



Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for ZYXEL IES-1000. You'll find the answers to all your questions on the ZYXEL IES-1000 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ZYXEL IES-1000
User guide ZYXEL IES-1000
Operating instructions ZYXEL IES-1000
Instructions for use ZYXEL IES-1000
Instruction manual ZYXEL IES-1000



- Multi-service access mode, AC or DC power input with two slide-in slots for various DSL and VoIP line card
- 12-port ADSL/ADSL2/ADSL2+ line card with a splitter built-in for BTU application
- 16-port G.SHDSL-bis line card with m-pair bonding features for business applications
- 24-port VoIP line card with SIP signaling protocol and MGCP functions support
- Line card cascading with Fast Ethernet uplinks
- 802.1p QoS priority queuing, 802.1q VLAN tagging and multicasting support
- 802.1x authentication, MAC/Port/ACL filtering and ACL filtering support
- Manageable with the Windows-based Element Management System (EMS)

IES-1000 Series
1U Remote MSAN/DSLAM
with AC/DC Power

Flexible Provisioning of DSL and VoIP Services

Benefits

Comprehensive design for various market demand

IES-1000 Series is a pizza-box IP-based multi-service access node (MSAN). It has two slots for various combinations of DSL and VoIP line cards to provide ADSL2+, G.SHDSL and VoIP services to residential and business customers. It terminates the ATM or EPON traffic of DSL connections and POTS voice signals to route them IP packets and route them through IP networks. With the highly compact design (1U height), AC and DC power input as well as simple installation, IES-1000 Series can be deployed at Telco and SMB environment to meet all kinds of market demands.

Robust ADSL2+ solution for Multiple Tenant Unit (MTU) services

With ADSL2+ line card, service providers can offer residential users high-bandwidth Internet access, on-demand entertainment services and IPTV services on a single network connection. The IES-1000 Series also offers businesses subscriber connectivity, VPN, VLAN, high-quality video conferencing and legacy service interconnection with bandwidth up to 24 Mbps per pair. Moreover, it supports ATM-based 2-pair bonding to provide even higher bandwidth to diverse customers. The ADSL2+ line card is a sophisticated device fully compliant with existing standards and with modern features like energy-saving, excellent performance and transparent backward to ADSL/ADSL2 compatibility.

Line-line G.SHDSL service for enterprise

With G.SHDSL technology, the IES-1000 Series is applicable for lease-line replacement. Using the TC-PAM modulation technique, IES-1000 Series is compatible with other existing transmission technologies, allowing service providers to deploy at locations where broadband services already exist.

M-pair bonding G.SHDSL-bis solution

IES-1000 Series supports the new-generation G.SHDSL-bis line card to provide transmission rate up to 5.76 Gbps symmetrically in a single pair. It also comes with two 100-Mbps Ethernet interfaces toward Ethernet aggregation network. One IES-1000 Series can accommodate two SAM116-22 modules to support 32 SHDSL connections. In addition, the SAM116-22 supports TDM 2-pair bonding in a physical layer manner. The m-pair bonding can be 2 or 4 pairs and the aggregated payload rate is around 22.76 Mbps.

VoIP line card to provide media gateway feature

In addition to FAX and modem services, VoIP line card provides a parallel and distributed media gateway architecture to empower VoIP services by taking advantage of POTS voice signal. With the architecture, the line card serves up to 24 POTS ports. As part of the benefits, there is no throughput bottleneck or single-point failure issue in this architecture. The media gateway provides G.711, G.722, G.726, G.729a/b and T.38 codecs while RFC3261 SIP network signaling protocols is supported.



[You're reading an excerpt. Click here to read official ZYXEL IES-1000 user guide](http://yourpdfguides.com/dref/3685637)
<http://yourpdfguides.com/dref/3685637>

Manual abstract:

SHDSL and VoIP services to residential and business customers. It terminates the ATM or EFM traffic of DSL connections and POTS voice signals to make them IP packets and route them through IP networks. With the highly compact design (1U height), AC and DC power input as well as simple installation, IES-1000 Series can be deployed at Telco and SMB environment to meet all kinds of market demands. Robust ADSL2+ solution for Multiple Tenant Unit (MTU) services With ADSL2+ line card, service providers can offer residential users high-bandwidth Internet access, on-demand entertainment services and IPTV services on a single network connection. The IES-1000 Series also offers businesses subscribers IP connectivity, VPNs, VLANs, high-quality video conferencing and legacy service interconnection with bandwidth up to 24 Mbps per port. Moreover, it supports ATM-based 2-port bonding to provide even higher bandwidth to distant customers. @@@@With the architecture, the line card serves up to 24 POTS ports. @@@@NetAtlas Access EMS provides powerful advanced remote management capabilities that help service providers minimize daily operational costs. Its loop-back design helps isolating network problems while the new firmware and IP Express configuration allow changes to be done remotely, eliminating the need for "truck rolls" in order to provision services to new customers or to reconfigure services for existing customers. Specifications System Specifications · Delivery of Ethernet in the first mile using legacy LAN technologies · End-to-end provisioning by offering DSL circuit configuration through NetAtlas Access EMS · Support expandable configuration with plug-and-play line card · SNMP v1, v2 manageable · Web management · FTP/TFTP for firmware upload · Console port configuration (RS-232) · Telnet configuration and monitoring · Spanning tree algorithm (802.

ID) for loop free connection · Configurable MTU value · PPPoE intermediate agent compliant with TR-101 · G.998.1 ATM bonding · ATM or EFM transmission convergence mode · 802.1Q VLAN aware bridging · IGMP snooping supports multicast traffic · QoS support with 802.Ip · DHCP relay agent option 82 per VLAN · Port isolation/per VLAN isolation · 256 static VLAN entries (full-range VLAN ID 1 ~ 4094) · 4K MAC address entries · Packet prioritizing per 802.

Ip (QoS) - Static configuration--default priority setting - 4 priority queues per PVC (up to 4 PVCs) · Multicast - IPv4 multicast forwarding (through L2 MAC) · Static multicast membership configuration - IGMP v1, v2 snooping & IGMP proxy mode support - Shared VLAN multicast - 256 multicast groups and each group can contain 18 members - IGMP filtering profile - IGMP count limiting - MVLAN - DSL port multicast bandwidth control · Management support - CLI-based management from console/ Ethernet port - SNMP v1, v2 and Telnet through inband Ethernet interface and NetAtlas Access, PC-based EMS management support - Web-based management through inband Ethernet interface - Secured host: configure remote host IP addresses for management - UNIX syslog - FW upgrade, configuration backup & restore via FTP and Web - Text-based configuration file support · Port configuration · Alarm/status surveillance · Performance monitoring · Security and memory backup · Self diagnostics · Remote reset · EMS management support · MIB · SNMP MIB II (RFC1213) · SNMP v1 · SNMP v2 · RFC1493 Bridge MIB · RFC1643 Ethernet MIB · RFC1757 four groups of RMON · RFC2674 · RFC2662 ADSL line MIB · RFC4319 (formerly RFC3276) SHDSL line MIB · Temperature monitoring and alarm · Auto-shutdown for over temperature · Surge protection to prevent lightning damage AAM1212-51 Line Card · One Telco 50 connector for 12-port ADSL/ ADSL2/ADSL2+ and splitter card over POTS · One mini RJ11 console port for local management · Two 10/100Base-TX for uplink · DELT (Dual End Loop Test) · SELT (Single End Loop Test) · G.998.1 2-port ATM bonding · Power enhancement or ADSL power saving mode · Rate adaptation · Status LEDs--System Status, Ethernet 1 and 2 Link Status, Ethernet 1 and 2 Active Status, ADSL ports status, Alarm · ADSL compliance - DMT T1.413, issue 2 - G.DMT (ITU G. 992.1) - G.LITE (ITU G.992.2) - G.HS (ITU G.994.1) - Auto-negotiating rate adaptation · ADSL2 - G.992.3 Annex A - G.

992.3 Annex L (RE-ADSL) - Annex M · ADSL2+ - G.992.5 Annex A, Annex M - G.992.3 Annex L (RE-ADSL) - Annex M · ADSL2+ - G.992.5 Annex A, Annex M Hardware Specifications IES-1000M · 19" 1U rack mountable, 2 card slots chassis · Dimensions: 440 (W) x 320 (D) x 44 (H) mm · 2 line cards to accommodate different types of DSL services as well as VoIP services · Fully hot-swappable design · Support 12 to 48 ports in MDU/central office environment AAM1212-53 Line Card · One Telco 50 connector for 12-port ADSL/ ADSL2/ADSL2+ and splitter card over ISDN · One mini RJ11 console port for local management · Two 10/100Base-TX for uplink · DELT (Dual End Loop Test) · SELT (Single End Loop Test) · Power enhancement or ADSL power saving mode · Rate adaptation · Status LEDs--System Status, Ethernet 1 and 2 Link Status, Ethernet 1 and 2 Active Status, ADSL ports status, Alarm · ADSL compliance - DMT T1.413, issue 2 - G.DMT (ITU G.

992.1) - G.LITE (ITU G.992.2) - G.

HS (ITU G.994.1) - Auto-negotiating rate adaptation - ADSL2: G.992.3 Annex B - ADSL2+: G.

992.5 Annex B SAM1316-22 Line Card · One Telco 50 connector for 16-port G.SHDSL.bis · One mini RJ11 console port for local management · Two 10/100Base-TX for uplink · In-band Ethernet management · Status LEDs: System Status, Ethernet Link Status, Ethernet Active Status, G.SHDSL.bis ports status, Alarm · Line coding: TC-PAM · Transmit power: up to 16.8 dBm · Density: 16 ports per line card · SHDSL payload format: ATM or EFM · Rate adaptation mode: fixed, line probing · Ethernet in the First Mile (EFM) according to IEEE 802.3-2004 · SHDSL.bis, extended data rates up to 5.7 Mbit/s · STU-C or STU-R mode · Fully integrated one solution for Ethernet, Packet and ATM transport over 4/2 SHDSL channels · Asymmetric PSDs according to ITU-T G.

991.2 (2004) Annex A and B fully supported · In compliance with - ETSI SDSL (ETSI TS 101 524 V 1.2.1) - ETSI SDSL.bis (ETSI TS 101 524 V 1.2.2) - ITU G.shdsl (ITU-T G.991.2) - ITU G.

shdls.bis (ITU-T G.991.2 (2004)) - ITU G.hs (ITU-T G.

994.1) - IEEE EFM (IEEE 802.3-2004) - ITU-T G.998.1 VOP1224-61 Line Card · One Telco 50 connector for 24 FXS ports over POTS · One mini RJ11 console port for local management · Two 10/100Base-TX for uplink · Ringer Max output power: 14 Watt · Support SIP singling protocol · Support G.



[You're reading an excerpt. Click here to read official ZYXEL IES-1000 user guide](http://yourpdfguides.com/dref/3685637)
<http://yourpdfguides.com/dref/3685637>

711, G.726, G.729 a/b, G.723.1 · Support T.38 fax/modem signal coding & fax relay (G.711 a/m) · Echo cancellation based on ITU-T G.168, G.165 · Silence detection/suppression and Comfort Noise Generation (CNG) · Voice Activity Detection (VAD) · Caller ID detection (for VoIP packets from uplink) · 10K Busy Hour Call Attempts (BHCA) · Configurable jitter buffer · Support the generation of dial tone, second dial tone, ringing tone (ring-back tone), busy tone, off-hook warning tone · Support call waiting, call hold, call transfer, return and call back on busy · MLT (Metallic loop testing for subscriber lines) and GR-909 loop diagnostic AAM1212-53 · Dimensions: 170 (W) x 320 (D) x 35 (H) mm · Weight: 0.9 Kg SAM1316-22 · Dimensions: 170 (W) x 320 (D) x 35 (H) mm · Weight: 0.

9 Kg VOP1224-61 · Dimensions: 170 (W) x 320 (D) x 35 (H) mm · Weight: 0.8 Kg Environmental Specifications · Power supply (AC/DC) - AC power: 100 ~ 240 V AC, 50 ~ 60 Hz - DC power: -36 ~ -72 V DC · Power consumption - AAM1212-51: 25 W - AAM1212-53: 25 W - SAM1316-22: 25 W - VOP1224-61: 30 W · Operating temperature: 0°C ~ 50°C · Storage temperature: -40°C ~ 70°C · Operating humidity: 10% ~ 90% (non-condensing) · Storage humidity: 10% ~ 95% (non-condensing) Certification · Safety - UL 60950-1 - CSA 60950-1 - EN60950-1 - IEC 60950-1 · EMC - FCC Part 15B Class A - EN55022 Class A - EN55024 Class A - ETSI 300386 · Reliability - ETSI 300019 · Telecom - ITU-T K20 Physical Specifications IES-1000M · Dimensions: 440 (W) x 320 (D) x 44 (H) mm · Weight: 3.7 Kg AAM1212-51 · Dimensions: 170 (W) x 320 (D) x 35 (H) mm · Weight: 0.9 Kg 1U Remote MSAN/DSLAM with AC/DC Power ADSL2+ Line Card G.SHDSL.bis Line Card VoIP Line Card IES-1000 AAM1212-51/53 SAM1316-22 VoP1224-61 IES-1000 Series 1U Remote MSAN/DSLAM with AC/DC Power IES Series MSAN/DSLAM Family Matrix Model No. System Overview Category Dimensions W x D x H (mm) Splitter Rack Mountable Total Slots Max. Slots Max. @@Ports ADSL2+ Fallback CFM (802.1ag) SELT DELT VoIP Signaling Protocol Voice Codec (G.711a/u, G.723, G.726, G.729ab) Metallic Line Test (MLT) DTMF Fax/Modem (T.38) Call Waiting/Hold/Transfer Dial Tone, Ringing Tone, Busy Tone QoS Function 802.

1p 802.1q (VLAN#) SPQ/WRR Security Function IEEE 802.1x Multiple PVC Q in Q (VLAN Stacking) DHCP Snooping D.



[You're reading an excerpt. Click here to read official ZYXEL](#)

[IES-1000 user guide](#)

<http://yourpdfguides.com/dref/3685637>