

FS5104

Enterprise-Class ADSL2+ Broadband Router



aethra®
keep connected™

Advanced Layer 3 and 2 features
Extensive IP routing and Ethernet/ATM
functionalities with advanced QoS mechanisms

Secure
Data protection with hardware encryption,
firewall security and VPN

Innovative
Cutting edge devices with state-of-the-art
technology



FS5104 is an ADSL2/2+ router designed for high performance connections.

FS5104 offers a wide range of configurations that allow SoHo and SME customers to use any type of professional application, including ISP, LAN to LAN, VPN and videoconferencing.

VPN and Security Features

FS5104 offers firewall functionalities to prevent unauthorized external hosts access to the internal LAN: access lists, SPI and DoS. FS5104 supports VPN data protection on transmission between two sites. The supported protocols are: IPinIP, GREinIP, PPTP client/server and IPSec software and hardware encryption.

Traffic Management Capabilities

FS5104 supports Traffic Shaping and QoS Layer 3 and 2 and provides interworking mechanisms between the two layers.

Powerfull Configuration & Management

FS5104 offers a web-based interface for easy configuration and monitoring. It includes remote management via an internal web server or Telnet server using the Command Line Interface.

Wireless Option

FS5104 is compliant to 802.11b/g standards up to 54 Mbps. Wireless security protocols include Wired Equivalent Privacy, Wi-Fi Protected Access (WPA1 and WPA2) and IEEE 802.1x.

FS5104

Technical Specifications



LED Indicators

- PWR
- LAN (1-4)
- Wi-Fi
- Internet
- ADSL Line

Physical Interfaces

- 4 switched 10/100 baseT Ethernet ports (LAN0) with RJ-45 connectors
- 1 console port with MiniDIN 8P connector

ADSL Network Interfaces

- ADSL2/2+ interface
- ITU-T G.992.1 (g.dmt), G.992.2 (g.lite)
- ITU-T G.992.3 (ADSL2 or g.dmt.bis)
- ITU-T G.992.4 (g.lite.bis)
- ITU-T G.992.5 (ADSL2+)
- Downstream line rate: up to 24 Mbps
- Upstream line rate: up to 1 Mbps up to 3.5 Mbps with Annex M

WiFi Interface (Factory Setup)

- IEEE 802.11b/g
- WEP encryption (64/128-bit)
- WPA1 and WPA2
- IEEE 802.1x authentication
- MAC filtering

IP Functions

- IP Routing
 - RIP v1/v1c/v2, BGP, OSPF
 - Enhanced Network Address and Port Translation (NAPT) engine, with multiple ALGs (including SIP, TFTP and H.323)
 - DHCP Server/Client/Relay, DHCP Learning
 - Multicast IGMP v1/v2/v3, PIM-SM, Static
- Routing Filtering Redistribution
- Firewalling
 - Extended Access Lists
 - Stateful Packet Inspection including Denial of Service attacks

IP Services

- DNS proxy
- VPN (GRE, IP, PPTP server/client)
- IPSec with DES, 3DES and AES
- ICMP, IGMP snooping, Telnet, TFTP
- Layer 3 QoS according to DiffServ model (RFC2474, RFC2475)
- Priority based queuing (Absolute Priority, WFQ, RED)
- Extensive monitoring, tracing and troubleshooting facilities

Ethernet Services

- Self Learning Bridge with up to 1k MAC addresses and automatic ageing
- Full-Duplex IEEE 802.3x
- Half-Duplex back pressure flow control
- Automatic MDI/MDI-X crossover
- Broadcast/Multicast storm protection
- VLANs (802.1Q and 802.1p) port based management
 - Tag/Re-Tag/Untag
 - Trunking (VLAN multiplexing)
 - Priority based queuing

ATM

- Services
 - Up to 16 VCCs
 - Class of Services (CBR, VRB-rt, VBR-nrt, UBR+, UBR)
 - Voice and Data packets over different VCCs (VC bundling)
 - Selective CLP marking
 - F4/F5 OAM cells, AIS and RDI
 - ATM: ITU T-I.361, ITU T-I363.5, ITU T-I432, ITU T-I610, ITU T-I731
- Access protocols
 - IP over AAL-5, Ethernet over AAL-5 (RFC2684)
 - PPP over AAL-5 (RFC2364)
 - PPP over Ethernet (RFC2516)
 - LLC/SNAP and VC encapsulation

Authentication

- PAP/CHAP/MS-CHAPv1 and v2 authentication

Service Resiliency

- VRRP (RFC2338)

Management and configuration

- Password Protected Access
 - 2 login levels
 - AAA and local authentication
- Local Management
 - Console port
 - Extensive CLI
 - Windows® based wizard for configuration and firmware download
- Remote Management
 - CLI (internal Telnet Server)
 - HTTP (embedded WEB Server)
 - SNMP Agent (v1, v2c)
 - SSH
 - Syslog
 - Network Performance Monitor
 - Ping MIB
- Firmware upgrades
 - Local and Remote (TFTP client embedded)

Environment

- Operating Temperature: -5° + 45°C (23° + 113°F)
- Non-Operating Temperature: -40° + 70°C (-40° + 158°F)
- Operating Humidity: 10 ÷ 93% (non-condensing)

Compliance & Approvals

- Storage: ETSI EN 300 019-2-1 T 1.3
- Transportation: ETSI EN 300 019-2-2 T 2.3
- Operating Conditions: ETSI EN 300 019-2-3 T 3.2
- EMC: EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3
- Protection: ITU-T K.21
- Safety: EN 60950-1

Power

- External power supply
- AC input voltage: 230 Vac
- AC input frequency: 50 Hz
- AC input current: 0.09 A

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