

SmartNode 4830 Series Analog VoIP Integrated Access Device

Quick Start Guide



CE Approval—Models that are equipped with telecom interfaces have been approved for connection to the public telecommunication network as listed under PSTN regulatory compliance.

Important—This is a Class A device and is intended for use in a light industrial environment. It is not intended nor approved for use in an industrial or residential environment.



- Do not open the device when the power cord is connected. For systems without a power switch and without an external power adapter, line voltages are present within the device when the power cord is connected.
- For devices with an external power adapter, the power adapter shall be a listed *Limited Power Source*. The mains outlet that is utilized to power the device shall be within 10 feet (3 meters) of the device, shall be easily accessible, and protected by a circuit breaker in compliance with local regulatory requirements.
- For AC powered devices, ensure that the power cable used meets all applicable standards for the country in which it is to be installed.
- For AC powered devices which have 3 conductor power plugs (L1, L2 & GND or Hot, Neutral & Safety/Protective Ground), the wall outlet (or socket) must have an earth ground.
- For DC powered devices, ensure that the interconnecting cables are rated for proper voltage, current, anticipated temperature, flammability, and mechanical serviceability.
- WAN, LAN & PSTN ports (connections) may have hazardous voltages present regardless of whether the device is powered ON or OFF. PSTN relates to interfaces such as telephone lines, FXS, FXO, DSL, xDSL, T1, E1, ISDN, Voice, etc. These are known as "hazardous network voltages" and to avoid electric shock use caution when working near these ports. When disconnecting cables for these ports, detach the far end connection first.
- Do not work on the device or connect or disconnect cables during periods of lightning activity.



In accordance with the requirements of council directive 2002/96/EC on Waste of Electrical and Electronic Equipment (WEEE), ensure that at end-of-life you separate this product from other waste and scrap and deliver to the WEEE collection system in your country for recycling.



This device contains no user serviceable parts. This device can only be repaired by qualified service personnel.



Electrostatic Discharge (ESD) can damage equipment and impair electrical circuitry. It occurs when electronic printed circuit cards are improperly handled and can result in complete or intermittent failures. Do the following to prevent ESD:

- Always follow ESD prevention procedures when removing and replacing cards.
- Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the clip to an unpainted surface of the chassis frame to safely channel unwanted ESD voltages to ground.
- To properly guard against ESD damage and shocks, the wrist strap and cord must operate effectively. If no wrist strap is available, ground yourself by touching the metal part of the chassis.

1.0 Introduction

This Quick Start Guide leads you through the basic steps to set up a new SmartNode (see figure 1) and to download a configuration. Please note that this guide does not replace the detailed *Software Configuration Guide* and the *User Manual* available online at www.patton.com/manuals/SN4830.pdf.

SmartNodes can be used for a wide variety of IP and voice over IP applications. To support and ease the configuration of the SmartNodes configuration templates for the most important applications are available online at www.patton.com/voip/appnotes.asp.

Setting up a new SmartNode consists of the following steps:

1. Connect a PC to the SmartNode, log in and configure your LAN IP address
2. Connect the SmartNode to the LAN
3. Download a configuration example, adapt it to your network, and load it onto the SmartNode

2.0 Powering up the SmartNode

1. Connect the SmartNode to the mains (AC) power source with the power cable.
2. Wait until the *Power* LED stops blinking and remains constantly lit. Now the SmartNode is ready to configure.

3.0 Connecting the SmartNode to the network



The interconnecting cables shall be acceptable for external use and shall be rated for the proper application with respect to voltage, current, anticipated temperature, flammability, and mechanical serviceability.

3.1 Connecting power and configuring the default IP address

Connect the SmartNode to the mains power supply using the included power supply and cable. When the *RUN* LED stops blinking and remains lit, the SmartNode is ready.

The factory default IP settings are listed in [table 1](#). If these addresses do not work with your network they must be changed. Contact your network administrator if you are not sure which IP address to use in your installation.

Table 1. Factory default settings

Item	IP Address	Network Mask
WAN interface Ethernet 0 (ETH 0/0)	DHCP	DHCP
LAN interface Ethernet 1 (ETH 0/1)	192.168.1.1	255.255.255.0
DHCP server address range	192.168.1.10-192.168.1.19	255.255.255.0

Note The DHCP server is running on the ETH 0/1 of the SN4830 Series models. All Ethernet ports are pre-configured and active.

3.2 Connecting to a PC and logging in

1. To access the SmartNode configuration, connect a PC equipped with an RS-232 console port to the *Console* port on the front of the SmartNode. Use the included black Ethernet cable and RJ45 to DB-9 adapter for this purpose (Model 16F-561).

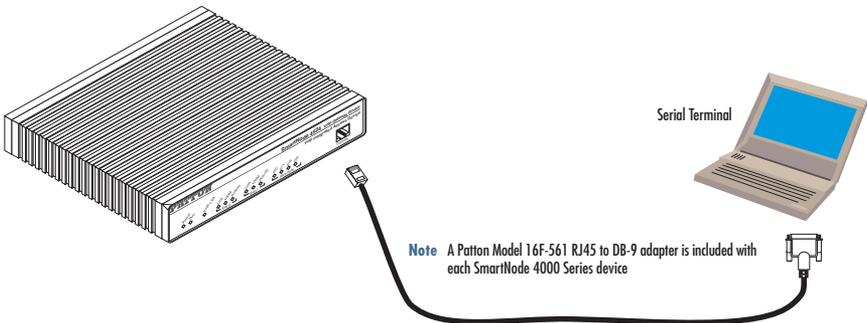


Figure 1. Connecting to a PC

2. Open a Terminal connection to the SmartNode. Use the Terminal program included with most PC operating systems (e.g. Hyper Terminal on Windows).
3. Type *administrator* as the login prompt and press the Enter key after the password prompt (do not type anything for the password). A prompt will appear consisting of the IP address and > character.

```
login:administrator
password:
172.16.40.1>
```

4. Following log in, the SmartNode is in operator execution mode (indicated by > character in the command line prompt). With the commands *enable* and *configure*, you enter the configuration mode.

```
172.16.40.1>enable
172.16.40.1#configure
172.16.40.1(cfg)#
```

3.3 Changing the IP address

1. Select the context IP mode to configure an IP interface.

```
172.16.40.1(cfg)#context ip router
172.16.40.1(ctx-ip)[router]#
```

2. Set the IP address and network mask for the each IP interface (*eth0*, for example).

Note For the examples in this guide, a private network (172.16.1) IP address is used.

```
172.16.40.1(ctx-ip)[router]#interface eth0
172.16.40.1(if-ip)[eth0]#ipaddress 172.16.1.10 255.255.255.0
2002-10-29T00:09:40 : LOGINFO      : Link down on interface eth0.
2002-10-29T00:09:40 : LOGINFO      : Link up on interface eth0.
172.16.1.10(if-ip)[eth0]#
```

3. Make this modified configuration your new start-up configuration. On the next start-up the system will initialize itself using the modified configuration.

```
172.16.1.10 (if-ip)[eth0]#copy running-config startup-config
172.16.1.10 (if-ip)[eth0]#
```

4.0 Connecting the SmartNode to the LAN

The 4830 Ethernet ports are auto MDX, therefore a straight-through wired cable can be used for host and switch connections.

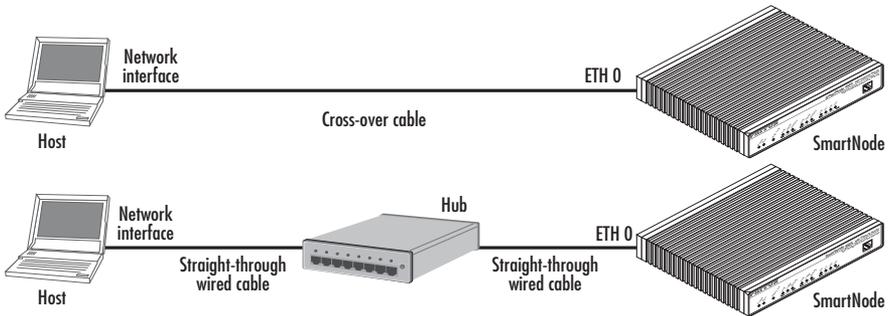


Figure 2. Connecting the SmartNode to the network

You can check the connection with the ping command to another host on the local LAN.

```
172.16.1.99(if-ip)[eth0]#ping <IP Address of the host>
```

Respectively from the host: *ping 172.16.1.99*

Note To ping outside your local LAN, you will need to configure the default gateway.

You may now start to configure the SmartNode from scratch using the CLI commands, but we recommend that you start your configuration from a template.

For a detailed description of the CLI refer to the *SmartWare Software Configuration Guide (SCG)* available on the online at: www.patton.com/smartnode.

5.0 Downloading a configuration example, adapting it to your network, and loading it onto the SmartNode

Patton provides a collection of configuration templates on the support page at www.patton.com/smartnode—one of which may be similar enough to your application that you can use it to speed up configuring the SmartNode. Simply download the configuration note that matches your application to your PC. Adapt the configuration as described in the configuration note to your network (remember to modify the IP address) and copy the modified configuration to a TFTP server. The SmartNode can now load its configuration from this server.

Note If your application is unique and not covered by any of Patton's configuration templates, you can manually configure the SmartNode instead of loading a configuration file template. In that case, refer to the SmartNode Series *SmartWare Software Configuration Guide* for information on configuring the SmartNode device.

In this example we assume the TFTP server on the host with the IP address 172.16.1.11 and the configuration named *SN.cfg* in the root directory of the TFTP server.

```
172.16.1.99 (if-ip) [eth0] #copy tftp://172.16.1.11/SN.cfg startup-  
config  
Download...100%  
172.16.1.99 (if-ip) [eth0] #
```

After the SmartNode has been rebooted the new startup configuration will be activated.



When you issue the **reload** command, the SmartNode will ask if you want to copy the running configuration to the startup configuration. Since you just downloaded a configuration file to the startup configuration you must answer this question with **NO**. Otherwise, the downloaded configuration will be overwritten and lost!

6.0 Additional Information

For detailed information about configuring and operating guidance, set up procedures, and troubleshooting, refer to the *SN4830 User Manual* available online at www.patton.com/manuals/SN4830.pdf and the *SmartWare Software Configuration Guide* available online at www.patton.com/smartnode.

A.0 Customer and Technical Support

Toll-Free VoIP support: call sip:support@patton.com with a VoIP SIP client

Online support: www.patton.com

E-mail support: support@patton.com — answered within 1 business day

Telephone support:

- Standard: +1 (301) 975-1007 (USA), Monday–Friday: 8:00 am to 5:00 pm EST (1300 to 2200 UTC/GMT)
- Alternate: +41 (0)31 985 25 55 (Switzerland), Monday–Friday: 8:00 am to 5:00 pm CET (0900 to 1800 UTC/GMT)

Fax: +1 (253) 663-5693 (USA) or +41 (0)31 985 25 26 (Switzerland)

B.0 Compliance Information

B.1 Compliance

EMC Compliance:

- FCC Part 15, Class A
- EN55022, Class A
- EN55024

Safety Compliance:

- UL60950-1/CSA C22.2 No. 60950-1
- IEC 60950-1
- EN 60950-1

PSTN Regulatory Compliance:

- FCC Part 68
- CS-03
- TBR 21
- TBR 12 & 13 (E1)
- AS/ACIF S016:2001 (E1)
- AS/ACIF S043:2005 (DSL Models)

B.2 Radio and TV interference

The SmartNode router generates and uses radio frequency energy, and if not installed and used properly—that is, in strict accordance with the manufacturer's instructions—may cause interference to radio and television reception. The SmartNode router have been tested and found to comply with the limits for a Class A computing device in accordance with specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection from such interference in a commercial installation. However, there is no guarantee that interference will not occur in a particular installation. If the SmartNode router does cause interference to radio or television reception, which can be determined by disconnecting the unit, the user is encouraged to try to correct the interference by one or more of the following measures: moving the computing equipment away from the receiver, re-orienting the receiving antenna and/or plugging the receiving equipment into a different AC outlet (such that the computing equipment and receiver are on different branches).

B.3 FCC Part 68 (ACTA) Statement

This equipment complies with Part 68 of FCC rules and the requirements adopted by ACTA. On the bottom side of this equipment is a label that contains—among other information—a product identifier in the format **US: AAAEQ##TXXXX**. If requested, this number must be provided to the telephone company.

The method used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact our company. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

B.4 Industry Canada Notice

This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, **IC**, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

This Declaration of Conformity means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above condition may not prevent degradation of service in some situations. Repairs to some certified equipment should be made by an authorized maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure for their own protection that the ground connections of the power utility, telephone lines and internal metallic water pipe system, are connected together. This protection may be particularly important in rural areas.

B.5 CE Notice

This equipment conforms to the requirements of Council Directive 1999/5/EC on the approximation of the laws of the member states relating to Radio and Telecommunication Terminal Equipment and the mutual recognition of their conformity.

The safety advice in the documentation accompanying this product shall be obeyed. The conformity to the above directive is indicated by the **CE** sign on the device.

B.6 Authorized European Representative

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Copyright statement

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Warranty

For warranty, trademark and compliance information, refer to the *SmartNode 4830 User Manual* located online at www.patton.com/manuals.

