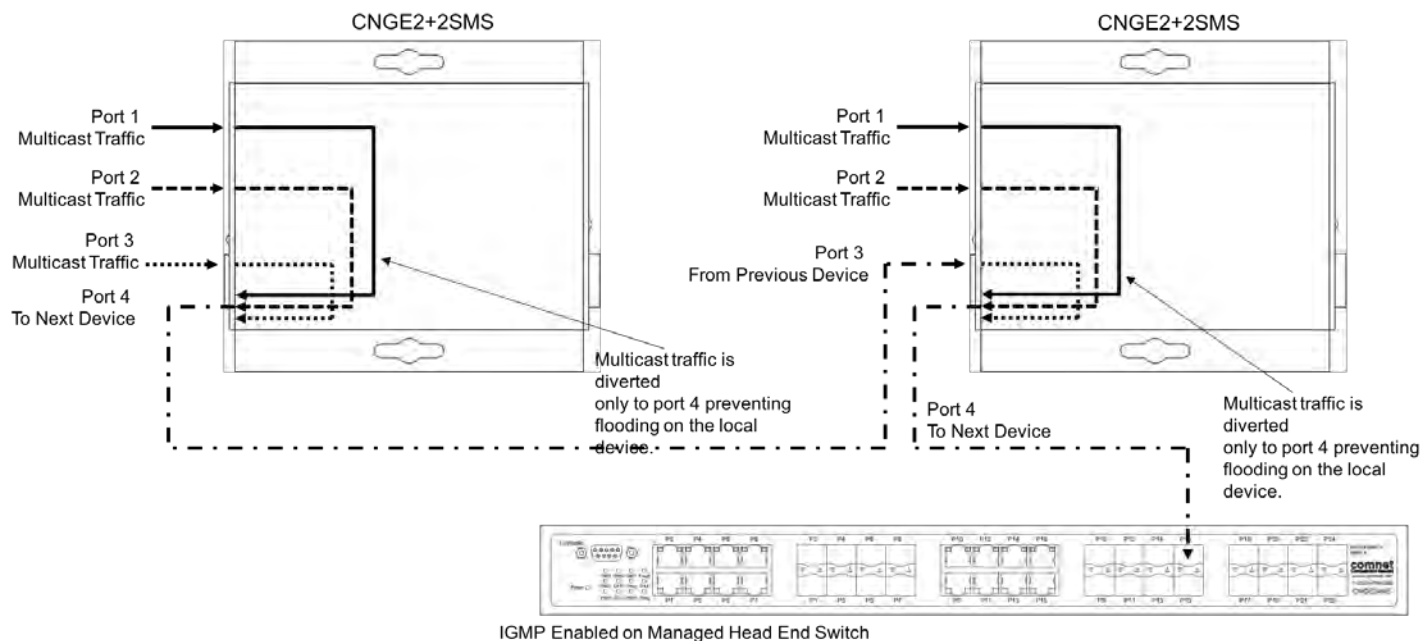
### Summary of the switch configurations (in order of switch priority)

RSTP (Switch 1)	SMS MUX (Switch 2)	ROOT BR (Switch 3)	R SFP (Switch 4)	Resulting Mode	Comment
ON	OFF	OFF	OFF	RSTP	All ring configurations
ON	OFF	ON	OFF	RSTP	RSTP this bridge set to root
OFF	ON	OFF	OFF	SMS	Port4 is uplink (traffic from ports 1-3 is sent only to port 4)
OFF	ON	OFF	ON	SMS with Redundant SFP	Fiber fail over with Port1 and Port2 isolation
OFF	OFF	OFF	ON	Redundant SFP	Fiber fail over Port 4 is primary port

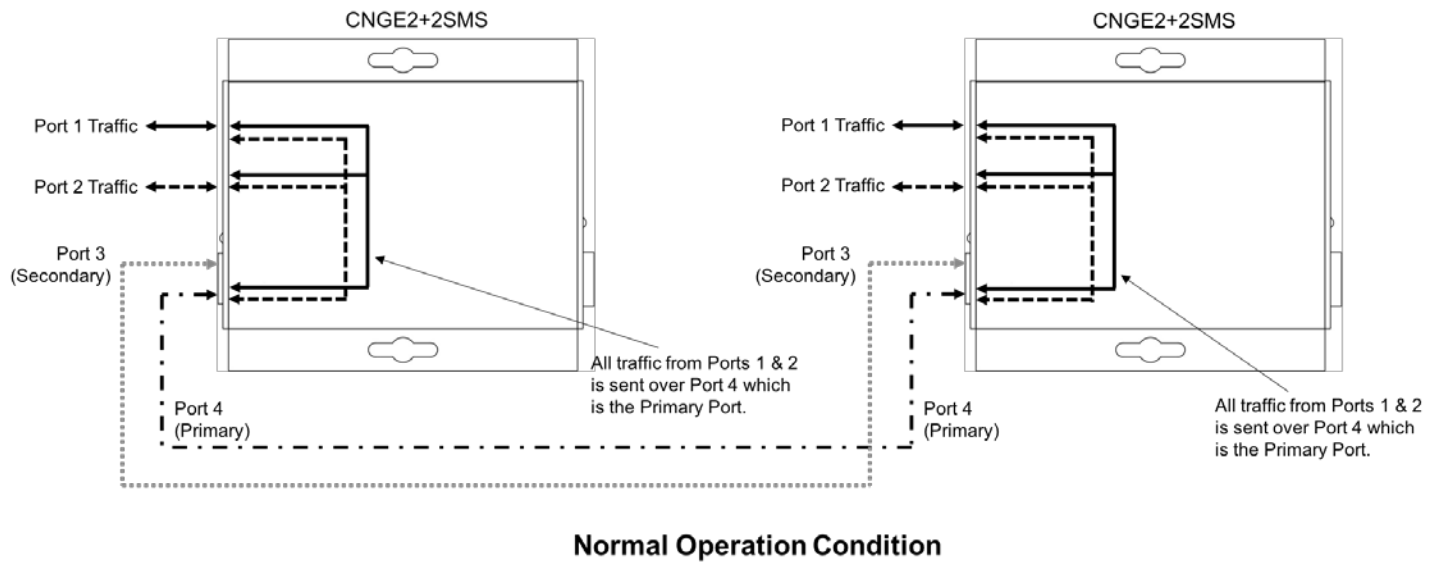
SMS MUX Disabled (DIP Switch 2 in OFF Position)



SMS MUX Enabled (DIP Switch 2 in On Position)

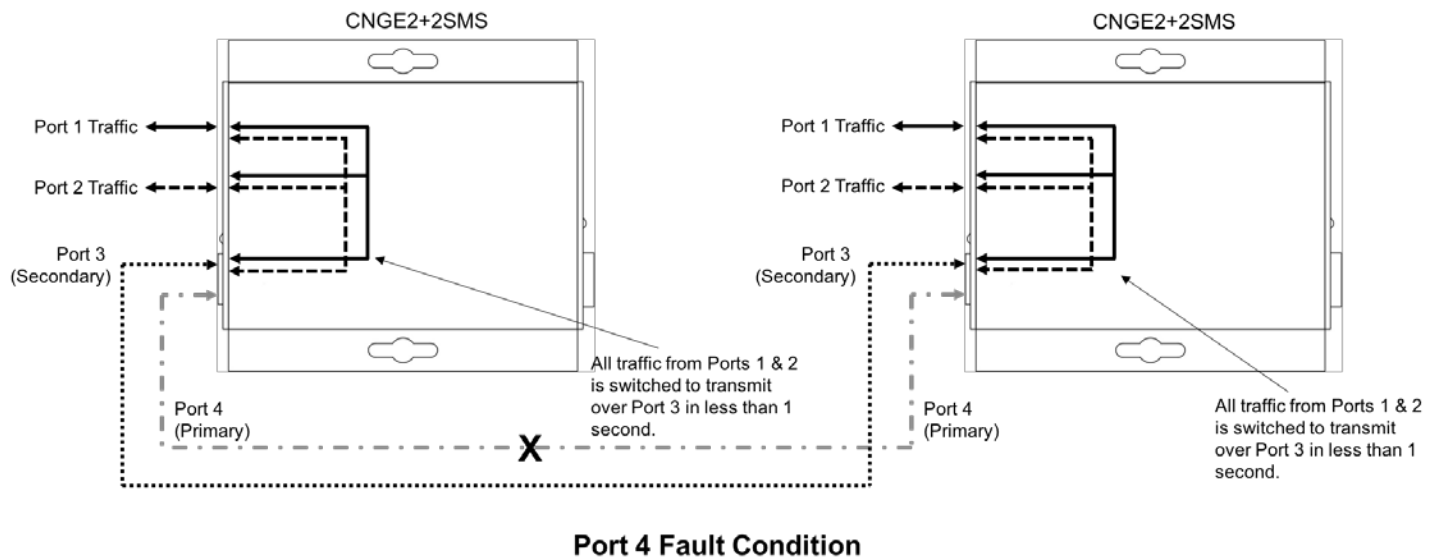


## Redundant SFP (RSFP) Enabled (DIP Switch 4 in On Position)



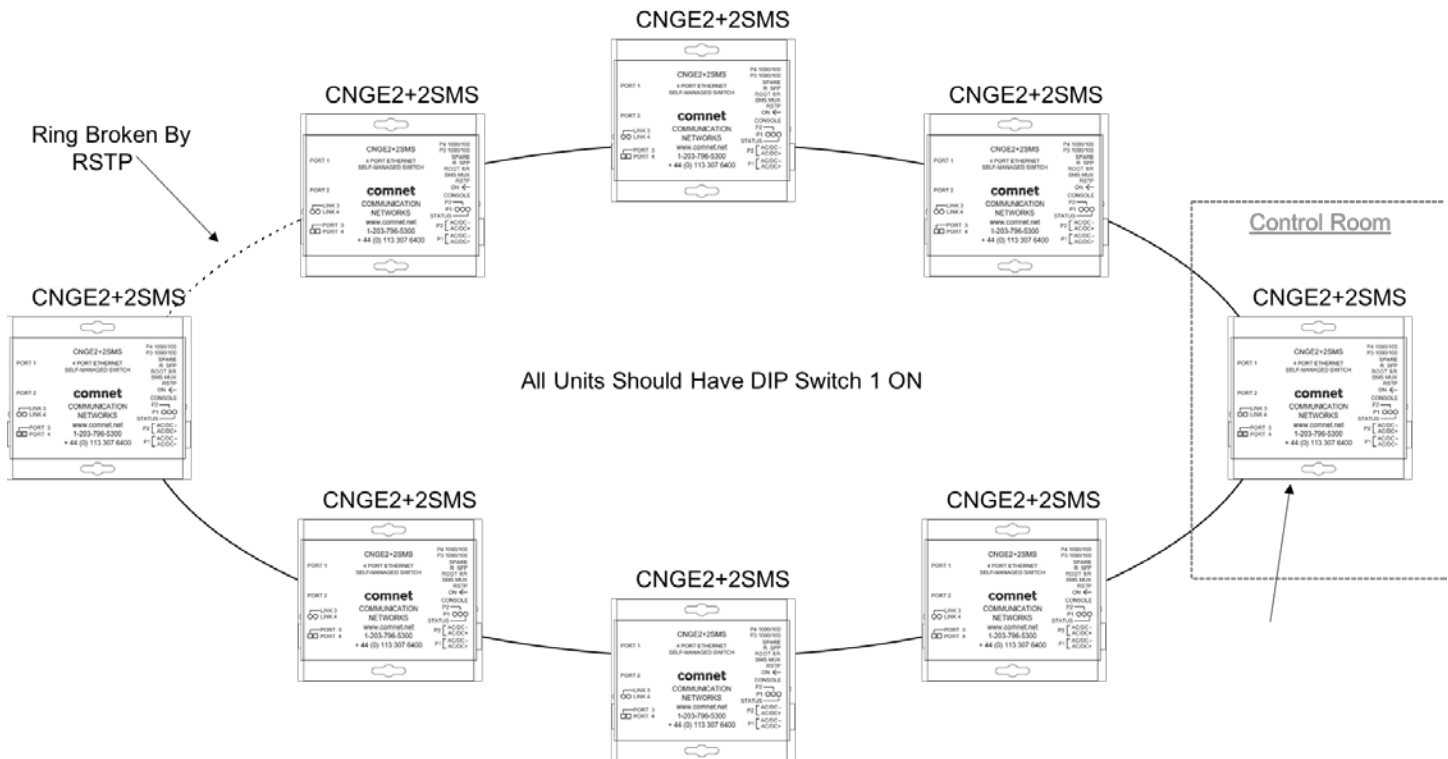
*Note: There is no port isolation between Ports 1 & 2 as shown. Ports 1 & 2 are free to send traffic between each other as per a normal switch.*

## Redundant SFP (RSFP) Enabled (DIP Switch 4 in On Position)



*Note: There is no port isolation between Ports 1 & 2 as shown. Ports 1 & 2 are free to send traffic between each other as per a normal switch.*  
*When Port 4 comes back online all traffic from Ports 1 & 2 is switched back to transmit over Port 4 in less than 1 second.*

## RSTP Enabled (Single Ring) (DIP Switch 1 ON)



**Attention:** ComNet recommends maximum number of units per ring is limited to 20 devices. Numbers higher than this may cause undesired performance and are not supported by ComNet.

**Note:** The unit at the control room location should have DIP switch 3 ON (ROOT BR). This will force the ring to break at the half way point and ensure most effective load sharing on the network.



## WEB Management

**Attention:** While installing and upgrading firmware, please remove physical loop connection first.  
**DO NOT** power off equipment while the firmware is upgrading!

### Configuration by Web Browser

This section provides instruction on configuration through the Web browser.

#### About Web-based Management

An embedded HTML web site resides in the flash memory on the CPU board. It contains advanced management features and allows you to manage the switch from anywhere on the network through a standard web browser such as Microsoft Internet Explorer.

The Web-Based Management function supports Internet Explorer 5.0 or later.

#### Preparing for Web Management

The default value is as below:

IP Address: 192.168.10.1

Subnet Mask: 255.255.255.0

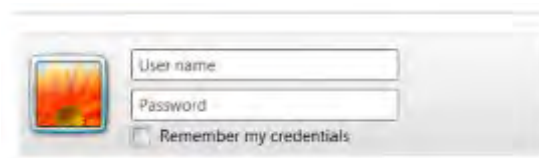
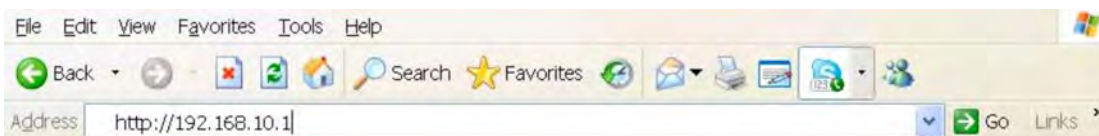
Default Gateway: 192.168.10.254

User Name: admin

Password: admin

#### System Login

1. Launch your Web Browser.
2. Type http:// and the IP address of the switch. Press Enter.
3. The login screen appears.
4. Enter username and password. The default username and password is admin.
5. Select Enter or OK button, then the main interface of the Web-based management appears.



Login screen

## QUICK START GUIDE

### ComNet Customer Service

Customer Care is ComNet Technology's global service center, where our professional staff is ready to answer your questions at any time.

Email ComNet Global Service Center: [customercare@comnet.net](mailto:customercare@comnet.net)



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