



SmartNode™ Application Note

SN4552 ISDN BRI S-Bus Extensions over IP

Application Overview

Instead of installing a separate PBX in small branch offices, stores or workshops, it is often more convenient and economical to extend a number of ISDN lines from the main PBX. The SmartNode is able to provide such remote PBX extensions and combine them with LAN-to-LAN routing and thus provide full connectivity over a single line.

To connect the locations a variety of network connections may be used:

- Internet
- Public or private IP/VPN network
- Point-to-Point Ethernet links (DSL, Radio, Laser etc.)

Especially in short distance networks across the town or on a campus point-to-point Ethernet links using DSL or wireless modems are very economical and easy to install.

To provide two voice channels (one BRI line) to the branch office the SmartNode4552 is the device of choice.

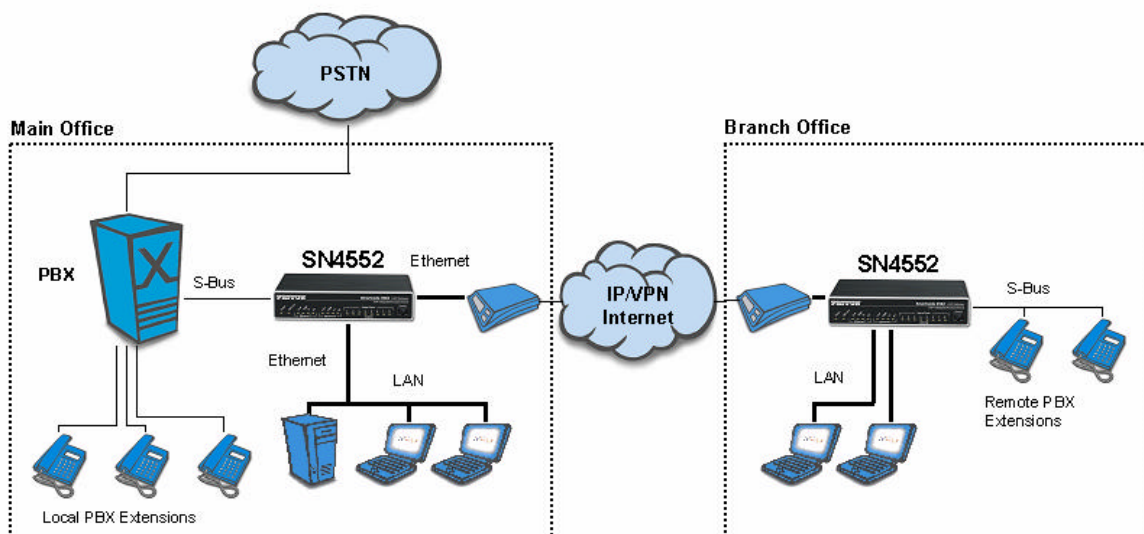


Figure 1: Schematic diagram of the application

Note that this Configuration Note provides a basic setup which is intended to get you started quickly and make a first call. In some cases the minor adaptations described hereafter will be sufficient for your network. However, the SmartNode has many additional configuration options which allow to fit the product in various network scenarios. Please consult the SmartWare Software Configuration Guide for the complete configuration documentation.

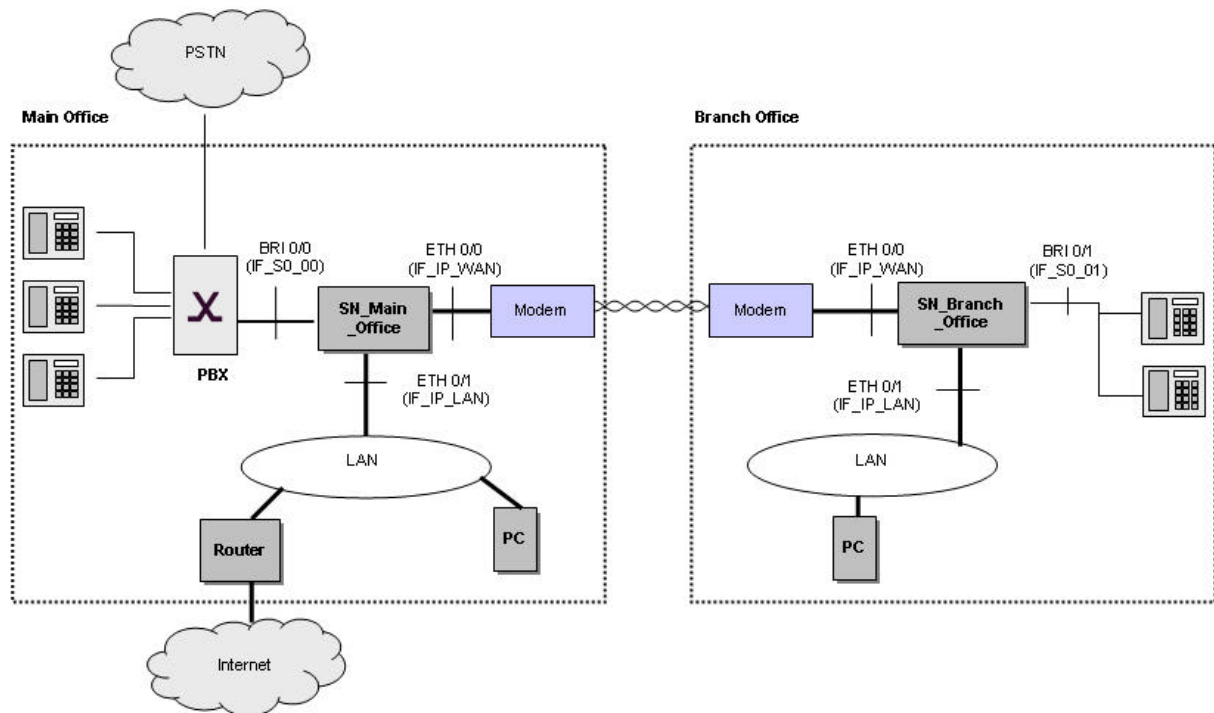


Figure 2: Detailed schematics of the complete network

Figure two presents the details of the example network i.e. SmartNode physical interfaces connected to the network (logical in brackets) and third party equipment. These things may be different in your network and must be adapted. Within the next section you find a detailed description about how to adapt the configuration.

How To Adapt To Your Network

The configuration files are available as an ASCII file (.cfg) file. You can edit the configuration files with any text editor (MS Word, Wordpad). Save changed files in text (.txt) format.

The configuration files contains comments (lines with a leading #) with instructions where and how to change the parameters which may need to be adapted to your network. Please replace the variables to valid parameters without brackets, e.g. <IF_IP_LAN> → 192.168.1.1

For instructions on how to download the configuration using a TFTP server to the SmartNode please consult the **Quick Start Guide**.

Note: Please follow the instructions in the Quick Start guide **exactly - step by step** to insure that the configuration is activated correctly!

Configuration File

sn4552_sbus_main.cfg
 sn4552_sbus_branch.cfg

Changes on 3rd Party Equipment

Separate Internet Gateway Router

Add the following routes:

Destination network of Branch Office:	Next hop: IF_IP_LAN SmartNode Main Office
Destination network of privat interconnection network:	Next hop: IF_IP_LAN SmartNode Main Office

Main Office PC's

Default route: IP-address of internet gateway router

Branch Office PC's

Default route: IP-address of IF_IP_LAN (SmartNode Branch Office)

Contacting Patton

If you have any questions please feel free to contact Patton's Technical Support:

- E-mail support—e-mail sent to support@patton.com will be answered within 1 business day
- Telephone support—standard telephone support is available five days a week—from 8:00 am to 5:00 pm EST (1300 to 2200 UTC)—by calling +1 (301) 975-1007

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