



Advanced Layer 3 and 2 features

Extensive IP routing and Ethernet functionalities with advanced QoS mechanisms

Data protection with IPSEC encryption and firewall security

Bonding support up to 2 copper pairs

Next Generation Networks Introduction

Ideal solution for integrating high-quality voice and data services over IP networks

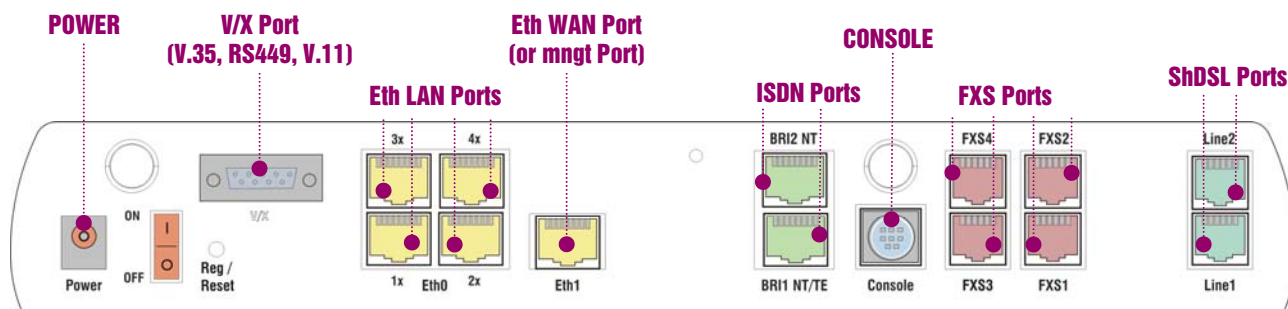
Up to 8 simultaneous voice calls
FXS & ISDN BRI mix

All-in-One solution

ShDSL.bis ATM&EFM support, V/X (factory option), Ethernet IAD into a single and integrated device

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

Full EFM functionalities
(e.g. 64/65B encapsulation, PAF for aggregation)



Fast Integration and “Five-9s” Service Availability

The SV2242E ensures seamless installation and the highest degree of compatibility with every type and brand of legacy telephony devices. Moreover, besides Virtual Router Redundancy Protocol, one of the ISDN-BRI port can be set to perform either data backup thus guaranteeing a reliable resiliency or voice backup.

Full IP Services & Security Features

The SV2242E provides advanced routing and bridging configuration also offering firewall functionality and VPN data protection (including IPsec hardware encryption).

High-speed Wireless Connectivity

The optional WiFi-AP module compliant to 802.11b/g/n standards offers the convenience and mobility of wireless connectivity. Wireless security protocols include Wired Equivalent Privacy (WEP), Wi-Fi Protected Access (WPA1 and WPA2), WPS and IEEE 802.1x authentication.

Powerful Configuration and Management

Configuration, firmware upgrades and troubleshooting of SV2242E can be performed locally and remotely thus providing Network Administrators with the maximum flexibility to connect remote branch offices and teleworkers to the corporate networks at the minimal costs of supervision & operation.

LED Indicators

- Power /Ready
- FXS (1-4)
- ISDN (1-2)
- Eth0 (1-4)
- Eth1
- Wi-Fi
- Line/Internet

Physical Interfaces

- 4-port FXS with RJ-11connectors
- 2-port ISDN-BRI with RJ-45 connectors
- 4-port 10/100bT Ethernet switch with RJ-45 connectors (Eth0)
- 1-port 10/100bT Ethernet with RJ-45 connectors (Eth1)
- 1 port V/X (V.35, RS449, V.11) (factory option)
- 1-port console with MiniDIN 8P connector
- 2 port ShDSL.bis Lines with RJ-11connectors

ShDSL Network Interfaces

- 2-pair ShDSL.bis interface ATM/EFM support
- ETSI TS 101 524
- ITU G.991.2 Annex A
- ITU G.991.2 Annex B
- ITU G.991.2 Annex F
- ITU G.991.2 Annex G
- IEEE 802.3ah EFM
- Line rate up from 192 kbps to 11400 kbps (with bonding)

Frame Relay on V/X

- QoS Management
- FRF.12
- LMI: Q.933a, T1.617
- Multiprotocol over Frame Relay (RFC1490)
- DLCI bundling

WiFi Interface (Factory option)

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

Voice Interfaces

- FXS
 - Compliant to Q.552 requirements
 - Port impedance: real 600 Ω or complex Euro values
 - Low distortion ringing voltages
 - Diagnostic features

Voice Processing

- Voice Codes
 - ITU-T G.711 (A-law, μ -law)
 - ITU-T G.729a
 - Transparent pass-through
- ITU-T G.165/G.168 echo cancelation
- Voice Activity Detection and Comfort Noise Generation
- RTP/RTCP (RFC 1889)
- 8 Voice Channels VoIP

Signalling

- Euro ISDN EDSS-1 / ETSI BRI/NET3
- ETS 300 125 (ITU-T Q.921)
- ETS 300 102-1 (ITU-T Q.931)
- SIP 2.0 according to RFC 3261 (TCP or UDP transport)
- En-block and Overlap sending
- ISDN speech, audio and data (Fax Gr 4, UDI 64, RDI 64)
- DTMF detection and carrying (RFC2833), DTMF info
- Local Generation of
 - Dial tone
 - Ring back tone (180 Ringing reply)
 - Call Waiting tone- Busy tone
 - Fast Busy tone

Fax and Modem Support

- T.38 fax relay
- Automatic G.711 Fax and Modem Pass-Through

Supplementary Services

- Locally managed or Softswitch-based
 - Call hold
 - Consultation call
 - Call waiting
 - Call forwarding
 - Caller Identity Presentation (CLIP), DTMF and FSK based
 - Identity restriction
 - Call transfer
 - 3party conference (FXS only)

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
 - DDNS client
 - 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 8 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
- 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

Ethernet OAM functionality

- Link Layer OAM (IEEE 802.3ah OAM)
- Service Layer OAM (IEEE 802.1ag)
- Connectivity Fault Management
- ITU-T Y.1731 Performance Monitoring

Authentication

- PAP/CHAP/MS-CHAPv1 and v2 authentication
- Basic and Digest schemes (RFC2617)

Management & Configuration

- Password Protected Access
 - 2 login levels + configurable privilege access right
 - AAA and local authentication & TACACS+
- Local Management
 - Console port
 - Extensive CLI
- Remote Management
 - CLI (internal Telnet Server)
 - HTTP (embedded WEB Server)
 - HTTPS (embedded Secure HTTP WEB Server)
 - SNMP Agent (v1, v2c, v3)
 - SSH
 - Syslog
 - Network Performance Monitor
 - Ping MIB
 - TR-069*
- Firmware upgrades: Local and Remote (TFTP & FTP client embedded)

Environment

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

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 AC/DC main adapter
- Input voltage from 100 to 240 Vac

*TR-069 available under license

