

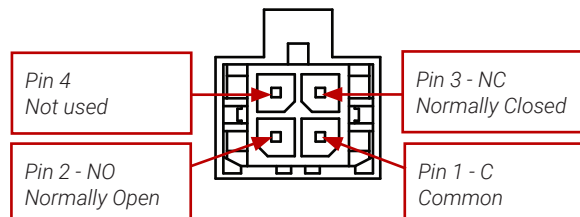
## Front Panel Status Indicators

<b>POWER</b>	Solid green LED indicates normal switch operation; slow-flashing green (once/second) indicates booting, heating, or delayed shutdown mode; quick-flashing green (twice/second) indicates the supplied voltage is out of range.
<b>FAULT</b>	LED is off during normal operation. Amber indicates a fault state.
<b>IP CAM PORTS (P##)</b>	Solid green indicates a link. Flashing green indicates data traffic.
<b>UPLINK</b>	Solid green indicates a link. Flashing green indicates data traffic.
<b>RECORDER</b>	Solid green indicates a link. Flashing green indicates data traffic.

## Fault Port

The rear panel **FAULT** port (2x2 Microfit connector) enables remote monitoring of fault conditions, including switch power issues (shorts, overloads, overheating), PoE port problems, and switch hardware failures.

The fault output is a dry contact relay. The relay is normally energized (ON) when no fault exists. The relay is de-energized (OFF) when a fault exists, and when the switch has no power.



Status	Pin 1 & 2	Pin 1 & 3
Normal operation	Closed	Open
Fault detected	Open	Closed

## Power and Voltage Limits

When connected to a 24V source, the switch supplies up to 112W total output (86W @ 12V source), where 56W is shared across ports 1-8, another 56W across ports 9-16, and with each port able to provide up to 12.95W at a powered device. Installers must consider these limitations when connecting powered devices. If power limits are exceeded (overload), individual or multiple ports may be disabled until the overload is removed.

Input Voltage (DC)	9 – 33.6 VDC
Input Current	12A maximum (fused)
Control Levels (DC)	0V – 4V = OFF 4.1V – 33.6V = ON
Output Power Limits	86W (12V source) 112W (24V source)
PoE Port Rating	802.3at 12.95W at powered device


## Service & Support

If your network switch is to be returned for service, please contact the Seon Technical Support team ([service@seon.com](mailto:service@seon.com)/1.844.899.7366), provide the model and/or serial# of your unit, and ask for a **Return Merchandise Authorization (RMA)** number. An **RMA#** allows the support team to better track your product when it comes in for service. Please show the RMA# on the **outside** of the package.

ANY PRODUCT SENT WITHOUT AN RMA# MAY BE REFUSED!

## Documentation

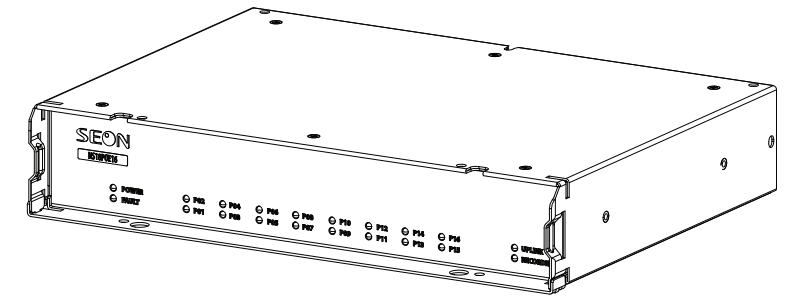
Additional copies of this guide, along with other supporting documentation can be found on the SafeFleet Community (<https://community.seon.com/documents/>)

 **2002/96/EC (WEEE directive):** This product cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return the product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points, for more information, see [www.recyclethis.info](http://www.recyclethis.info).

**2006/66/EC (battery directive):** This product does not contain batteries.

# 16-Port Network Switch Installation Guide

The 16-port Network Switch included in this kit enables connecting up to 16 IP cameras to a compatible recorder over a single Ethernet cable. The number of supported IP channels is determined by the recorder. In this Guide, the recorder shown represents a common case applicable to all compatible recorders. Refer to the specific recorder documentation for more details.



## Kit Contents (NH16-CONV-TH8)

- 16-port network switch (NS18POE16)
- Mounting plate and screws (NS-MP-01)
- Power harness kit: 20ft./6.1m, 20A fuse & holder, butt splice (PH1X3UM20-PG)
- Control cable: 6ft./1.83m, 2x1 Microfit (060-0656)
- Ethernet cable: 6ft./1.83m (085-0116)

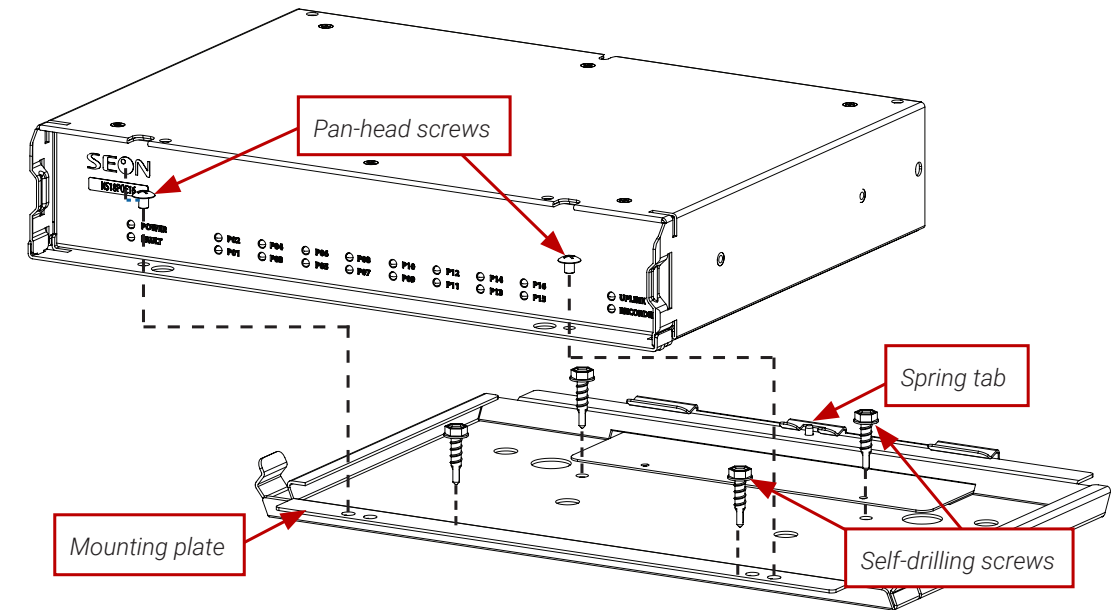
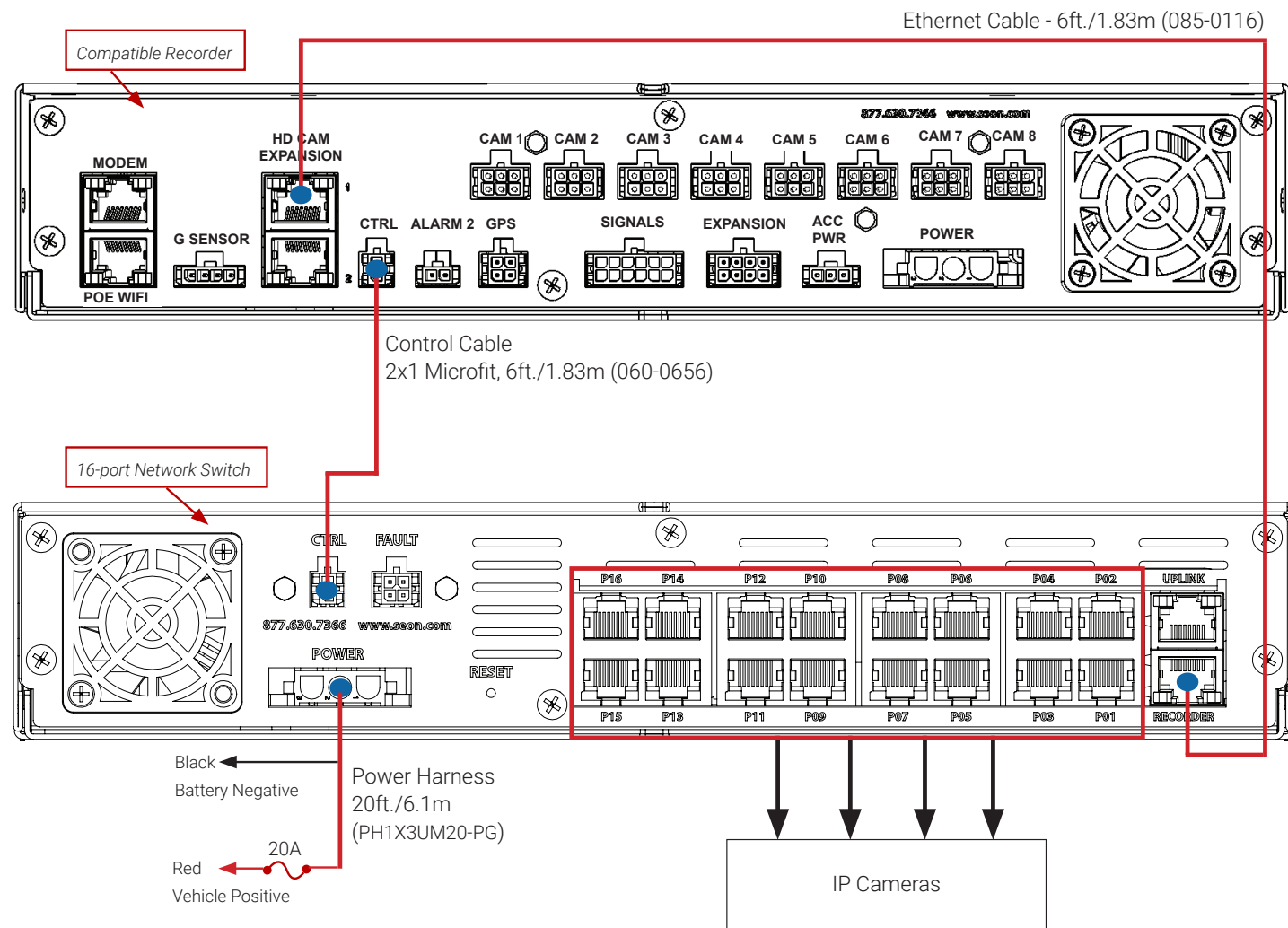
## Installation Requirements

<b>Location</b>	Mount switch to a flat, vibration resistant surface in a location free of dripping liquids and excess heat, humidity, and dust. Ensure the front panel LEDs are visible.  Cable routing between switch and recorder is limited to 6ft (1.83m) using the supplied Ethernet and Control cables. Contact the Support team if remote installation at a longer distance is required.
<b>Orientation</b>	Install horizontally or vertically, on top of a surface. Contact the Support team if the switch needs to hang from above. <b>Do not install upside-down.</b>
<b>Clearance</b>	Provide sufficient clearance for easy access to cables/connectors.
<b>Harnesses</b>	Route wiring and cables away from sharp edges that might damage insulation. Avoid sharp bends in cables.

**WARNING: Avoid installation locations with excessive heat or moisture exposure**

Installation close to extreme heat or moisture voids the product warranty.

# Typical Installation Diagram



## Power-on Test

1. Turn on the vehicle ignition.
2. After the recorder starts up (60-90 seconds), the switch's front panel **POWER** LED should turn solid green.
3. Each port indicator LED (P##) with a connected camera should be solid green or flashing.
4. The **RECORDER** LED should be solid green or flashing to indicate a connection between the switch and the recorder.
5. If status indicators do not appear as described, or the **FAULT** LED is lit, check all connections or contact the Technical Support team.

### TIP: Recorder Control Signal

The switch relies on the recorder's control signal for power on/off. See the compatible recorder documentation for details.

## Installation Procedure

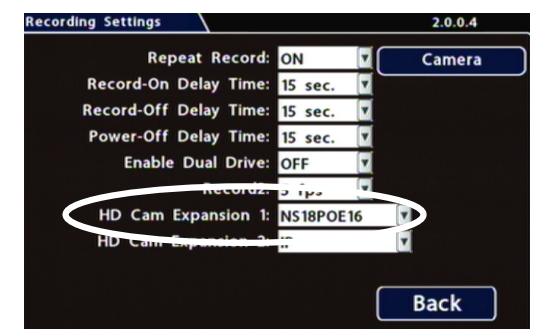
The switch is designed for horizontal installation (i.e. on top of the mounting plate), and may also be installed vertically. Contact the Support team if hang-mounting is required. Do NOT install the switch upside down. Using the diagrams on the next page for reference, follow these steps:

1. Select an appropriate mounting location and orientation (horizontal or vertical).
2. Use the mounting plate to determine the position of the switch on the mounting surface, then fasten the plate using supplied self-drilling screws.
3. Slide the rear bottom edge of the switch into the spring tab on the back edge of the mounting tray.
4. Attach the front bottom edge of the switch to the mounting plate using the two pan head Phillips screws.
5. Attach one end of the supplied Ethernet cable (085-0116) to the switch port labeled **RECORDER**, and the other end to the IP camera network port of the compatible recorder.
6. Attach one end of the supplied Control cable (060-0656) to the switch port labeled **CTRL** and the other end to the compatible recorder **CTRL** port. Contact the Support team if the compatible recorder does not have a CTRL port.
7. Use the supplied power harness kit (PH1X3UM20-PG) to wire the switch power and fuse, as shown in the Typical Installation diagram.
8. Connect IP cameras to the switch. To avoid possible power overload, ensure high-power cameras are divided between ports 1-8 and 9-16 (see *Power and Voltage Limits* for details).

## Recorder Configuration

This procedure enables detection and control of the 16-port Network Switch on the NH16 recorder. Consult instructions supplied with other compatible recorders for similar procedures.

1. Open the configuration menu on the recorder and navigate to **Recording Settings**.
2. Select the **NS18POE16** option for **HD Cam Expansion 1** or **HD Cam Expansion 2**, based on the port actually connected to switch.
3. Save settings, then exit configuration.
4. Use the recorder health diagnostics to confirm the switch is detected and operational.



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