

# **SpeedStream<sup>®</sup> 4100/4200 Ethernet / USB ADSL CPE**

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## Product Feature Matrix

**SIEMENS**

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## 1 Introduction

The SpeedStream® 4100/4200 Series Modems are the ideal solution for the residential environment. The SpeedStream® 4100 Series Modem provides an IEEE 802.3/802.3u 10/100BaseT (Ethernet) LAN interface and a USB port with the 4200 for local user equipment and a single ATM-based DSL interface toward the public network. The embedded PPP client means no additional PC software is needed for broadband connectivity. An intuitive, web-based graphical user interface (GUI) makes installation and configuration effortless.

Plug-and-Play USB installation allows the SpeedStream® 4100/4200 to be installed on any PC running Windows® 98, Windows® 98 Second Edition, Windows® ME, Windows® 2000, Windows® XP and Mac OS 8.6 through Mac OS X (10.2.4). Computers attached to the USB and Ethernet ports can share local resources and the ADSL line.

The SpeedStream® 4100/4200 supports full routing based functionality. Among the features supported are: DHCP, DNS Relay, NAT, NAPT, UPnP, RFC 2364, RFC 2516, RFC 2864 (Bridged and Routed), PPPoE Relay/Bridging, static routes, VPN pass-through, and a stateful-inspection firewall with Denial of Service (DoS) protection.

### 1.1 Legend

Value	Description
Yes	Supported
No	Not Supported
N/A	Not Applicable

## 2 Power, Mechanical, Packaging

### 2.1 Power

Feature	Comments
Input	110/220VAC, 50mA, 60 Hz
Output	12V/50mA
External AC power supply	Yes
External power switch	Yes
Power consumption	10 watts maximum

## 2.2 Physical Interfaces

Feature	Comments
10/100 Base-T connector	(1) RJ-45 Ethernet port
RJ-11 connector	(1) RJ-11 ADSL WAN port
USB connector	USB 1.1 compliant (USB 2.0 Full speed device)
Reset Button	Yes

## 2.3 Visual Indicators

Feature	Comments
Front panel LED for Power status	Yes, green / red. Labeled POWER
Front panel LED for Ethernet status	Yes, green. Labeled ETHERNET
Front panel LED for DSL status	Yes, green. Labeled DSL
Front panel LED for Internet status	Yes, green Labeled Internet (4100 only)
Front panel LED for Activity status	Yes, green Labeled Activity
Front panel LED for USB status	Yes, green. Labeled USB (4200 only)

## 2.4 Product Cabinet

Feature	Comments
Desktop package	Yes
Wall mountable	Yes

## 2.5 Product Packaging

### 2.5.1 Cabling

Feature	Comments
RJ-11 Phone Cable	Yes
USB cable	Yes
RJ-45 Straight-through cable	Yes

### 2.5.2 Documentation

Feature	Comments
Quick start guide	Yes
Product Safety Certification sheet	Yes
SW/HW License Agreement	Yes
Warranty Registration Card	Yes
Release notes	Yes, if necessary
Software/Documentation CD	Yes, CD contains USB drivers, quick start guide, user manual and Adobe Acrobat Reader

**2.5.3 Physical Packaging**

Feature	Comments
Dimensions	4.5" (114mm) W x 4.0 (102mm) "D x 1.5" (38mm) H
Weight:	1 lbs (428g)
Shock resistant individual shipping package	Yes

**2.6 Environmental**

Feature	Comments
Operating temperature	0 to 40 degrees centigrade
Non-operating storage	-10 to +75 degrees centigrade
Operating humidity	10% to 90% Non-condensing
Non-operating humidity	5% to 95% Non-condensing

**2.7 Quality and Reliability**

Feature	Comments
MTBF	Exceeds 90,000 hours

**3 Safety and Certification****3.1 Safety and Emissions**

Feature	Comments
FCC Part 15 emissions	Class B
FCC Part 68 approval	Yes
CE Mark	Yes
UL Mark	No. CSA tests to all the same safety standards as UL and more. CSA is effectively a superset certification.
CSA	Yes
Industry Canada Mark	Yes

## 4 User Plane Capabilities

### 4.1 10/100 BASE-T Ethernet Interface

Feature	Comments
Factory MAC address	Yes
IEEE 802.3/802.3u Ethernet	Yes
Ethernet v2	Yes
Half/Full duplex Ethernet	Yes
Auto MDI-MDIX support	Yes

### 4.2 USB Interface

Feature	Comments
Number of USB ports	1
Factory MAC address	Yes
Data Transfer	Bulk Transfer
USB Compliance	1.1 (USB 2.0 Full speed device)
OS support	98, 98SE, ME, W2K, XP, Mac OS 8.6 through Mac OS X (10.2.4).
Host Controller Support	OHCI and UHCI
Data Rate	Up to 12Mbps
Device Type	High Speed

### 4.3 DMT ADSL WAN Interface

Feature	Comments
ADSL DMT chipset & version	Texas Instruments AR7 TNETD7300A
ITU-T G.992.1 ADSL	Yes
ITU-T G.992.2 ADSL	Yes
ITU-T G.992.3 ADSL2	Yes
ITU-T G.992.4 ADSL2	Yes
ITU-T G.992.5 ADSL2+	Yes
ITU-T G.994.1 ADSL Handshake	Yes
ITU-T G.996.1 TEST	Yes
ITU-T G.997.1 PHY	Yes
ANSI T1.413 Issue 2	Yes
Explicit rate operation	Yes; As set by ATU-C
Rate adaptive operation	Yes; As set by ATU-C
Fast or Interleaved FEC	Yes; As set by ATU-C
Dual latency	Yes
Dying Gasp	Yes
Network Timing Reference	Yes
Frequency Division Multiplexing	Yes
Echo Cancellation	Yes

Bit swapping	Yes; As supported by TI AR7 chipset
Trellis coding	Yes; As supported by TI AR7 chipset

## 5 Control Plane Capabilities

### 5.1 AAL5, ATM and Cell Transmission Convergence

Feature	Comments
Maximum simultaneous VCCs	8
Pre-configured PVCs	Yes, 0/35, 0/43, 0/51, 0/59, 8/35, 8/43, 8/51 and 8/59; (customer specific PVC configuration can be supported.)
VPI range	VPI= 0-255
VCI range	VCI= 0-65,535
ATM traffic classes supported	UBR, UBR+PCR, CBR, VBRnt and VBRrt
per-VCC Peak Cell Rate traffic shaping	Yes
ITU I.432 HEC cell delineation	Yes
ITU I.432 cell payload scrambling	Yes
ATM to DMT transmission convergence	AS0 downstream, LS0 upstream ADSL Forum TR-002
UNI 3.1/4.0 Support	Yes, PVC
ILMI version	Future support

### 5.2 ATM/AAL5 Data Encapsulation

Feature	Comments
IP encapsulation into PPP	Yes
RFC 2684 Bridged Ethernet encapsulation	Yes
RFC 2684 Routed IP Ethernet encapsulation	Yes
RFC 2364 PPP over ATM	Yes
RFC 2516 PPP over Ethernet	Yes
Multiple PPPoE sessions	Yes, (up to 4n a single VC)

### 5.3 Packet Forwarding

#### 5.3.1 Layer 3 Routing – IP

Feature	Comments
Static routing	Yes, maximum of 16
Default route	Yes
Variable length subnet masks	Yes
RIP version 1	Yes, active and passive
RIP version 2	Yes, active and passive
Multiple Virtual Routers	Yes, via each interface
VCC to VCC routing	Not by default, can be enabled.
ICMP redirects	Yes
Simultaneous routing and bridging	Yes

CIDR Support	Yes
IP unnumbered	Yes

### 5.3.2 Layer 2 Bridging

Feature	Comments
IEEE 802.1d MAC layer bridging	Yes
MAC address learning and aging	Yes
Maximum MAC addresses learned	255
Spanning Tree Algorithm	Yes, disabled by default
Multicast groups	Yes
VCC to VCC bridging	Yes, optional
MAC address filtering	No

## 6 Management Plane Capabilities

### 6.1 Management Interfaces

#### 6.1.1 Local and Remote Console

Feature	Comments
Password Protection	Yes
Command line interface via Telnet	Yes
Telnet access via LAN and WAN ports	Yes, LAN-only enabled by default

#### 6.1.2 Remote Protocol-based Management

##### 6.1.2.1 SNMP

Feature	Comments
SNMP v1 support	Yes, GETs only.
RFC 1213 MIB-II	Yes
RFC 1623 Ethernet MIB	Yes
RFC 2515 ATM MIB	Yes
RFC 2662 ADSL MIB	Yes
ADSL Forum Line MIB	Yes

**6.1.2.2 HTTP – Web-Based Management**

Feature	Comments
Internal HTTP server	Yes
Web management	Yes, LAN and WAN
Password Protected	Yes
Ability to disable	Yes
Ability to run over port other than 80	Yes
HTML based help	Yes
Browser compatibility	Internet Explorer 4.0+ and Netscape Navigator 4.0 or greater
JAVA based	No

**6.2 ATM Layer In-band Management**

Feature	Comments
Generate and reply to F4 & F5 Loopback OAM cells	Yes
F4 & F5 AIS/RDI OAM cell flow support	Yes

**6.3 ADSL In-band Management**

Feature	Comments
DMT Embedded Operations Channel (EOC)	Yes; As supported by DSL chipset

**6.4 Configuration Management****6.4.1 Firmware and Configuration Updates**

Feature	Comments
Firmware updates via FTP	Yes, WAN is disabled by default
Firmware updates via local PC application	Yes
Persistent storage of configuration during power down	Yes
Configuration changes via local or remote	Yes, via telnet and/or HTTP. WAN access disabled by default.
Reset to default or factory	Yes

**6.4.2 IP Address and DNS Name Management**

<b>Feature</b>	<b>Comments</b>
LAN interface factory default IP address	192.168.254.254
Manual IP address assignment for Ethernet	Yes
UPnP Support	Yes, IGD v1.0
Dynamic IP address assignment for ATM VCC via PPP/IPCP	Yes
DHCP relay agent	Yes
DHCP server	Yes
DHCP client for WAN port	Yes
DNS relay	Yes
Dynamic DNS (DDNS)	Yes
Configurable CHAP or PAP	No, auto-detection support
PPPoE relay (bridging)	Yes, multiple sessions supported
NAT	Yes, concurrent with NAPT
Network Address Port Translation	Yes, support for port ranges
Configurable WAN-to-LAN pass-through of NAPT	Yes; Provides access to LAN-side servers (FTP, SMTP, HTTP, etc.)
VPN pass-through support	Multiple PPTP, L2TP and IPSEC sessions
IP Multicast	Future
ALG support	80+ ALGs are supported
IP Passthru / DHCP Spoofing	Yes

**6.5 Fault Management**

<b>Feature</b>	<b>Comments</b>
Power-on self test	Yes
Front panel alarm indication	Yes
Reset button	Yes
Event logging	Yes
PPP link status and reset	Yes
PING packet generation	Yes
Traceroute	Yes

## 6.6 Performance and Accounting Management

Feature	Comments
Ethernet port statistics	Yes
USB statistics	Yes
Bridging statistics	Yes
IP statistics	Yes
ICMP statistics	Yes
PPP statistics	Yes
TCP & UDP statistics	Yes
ATM/AAL5 statistics	Yes
Near end ADSL statistics (ATU-R)	Yes
Far end ADSL statistics (ATU-C)	Yes

## 6.7 Security Management

Feature	Comments
Password for Web-based access	Yes
Password for console and Telnet access	Yes
Access lists	Yes
Number of privileged users	3
Renumber well known server ports	Yes
Limit access to management from LAN	Yes

## 6.8 Firewall Capabilities

Feature	Comments
Stateful-Inspection Firewall	Yes
IP Filtering	Yes, <ul style="list-style-type: none"> <li>- Source and destination router interfaces.</li> <li>- IP protocols.</li> <li>- Direction of traffic flow.</li> <li>- Source and destination network/host IP address.</li> <li>- Source and destination port ranges.</li> <li>- Protocol specific attributes (ICMP, etc.).</li> </ul>
Denial of Service (DoS) protection	Yes
ICSA compliant	Yes, selectable ICSA 3.0a Compliancy Mode
Pre-configured settings	Yes, ICSA 3.0a Compliant, High, Medium and Low
Custom settings allowed	Yes
Snooze Support	Yes, Ability to disable firewall for a specific computer for set period of time
Firewall Logs	Yes, (packet/connection access, denial). Adjustable granularity of events logged and Syslog support.
DMZ support	Yes

## Document Revision History

Version	Date	Editor	Description
1.0	03/01/04	JD	Initial document creation
1.1	03/15/04	JD	Errata
1.2	06/21/04	RV	Errata