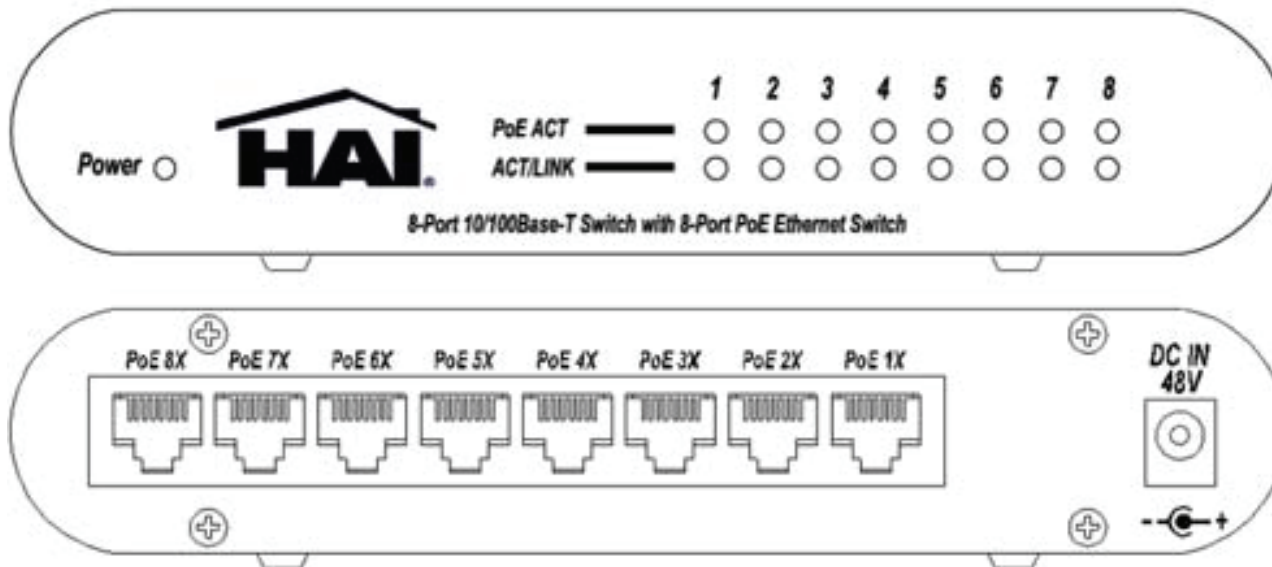




8-Port PoE Network Switch



User's Guide

Document Number 91I00-1 Rev A
August, 2009

FCC Warning:

This device has been tested and found to comply with the regulations for Class B digital equipment. Pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with user's guide, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

CE Mark Warning:

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

UL Warning:

- 1) Elevated Operating Ambient Temperature - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with manufacturer's maximum rated ambient temperature.
- 2) Reduced Air flow - installation of equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- 3) Mechanical Loading - mounting of the equipment in the rack should be such that hazardous conditions are not achieved due to uneven mechanical loading.

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Introduction

The 91A00-1 combines a small, high efficiency 8-Port 10/100Mbps Ethernet switch with IEEE 802.3af Power over Ethernet (PoE) capability on all 8 ports. It can be used to provide power to up to 7 HAI OmniTouch 5.7e Touchscreens (one port must be connected to the network).

The 91A00-1 is a Power Source Equipment (PSE) device that is fully compatible with Powered Devices (PD) that comply with the IEEE 802.3af standard. The PoE ports on the 91A00-1 can also be used to power other Powered Devices (PD), such as the HAI Home Theater Extender, PoE IP cameras, PoE Wireless Access Points, PoE Printer, etc.) without requiring additional power on the network. Each of the PoE ports can provide 15.4 Watts of power as well as 10/100M data transmission through the traditional UTP cable to the Powered Device.

The 91A00-1 is supplied with an external 48VDC power adaptor. No configuration is required and installation is quick and easy. Support for automatic MDI / MDI-X on all of the ports eliminates the need for a crossover connection to another switch or hub. Auto-negotiation on each port senses the link speed (100 Mbps or 10 Mbps) of a network device and intelligently adjusts for compatibility and optimal performance.

* This device is designed for indoor use. Do not use outdoors.

Power over Ethernet (PoE)

Power Over Ethernet (PoE):

Power over Ethernet (PoE) integrates 48V power and data onto one single cable, eliminating the need to have power available at all equipment locations. Power and data are integrated onto the same cable, up to 100 meters (328 feet).

Features:

- 8 x 10/100Mbps Auto-negotiation Ethernet RJ-45 ports with PoE on all 8 ports
- Compliant with IEEE 802.3af specification
- Supports PoE power, up to 112W total, for all 8 ports
- Supports PoE IEEE802.3af compliant Powered Device (PD)
- Each port supports automatic MDI/MDIX, so there is no need to use crossover cables
- Full/half duplex transfer mode for each port
- Wire speed reception and transmission
- Up to 1000 unicast address entities per device, self-learning, and table aging
- 64K Byte packet buffer

Installation

Unpacking

Open the shipping cartons of the 91A00-1 and carefully unpack its contents:

- 91A00-1 8-Port PoE Network Switch
- AC power adaptor
- User's Guide

Installation:

Install the 91A00-1 as follows:

- The surface must support at least 4.4 lb and a power outlet should be within 6 feet of the switch
- Visually inspect the DC power jack and make sure that is fully secured to the power adaptor
- Make sure that there is proper heat dissipation from and adequate ventilation around the switch

Do not place heavy objects on the switch.

Connecting Network Cables

Connecting Network Cables

The 91A00-1 has 8 10/100Mbps Ethernet ports. Each port incorporates 10/100Mbps support using traditional UTP cables. Each of the 8 PoE ports will automatically activate when a compatible device is identified. The 91A00-1 will supply power through the port to the connected PoE device (PD)

Legacy devices that are not compatible will not be supplied power. This feature allows users to freely and safely mix legacy and PoE compatible devices connected to switch.

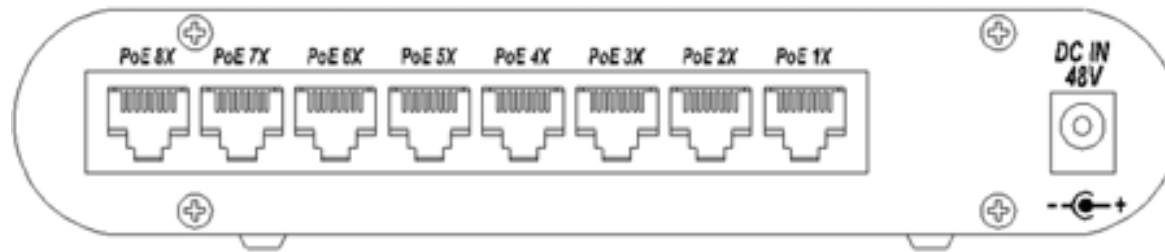
This Switch supports 10Mbps Ethernet or 100Mbps Ethernet and runs both in half and full duplex mode using two pairs of cable.

All ports are automatic MDI type ports. The switch can auto negotiate to MDI or MDI-X type, so you can connect either a standard network or crossover cable.

When connecting an OmniTouch 5.7e to the network, a Cat-5 (4-pair) cable is required for operation. Run the Cat-5 cable between the location of the 91A00-1 and the location of the OmniTouch 5.7e.

Rear Panel

There are 8 RJ-45 ports and one DC power jack on the rear panel of the 91A00-1.



Ports:

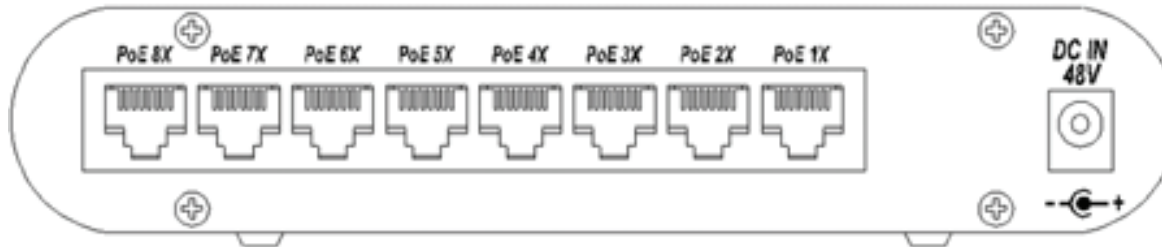
PoE Ports: PoE1X to PoE8X

- All ports are 10/100Mbps as well as 802.3af PoE enabled ports.
- All ports will automatically activate when a compatible PoE device is identified. The 91A00-1 will supply power through the Ethernet port to the connected PoE device (PD).
- The 91A00-1 also supports legacy devices that are not PoE compatible. In this case, the PoE ports will not supply power to those devices. This feature allows users to freely and safely connect legacy and PoE compatible devices to the switch.

Rear Panel

DC Power Jack:

The DC power jack is located on the right side of the rear panel of the 91A00-1 .



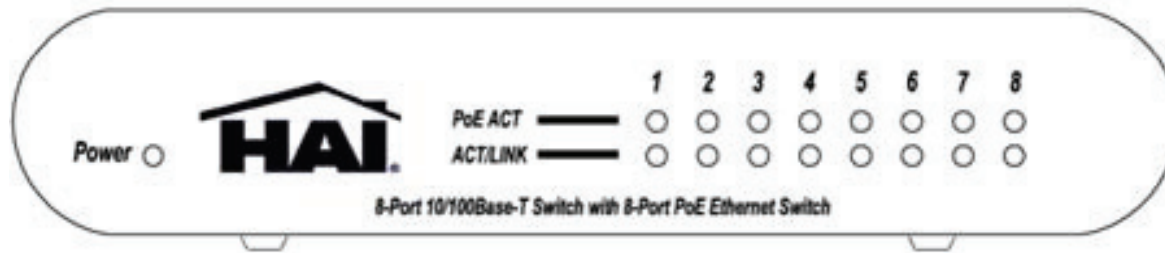
Use only the supplied AC power adaptor. The use of any incompatible adaptor may cause damage to the equipment and void the warranty.

The 91A00-1 does not include a power switch. Plugging its power adaptor into a power outlet will immediately power it on.

Front Panel

LED Indicators:

The LED indicators provide instant status and helps you monitor and troubleshoot when required.



Power LED	LED on: Power ON / LED off: Power off.
LINK/ACT	LED on: this port is Linked and Active LED off: this port is not correct Link or inactive
PoE (1x - 8x)	LED on: The PoE power device (PD) is connected and the port is supplying power. LED off: no PoE power device (PD) connected

Standards	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3x Full Duplex Flow Control IEEE 802.3af Power over Ethernet
Protocol	CSMA/CD
Data Transfer Rate	Ethernet: 10Mbps (half-duplex), 20Mbps (full-duplex) Fast Ethernet: 100Mbps (half-duplex), 200Mbps (full-duplex)
Network Cables	10BASE-T: 2-pair UTP Cat 3, 4, 5 up to 100 meters 100BASE-Tx: 2-pair UTP Cat 5, 5e up to 100 meters
Number of Ports	8 x 10/100Mbps RJ-45 ports with 8 PoE enabled ports
PoE power on RJ-45	Power + : pin 3 & pin 6 : Power – : pin 1 & pin 2
AC power adaptor	Input: 110V ~ 220VAC, 50Hz - 60Hz Output: 48VDC, 2.5A (8 PoE port)

Technical Specification (continued)

Power Consumption	6.4 watts, maximum (with no Powered Devices connected) 112 watts (8 PoE ports fully load)
Temperature	Operation: 0°C - 40 °C (32°F - 104 °F)
	Storage Temperature: -10°C - 70 °C (14°F - 158 °F)
Humidity	Relative Humidity: 5% - 95%
Dimensions	16cm W x 9.4cm D x 2.1cm H
EMI	FCC Class B, CE Mark Class B
Safety	48VDC Power Adaptor UL listed
RAM buffer	64K bytes per device
Filtering Address Table	1000 entries per device
Packet Filtering/ Forwarding Rate	10Mbps Ethernet: 14,880/pps 10Mbps Ethernet: 148,800/pps
MAC Address	Automatic update
Transmission Method	Store – and - forwarder