



FlowPoint FP2200 SDSL Router

Firmware version 3.5.x (December 14, 1999)

INTRODUCTION:

Thank you for choosing FlowPoint as your solution for Internet access and LAN-to-WAN connectivity.

The following documents are provided to help you with the setup and configuration of your router:

- Customer Release Notes (this document)
- Quick Start Guide (printed - discusses hardware setup, Web Easy Setup application)
- Command Line Interface document (on-line - console port or Telnet configuration and advanced settings)

Important Note: Please, use the Quick Start Guide. Refer to the other documents, only if needed.

This document contains late-breaking information about your router and has the following sections:

- Hardware Compatibility
- Configuration Notes
- Key Changes in this Release
- Known Problems
- Documentation
- Technical Support

HARDWARE COMPATIBILITY:

This version of firmware is supported on most hardware revisions of model 2210 or 2220. The 2200-32 product requires part number 905-00725-04. The hardware model number can be found on a label on the bottom of the router.

The following product numbers will interoperate with the indicated DSLAM:

2200-12 Nokia SpeedLink™.	2200-16 Copper Mountain Systems
2200-18 Point-to-Point router applications	2200-20 Promatory Communications
2200-22 Interspeed Frame Relay	2200-32 Newbridge Networks

These product numbers are displayed by the web GUI or Quick Start after connecting to the router.

CONFIGURATION NOTES:

This device may be configured using several different methods:

- Using Easy Setup from a web browser connected to the router's default IP address of 192.168.254.254
- Using the Quick Start Windows application, which is installed from the Installation CD
- From the console port using the Command Line Interface (CLI) (requires console cable to be connected)
- From a Telnet session connected to 192.168.254.254, again using the CLI

Web Easy Setup GUI:

The simplest method is to use your web Browser and connect to the router's built in web Easy Setup application. Be sure to set your PC's IP driver to use DHCP to get an IP address from the router before trying to connect. If your PC is on a different LAN, type at a Window's DOS command prompt:

```
route add 192.168.254.254 x.x.x.x, where x is the PC's IP address.
```

To access the Web GUI, connect to 192.168.254.254 and use the username `login` and the password `admin`. Follow the prompts and enter the values provided by your Network Service Provider.

Security Caution

This router supports HTTP access for configuration changes and this can be a security risk if access is not controlled. The web GUI has a 'Change Access Control' button. You may wish to select 'Allowed from LAN' to stop access from the Internet (WAN). Telnet access and SNMP access can also be disabled.

The CLI provides additional commands that allow finer grained access controls.

Additional Software Tools:

A set of MS Windows applications are on the Installation CD that allows you to configure the router, install new software versions, and set up other advanced options.

There is also a Command Line Interface (CLI) that you may need to set up certain settings like IP filters, host mapping, IPX and optional features like encryption and VPN.

The SDSL router is a CPE (customer premise) device by default. If you have products 2200-12 or 2200-18 and are not connecting to a DSLAM (CO device) and want to set one router up as a CO (Central Office) enter the following command: `sd term co`.

The WAN line speed is manually set at the CO end and will be determined automatically at the CPE end (although you can specify the starting point of the search algorithm). On some models the WAN speed is set using a management channel.

Sample configurations:

See sample files in the samples directory where the Quick Start application was installed (if install documentation was selected).

VPI/VCI Configuration

When using the Web GUI be sure to verify the VPI/VCI numbers for the data PVC connection. These values must match your Network Service Providers values.

Troubleshooting notes (via the CLI)

Use the `ifs` command to show the physical link status (open is good).

The `remote stats` command indicates whether data is actually being received or sent (bytes in/out).

Use the `ping` command to verify the link.

Other handy commands:

<code>sd stats</code>	shows CRC errors on the WAN link (ATM)
<code>frame stats</code>	shows LMI statistics on the WAN link (Frame relay)
<code>sdsl speed xx</code>	start speed search at xx rate
<code>sdsl speed xx noauto</code>	set link speed to xx and disable auto speed searching
<code>atom findpvc on off</code>	used to detect and print unknown VPI/VCI numbers (ATM)

IP Filtering

IP Filtering is discussed at length in the Command Line Interface document. A sample set of filters is provided in the FILTERS.TXT file in the `samples` directory where the Quick Start application was installed (if install documentation was selected). This script file may be copied to the router using the Quick Start application by clicking the Tools and Execute Script buttons. Be sure to edit the file to fit your specific configuration.

NOTE: IP filters only work if IP routing is enabled.

Encryption Software Option

Encryption is a software option that can be installed on the router. However, it must be purchased separately and then activated. Two methods of key exchange over PPP have been implemented:

- PPP DES (RFC1969) - static keys
- Diffie-Hellman - dynamic keys

Encryption requires PPP. Please consult the Command Line Interface manual for configuration information.

VPN Tunnel (L2TP) Software Option

L2TP is a software option that can be installed on the router. However, it must be purchased separately and then activated. This feature is discussed at length in the Command Line Interface document. An example is provided in the root directory of the CD ROM (file `vpn_exam.htm`). Also sample configuration files are provided in the `samples` directory where the Quick Start application was installed (if install documentation was selected). These script files must be edited and copied to the router using the Quick Start application by clicking the Tools and Execute Script buttons. Be sure to edit the file to fit your specific configuration.

KEY CHANGES IN THIS RELEASE:

Significant changes in vers 3.5.0

Embedded Web GUI

- Sets Link protocol (RFC1483, PPP, MER), IP routing, Bridging
- Set DHCP values for DNS, Domain, WIN servers
- Sets login password and data and/or voice PVCs
- Set Block NetBios and NAT
- Access control to LAN or none for HTTP, Telnet or SNMP
- Support for ATM or FR routers

Router Kernel

- IP Filters are now standard at no extra cost
- HTTP access can be disabled or set the port number
- Access list for HTTP access
- Provide an ATM echo channel
- Double the login delay if a bad password is entered
- Allow set of MTU size for WAN or Ethernet interfaces
- Added a command to turn off IPX rip/sap on the wan
- IP filter watch output now includes the date/time stamp.
- Multicast support
- Default route, always use the all zeros net mask instead of the all ones net mask.

Significant Bug fixes

- Network address translation fixes
- DHCP has additional checks ensuring automatic disabling when other servers detected
- DMT WAN line activation error recovery improved
- Don't bring up dial-up lines every ten minutes looking for DNS

New CLI commands not in the CLI yet:

- `frame lmi on|off` Turns lmi on or off for Frame Relay products. Default is on.
- `remote setlpxoptions <option> on|off <remote name>`

CUSTOMER RELEASE NOTES

valid options is: RIPSAP Use IPX RIP/SAP protocols
remote setpppoptions <option> on|off <remote name>
valid options are:
compression Compression allowed
ipSlaveMode Always accept peer proposal for our WAN IP Address
lcpEcho Use periodic echo
reacqIPAddr Try to reacquire IP address
RIPSAP Use IPX RIP/SAP protocols

KNOWN PROBLEMS:

Some applications such as the Unix 'top' program and Microsoft Net Meeting that use IP or UDP protocols may have problems with Network Address Translation. You can avoid this problem by turning off NAT and running as a subnetwork to your ISP.

Some PPP termination systems do not completely support IP address negotiation. Communications with such systems can result in protocol hangs. The command:

```
remote setpppoptions reacqIPAddr off <remote name>
```

can be used to force the router to always request a new IP address whenever the PPP session is terminated, thus providing a work around until the software in the other systems has been changed.

MS Internet Explorer does not honor the no cache option. Thus old values appear in the Web GUI rather than the current ones. You need to hit the refresh button to see changed values. Netscape does not have this problem.

DOCUMENTATION:

The user manuals are included in soft copy format. The files are installed when the software is installed. You need the freely-available Acrobat Reader to view and print these documents. If you don't have the Acrobat Reader already installed on your system, you can install it from the Installation CD or from Adobe's Web site (<http://www.adobe.com/>). The Acrobat Reader is available for a very wide range of platforms, including MS Windows, Macintosh and many Unix systems.

TECHNICAL SUPPORT:

Should you have any difficulty installing or operating the product, feel free to contact Technical Support.

Before you call, please try to gather a trace file. If you can connect to the router with Quick Start, select 'Help' and 'Technical Support Data' from the menu. This will generate a file that can be used to analyze the problem.

If you can't connect to the router, but are able to use the console interface, use the Tools | Terminal Window menu and then select the 'Technical Support Data' item, or if you are using the Terminal or HyperTerminal applications that come with Windows or any other terminal emulation program (use the parameters: 9600, 8N1), type `system support` and copy and paste the result into a file.

FlowPoint Technical Support:
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