SmartNode™ SN10100A Series
TDM+VoIP Smart Media Gateway

Quick Start Guide

Important—This is a Class A device and is not intended for use in a residential environment.

WARNING

- **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 used 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 that 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.**

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

- **If one has reason to open the chassis or case, then the precautions mentioned above shall be followed. This includes both the warnings relating to disconnection of the input power, and the warnings relating to the disconnection of WAN, LAN & PSTN ports.**

WARNING

This device is NOT intended nor approved for connection to the PSTN. It is intended only for connection to customer premise equipment.

WARNING

- **Gerät nicht öffnen, wenn das Netzkabel angeschlossen ist. Bei Systemen ohne Netzschalter und ohne externes Netzteil liegt Netzspannung im Gerät an, wenn das Netzkabel angeschlossen ist.**
- **Bei Geräten mit externem Netzteil muss das Netzteil die Anforderungen an eine zugelassene Stromquelle mit begrenzter Leistung erfüllen. Die Steckdose, die für die Stromversorgung des Gerätes verwendet wird, sollte höchstens 3 Meter vom Gerät entfernt und leicht zugänglich sein sowie durch einen den örtlichen regulatorischen Anforderungen entsprechenden Schutzschalter abgesichert sein.**
- **Für mit Wechselstrom betriebene Geräte muss sichergestellt sein, dass das verwendete Netzkabel alle gültigen Normen des Landes erfüllt, in dem es eingesetzt werden soll.**
- **Für mit Wechselstrom betriebene Geräte, die 3-polige Netzstecker haben (L1, L2 u. GND oder Phase, Neutralleiter u. Schutzleiter), muss die Steckdose geerdet sein.**
- **Für mit Gleichstrom betriebene Geräte muss sichergestellt sein, dass die Verbindungskabel für Spannung, Strom, erwartete Temperatur, Entflammbarkeit und mechanische Wartbarkeit geeignet sind.**
- **WAN-, LAN- u. PSTN-Ports (Anschlüsse) können unter gefährlicher Spannung stehen, unabhängig davon, ob das Gerät ein- oder ausgeschaltet ist. PSTN bezieht sich auf Schnittstellen wie Telefon, FXS, FXO, DSL, xDSL, T1, E1, ISDN, Voice, usw. Diese sind als „gefährliche Netzwerkspannungen" bekannt. Um einen elektrischen Schlag zu vermeiden, muss in der Nähe dieser Anschlüsse mit Vorsicht gearbeitet werden. Werden Kabel von diesen Anschlüssen getrennt, zuerst das Kabel am anderen Ende herausziehen.**
- **Während eines Gewitters darf nicht am Gerät gearbeitet werden und es dürfen keine Kabel angeschlossen oder vom Netz getrennt werden.**

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.

In Übereinstimmung mit den Anforderungen der Richtlinie 2002/96/EG über Elektro- und Elektronik-Altgeräte (WEEE) muss sichergestellt sein, dass Altgeräte von anderem Abfall und Schrott getrennt werden und dem Sammel- und Verwertungssystem für Elektro- und Elektronik-Altgeräte in Ihrem Land zum Recycling zugeführt werden.

1.0 Before you begin

In the box, you will find:

- One SmartNode SN10100A
- One set of mounting brackets with screws
- One DB-9 to RJ-45 adapter
- Three CAT5 Ethernet straight cables (male-male), three meters in length
- One warranty sheet
- One packing slip
- One SmartNode SN10100A Series Quick Start Guide
- One SmartNode SN10100A Important Notice sheet with unique information for your specific unit

2.0 Installing the rack hardware

1. Install rack-mounting hardware on to the SN10100A and install the unit on the equipment rack.
2. Connect the Ethernet port to your management network.
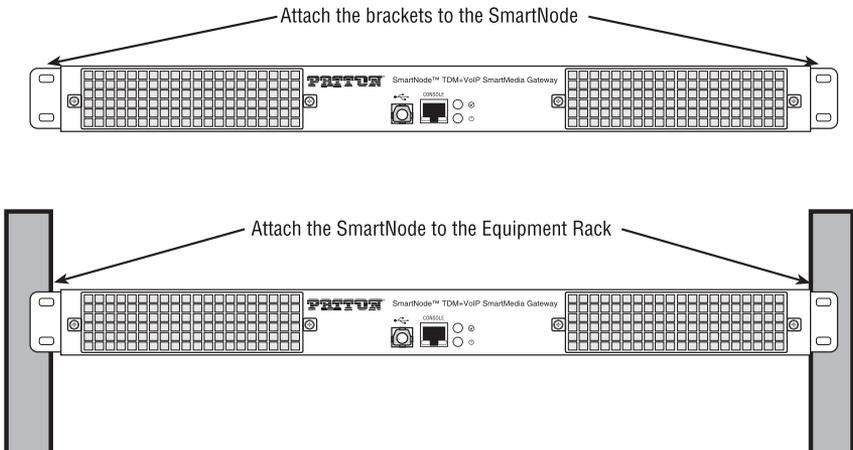
Figure 1. Installing the SN10100A

3.0 Connecting to the VoIP Network

1. Connect the VoIP Ports 0/1 and 0/1 to your network (see **figure 2**).

Note Ethernet ports (ETH 0/0 & 0/1), and SMS ports (SMS-0/0 & 0/1) are not used when connecting VoIP.
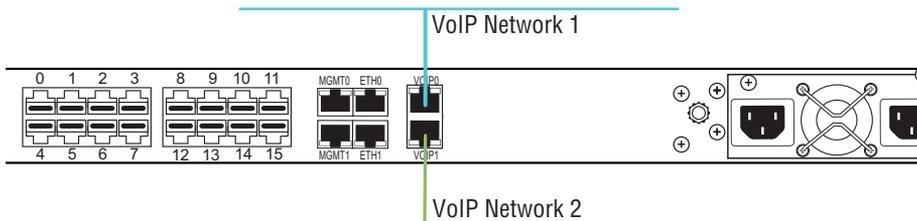
Figure 2. Connecting the VoIP ports

4.0 Connecting to the PSTN

A SN10100A with 8 RJ48C type ports enables the connection to T1/E1 lines.

Note T1/E1 ports are activated by software license; the number of active ports depends on the licenses purchased.

1. Start with port 0, located at the top and leftmost position. Connect one cable between this port and the T1/E1 line.

2. Repeat step 1, using the next available port

16-Port Interface to the PSTN
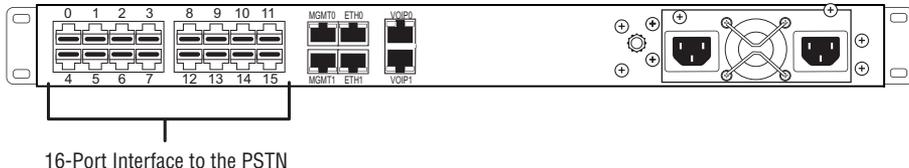
Figure 3. Port Interface to the PSTN

5.0 Grounding the Equipment Chassis

As a standard safety practice, the chassis of the SN10100A series gateway must be properly grounded to protect against any contact with an electrical fault condition. It is recommended that the chassis be connected to an earth ground. If the SN10100A series gateway is mounted in an equipment rack, then the ground cable must be connected from the ground lug of the SN10100A series gateway ground to the ground bar of the equipment rack. If more than one SN10100A series gateway is installed in an equipment rack, each SN10100A series gateway must be grounded directly to the equipment rack ground bar.

WARNING

To avoid the risk of fire, electric shock, or personal injury do not apply power to the SN10100A before the equipment chassis ground has been installed.

5.1 Guidelines

- Use 10 AWG (minimum) stranded ground wire.

- Terminate equipment side of ground wire with a #10 ring terminal.

- **Do NOT** daisy chain the ground between equipment. Use a ground bus bar, as shown in **figure 4**.
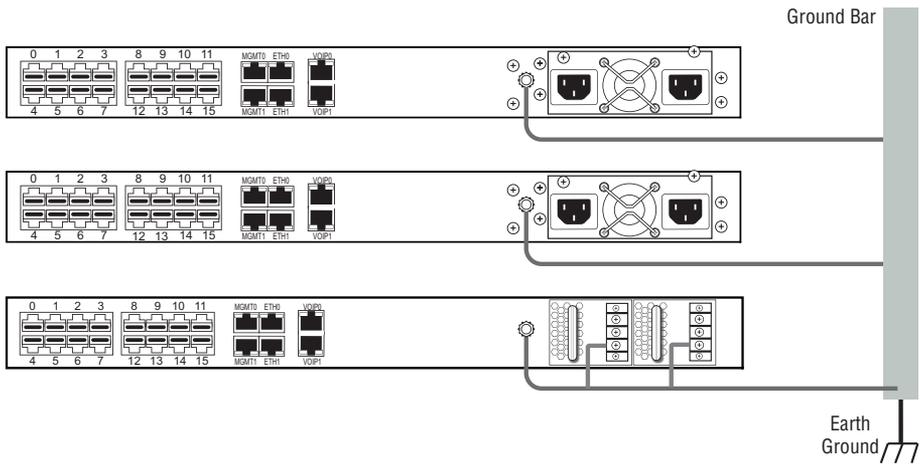
Figure 4. Chassis ground connection

- Do not over-tighten ground lug connections.

- Keep the length of the ground wire as short as possible.

5.2 Grounding procedure

Do the following to connect to the SN10100A series gateway to ground:

1. Connect one end of a ground wire to the ground lug of the SN10100 series gate-way. See **figure 4**.

2. Connect the other end of the ground wire to a ground bar of the equipment rack.If the SN10100 series gateway is not installed in an equipment rack, then connect the ground wire to the main water entry pipe.

3. Verify that the resistance of the ground path is less than 0.5 ohms.

6.0 Connecting to the power source

1. Connect AC power cables between the AC connectors of the SN10100A and the two independent power sources (see **figure 5**).

2. Verify that the Power LED on the front panel (see **figure 6**) is a solid green.

Figure 5. Connecting the power source
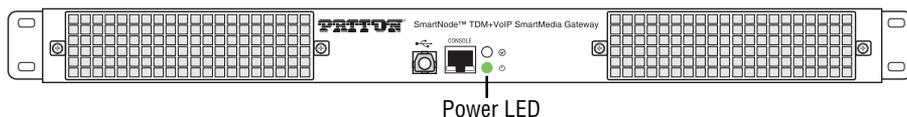
Power LED

Figure 6. Power LED location

7.0 Connecting to the Control host

1. Connect to the Control host through the console serial port (see **7.1 "Connecting the console serial port"** on page 8) OR the Ethernet management interface (see **7.2 "Connecting the Ethernet management interface"** on page 8).

   The IP address of the management port is *192.168.200.10/24*. If it is not possible to connect to the management port via IP, use the serial cable to connect to the SmartNode Control host for the first time.

2. Default HOSTNAME is the Control host serial number, which can be found in the "Important Notice" sheet included with your shipment.

3. Refer to the "Important Notice" sheet for the username and password to log onto the SmartMedia WebPortal. Navigate to: HTTP://HOSTNAME:12358, to configure the SmartNode unit. (username/password: root/root)

7.1 Connecting the console serial port

1. Connect a CAT5 RJ-45 (male-male) cable (supplied with unit) between the COM port of your computer and the serial port (labeled CONSOLE) of the SN10100A.

2. If your computer's serial port features a DB9 connector, use the DB9 to RJ-45 adapter supplied with your SN10100A. If your computer's serial port features a USB connector, you will need to provide a USB to DB9 adapter.

CONSOLE Port

Serial Terminal (PC)
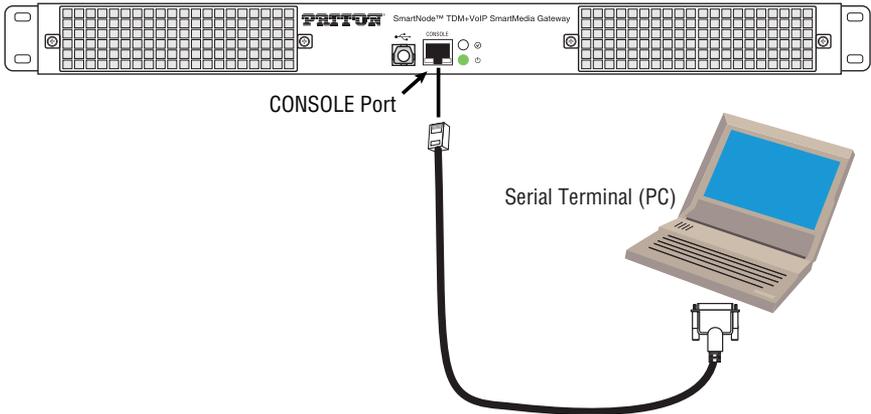
Note A Patton Model 16F-561 RJ45 to DB-9 adapter is included with each SmartNode 10200A device.

Figure 7. Connecting the console serial port

7.2 Connecting the Ethernet management interface

1. Connect the supplied CAT5 Ethernet cable to the management port labeled MGMT0 on the rear of the SmartNode 10100A (see **figure 8** on page 8.

2. Log into the SmartNode using the specific credentials included on the "Important Notice" sheet that shipped with your unit. The management port is configured with a static Class C IP address by default

Ethernet Management Port (MGMT0)
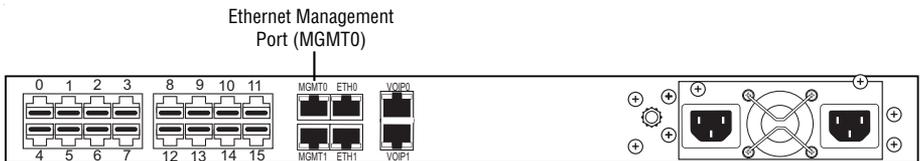
Figure 8. Connecting the management interface

8.0 Configuring the SmartNode

You may access the SmartNode through the console management port, or through the Ethernet management port. Refer to the following sections for more information:

- **8.1 "Accessing the SmartNode via the Console Management port"** on page 9
- **8.2 "Accessing the SmartNode via the Ethernet Management port"** on page 9

8.1 Accessing the SmartNode via the Console Management port

Logging into the SmartNode Console

1. To physically connect the console serial port, follow the instructions in **7.1 "Connecting the console serial port"** on page 8.

2. To communicate with the SN10100A through the console port, you must first configure a terminal emulator or console application (such as HyperTerminal or Putty) in order to configure initial settings. Configure the terminal emulator with the following settings:

Baud rate	Data rate	Parity	Stop bits	Flow control
9600	8 bits	None	1	None

3. Log into the console using the specific credentials included on the 'Important Notice' that shipped with your unit. (If you do not have the "Important Notice" sheet, contact support@patton.com).

8.2 Accessing the SmartNode via the Ethernet Management port

Logging into the SmartNode via SSH

1. To physically connect the Ethernet management port, follow the instructions in **7.2 "Connecting the Ethernet management interface"** on page 8.

2. To access the SN10100A, you must use an SSH connection. The password is set at the factory and is indicated on the "Important Notice" sheet included with your unit. (If you do not have the "Important Notice" sheet, contact support@patton.com).

3. The factory default configuration for the Management Ethernet Interface is a Static IP address of 192.168.200.10/24.

Preparing for Web Management

After logging into the SN10100A via the console port or SSH, a control menu displays. This menu allows you to complete simple tasks like setting the time zone and configuring the management IP Address, and more complicated tasks like advanced debugging.

For debugging assistance, contact Patton's Support team at support@patton.com. Once your IP Address and Time Zone are set, there are no more configuration steps in the CLI and you may proceed to the web management page.

9.0 Logging into the Web Interface

This section describes how to login and navigate the SmartNode 10100A Web Portal.

The first step involved in initially configuring any Smart Media system involves logging on to the Web Portal. This can be divided into two distinct tasks: connecting to the 10100A via IP and logging on to the Web Portal. For establishing IP connectivity refer to **8.2 "Accessing the SmartNode via the Ethernet Management port"** on page 9.

9.1 Connecting to the web server

Using a web browser, connect to the Web Portal by typing the following in your address bar:

–http://[DEVICE HOST NAME]:12358

or, alternately,

–http://[DEVICE IP ADDRESS]:12358

9.2 Logging on to the Web Portal

In order to log on to the Web Portal configuration tool, enter the root user ID and password. The default values for these parameters are:

–User ID: root
–Default password: root

10.0 Additional Information

Refer to the following manuals–available online at **www.patton.com/manuals**–for detailed information about installing, configuring, and operating the SN10100A models, along with warranty, trademark, and compliance information.

• *SmartNode 10100A Series User Manual* – **www.patton.com/manuals/SN10100.pdf**

• *Smart Media System Software Configuration Guide* – **www.patton.com/manuals/SmartMedia-scg.pdf**

A.0 Compliance Information

A.1 Compliance

EMC:

- FCC Part 15, Class A
- EN55022, Class A
- EN ETSI 300 386 V1.3.3

Low-Voltage Directive (Safety):

- UL 60950-1/CSA C22.2 No. 60950-1
- IEC/EN60950-1

A.2 Radio and TV Interference (FCC Part 15)

This device 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. This equipment has been tested and found to comply with the limits for a Class A computing device in accordance with the 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 equipment causes interference to radio or television reception, which can be determined by disconnecting the cables, 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).

A.3 CE Declaration of Conformity

Patton Electronics, Inc declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The Declaration of Conformity may be obtained from Patton Electronics, Inc at www.patton.com/certifications.

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

A.4 Authorized European Representative

Martin Green
European Compliance Services Limited
Milestone house
Longcot Road
Shrivenham
SN6 8AL, UK

B.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: 9:00 am to 5:30 pm CET (08:00 to 16:30 UTC/GMT)

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

Copyright statement

Trademarks statement

Warranty

For warranty information, refer to the *SmartNode 10100A Series User Manual* available online at **www.patton.com/manuals/SN10100.pdf**.