Benefits

- Full-range DSLAM Family Covers Different Cost Deployment Scenarios
  ZyXEL’s IP DSLAMs are available in a range of sizes to suit any deployment scenario.
  The IES-3000 series offers high-performance systems for large-scale deployments, while the IES-2000 series is designed for medium-size deployments.

- Multi-service IP DSLAMs
  ZyXEL’s IP DSLAMs offer a wide range of services, including voice, video, and data. They support voice over IP (VoIP), video streaming, and data services.

- System Architecture
  The system architecture of the IES series is designed to support a wide range of services.
  The system architecture is based on a modular design, allowing for easy expansion and customization.

Flexible uplink connections

- Full-range DSL line cards
  ZyXEL’s IP DSLAMs support a wide range of DSL line cards, including ADSL, SHDSL, and VDSL. These line cards are designed to support a variety of services.

- VLAN traffic isolation
  ZyXEL’s IP DSLAMs support VLAN traffic isolation, allowing for the separation of traffic from different networks.

- Network security
  ZyXEL’s IP DSLAMs are designed with strong network security features, including firewalls, Intrusion Detection Systems (IDS), and Intrusion Prevention Systems (IPS).

- Express family
  The Express family is designed for high-speed services, providing a fast and reliable connection.

- Additional slots
  ZyXEL’s IP DSLAMs offer a wide range of additional slots, allowing for easy expansion and customization.

Product Portfolio

- IES-1000 (1U rack-mountable and wall-mountable)
- IES-1248 (2U rack-mountable)
- IES-2000 (4U rack-mountable)
- IES-3000 (6U rack-mountable)

Certification

- UL60950
- IEC60950
- EN55024 Class A
- EN55022 Class A
- ETS300 386
- FCC Part 68

Reliability

- 5-year warranty
- 24/7 support
- 99.99% availability

Multi-service IP DSLAM for Broadband IP Access

The IES series is designed to support a wide range of services, including voice, video, and data. The IES series is available in a range of sizes to suit any deployment scenario.

- Express family
  The Express family is designed for high-speed services, providing a fast and reliable connection.

- Additional slots
  ZyXEL’s IP DSLAMs offer a wide range of additional slots, allowing for easy expansion and customization.

ZyXEL’s IP DSLAMs are designed with strong network security features, including firewalls, Intrusion Detection Systems (IDS), and Intrusion Prevention Systems (IPS).
Model Description

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES-1000</td>
<td>Multi-service mini IP DSLAM</td>
<td></td>
</tr>
<tr>
<td>IES-1248-71</td>
<td>24-port Annex A ADSL2+ line card (over POTS)</td>
<td>442.7 (L) x 320 (D) x 44.5 (H) mm</td>
</tr>
<tr>
<td>IES-2000</td>
<td>Multi-service IP DSLAM</td>
<td></td>
</tr>
<tr>
<td>IES-2000ST</td>
<td>24-port Annex A ADSL2+ line card (over POTS)</td>
<td>442.7 (L) x 280 (D) x 89 (H) mm</td>
</tr>
<tr>
<td>IES-2500</td>
<td>Multi-service IP DSLAM</td>
<td></td>
</tr>
<tr>
<td>IES-2500M</td>
<td>Management and switching card with 4 slots for line cards, DC power input</td>
<td>442.7 (L) x 368 (D) x 178 (H) mm</td>
</tr>
</tbody>
</table>

System Architecture

<table>
<thead>
<tr>
<th>Model</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>IES-1000</td>
<td>Management and switching card (MSC) provides the following features:</td>
</tr>
<tr>
<td></td>
<td>- Supports VLAN#1 to VLAN#3</td>
</tr>
<tr>
<td></td>
<td>- VLAN tagging</td>
</tr>
<tr>
<td></td>
<td>- Multiple VLAN tagging</td>
</tr>
<tr>
<td></td>
<td>- VLAN#3 as an Internetwork VLAN</td>
</tr>
</tbody>
</table>

Benefits

- Full-range DSLAM Family Covers Different Deployment Scenarios
- Multi-service IP DSLAM
- Deploys Zyxel’s flexible VLAN technology for Internet and security

Flexible Uplink Connections

- All IES-1000 models of DSLAMs use two 10/100BaseT Fast Ethernet interfaces for uplink and tandem purposes. Zyxel’s VLAN technology is a unique solution that allows for large-scale deployments and provides a wide range of support for optimal bandwidth in the uplink and downstream interfaces of applications such as broadcast video.

Multicasting Optimization

- The IES-1000 supports multicasting for optimal bandwidth in the uplink and downstream interfaces of applications such as broadcast video.

End-to-end Management Minimizes the Operation Cost

- The IES-1000 supports both software and hardware-based management solutions for uplink and downstream interfaces of applications such as broadcast video.

Product Portfolio

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<tr>
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</tr>
</thead>
<tbody>
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<td>Multi-service IP DSLAM</td>
<td></td>
</tr>
<tr>
<td>IES-2000</td>
<td>Multi-service IP DSLAM</td>
<td></td>
</tr>
<tr>
<td>IES-3000</td>
<td>Multi-service IP DSLAM</td>
<td></td>
</tr>
</tbody>
</table>

Product Information

- For more product information, visit us on the web: www.ZyxEL.com
- Tel: +358-9-4780 8400
- Email: info@zyxel.fr
- Fax: +34 913 005 345
- Tel: +1-714-632-0882
- Email: info@zyxel.fr
- Fax: +7-095 542-8925
- Tel: +46 31 744 7701
- Email: info@zyxel.fr
- Fax: +34 913 005 345

Safety

- IES-1000 has been certified to comply with FCC, CE, and other safety standards.

Reliability

- IES-1000 has a low failure rate and is designed for long-term use.

Multi-service IP DSLAM

- IES-1000 supports both software and hardware-based management solutions for uplink and downstream interfaces of applications such as broadcast video.

IES-1000 Multi-service IP DSLAM

- Supports both software and hardware-based management solutions for uplink and downstream interfaces of applications such as broadcast video.

IES-1248 Multi-service IP DSLAM

- Supports both software and hardware-based management solutions for uplink and downstream interfaces of applications such as broadcast video.

IES-2000 Multi-service IP DSLAM

- Supports both software and hardware-based management solutions for uplink and downstream interfaces of applications such as broadcast video.

IES-3000 Multi-service IP DSLAM

- Supports both software and hardware-based management solutions for uplink and downstream interfaces of applications such as broadcast video.

Certification

- IES-1000 has been certified to comply with FCC, CE, and other safety standards.

Deployment Scenarios

- Covers Different Applications

- Full-range DSLAM Family

- Multi-service IP DSLAM

- Flexible Uplink Connections

- VLAN Office Security and Segmented Class of Service

- Full-range DSL Speed Offering

- Multicasting Optimization

- End-to-end Management Minimizes the Operation Cost

- Product Portfolio
Multiservice IP DSLAM for Broadband IP Access

ZyXEL IP Express series terminates and converts ATM traffic directly into an Ethernet frame. It provides an alternative method to deploy a more cost-effective, lower complexity of data format conversion, solve traffic congestion problems with high-speed core routers, and utilize existing ATM network infrastructure. This is an ideal solution for many service providers, especially for those who lack an ATM network infrastructure.

ZyXEL’s IP Express series also comes with a range of powerful features such as Network Address Translation (NAT), Virtual Private Network (VPN), and Quality of Service (QoS). These features allow service providers to offer a wide range of services to their subscribers, including Internet access, Voice over IP (VoIP), and Video services.

The benefits of ZyXEL’s IP Express series include cost-effective deployment, simplified network management, and a wide range of features to meet the demands of today’s service providers. Whether you are looking to expand your existing network or build a new one, the ZyXEL IP Express series is a great choice for your multiservice IP DSLAM needs.
**Benefits**

**Full-range DSLAM Family Covers Different Cost Deployment Scenarios**

ZyXEL’s IP DSLAM family offers a wide range of options for every deployment scenario. Available models range from an affordable 8-port IES-1000 to the 32-port IES-3000M. Each model is part of a family development platform that can cover more than 20 deployment possibilities, which is simply unmatched in its price range.

**Flexible uplink Options**

All ZyXEL models of IES-DSLAMs use an MGMT interface for the uplink and trunking purposes. MGMT interfaces enable flexibility for family development or larger topologies.

**VLAN Office Security and Segmented Class of Service**

IP phones also allow service providers to provide VLAN aware with network discovery and security.

**Multicasting Optimization Boosts Bandwidth Utilization**

The IGMP snooping feature offered in the IP Express gives service providers the ability to multicast the same packet to many lines or destinations at the same time.

**End-to-end Management Minimizes the Operation Cost**

End-to-end Management devices are designed to provide comprehensive end-to-end management for IP DSLAMs, which minimizes the operation cost.

**System Architecture**

- **System**
  - Main chassis
  - Slipstream chassis
  - Management and switching card
  - Line card
  - Slipstream card

- **Model Description**
  - **IES-3000**
    - 30-port IES-3000 M, 12-port IES-3000 ST
    - 25-port IES-2500 SW, 25-port IES-2500 ST
    - 20-port IES-2000 SW, 20-port IES-2000 ST
  - **IES-1000**
    - 10-port IES-1000 SW, 10-port IES-1000 ST
  - **IES-1000M**
    - 10-port IES-1000M SW, 10-port IES-1000M ST
  - **IES-1248**
    - 24-port IES-1248 SW, 24-port IES-1248 ST
  - **IES-2000**
    - 20-port IES-2000 SW, 20-port IES-2000 ST
  - **IES-2000M**
  - **IES-2500**
    - 25-port IES-2500 SW, 25-port IES-2000M ST
  - **IES-3000**
    - 30-port IES-3000 SW, 30-port IES-3000 ST
  - **IES-3000M**
    - 30-port IES-3000M SW, 30-port IES-3000M ST

**Certification**

- **EMC/ESD**
  - UL60950
  - IEC60950
  - EN60950
  - ETS300 385
  - FCC Part 15 Class A
  - CISPR 22 Class A

- **Safety**
  - UL60950
  - IEC60950
  - EN60950
  - UL60601-1
  - UL60825
  - UL60950
  - IEC60950

**Reliability**

- **Mean Time Between Failures (MTBF)**
  - 12,000 hours
  - 10,000 hours

- **Mean Time To Repair (MTTR)**
  - 1 hour

**Multi-service IP DSLAM for Broadband IP Access**

The importance of Broadband IP Access has been demonstrated by the real-life success of new and innovative business, home, and video applications. The adoption of IP gates service providers much more flexibility and fewer traditional service architectures comprised of various technologies such as xDSL and ATM.

ZyXEL’s IP Express models offer advantages over traditional technologies such as xDSL and ATM. For example, they reduce the complexity of data format conversion, resource congestion problems, with high-speed cross-connecting and switching capacity. IP Express also offers a high level of flexibility and scalability for service providers to provide QoS to various types of services and applications.

**Product Portfolio**

**IES-1000**

- 10-port IES-1000 M, 10-port IES-1000 ST

**IES-1248**

- 24-port IES-1248 M, 24-port IES-1248 ST

**IES-2000**


**IES-2500**

- 25-port IES-2500 M, 25-port IES-2500 ST

**IES-3000**

- 30-port IES-3000 M, 30-port IES-3000 ST

**IES-3000M**

- 30-port IES-3000M M, 30-port IES-3000M ST

**IES-1000M**

- 10-port IES-1000M M, 10-port IES-1000M ST

**IES-2000M**


**IES-2500M**

- 25-port IES-2500M M, 25-port IES-2500M ST

**IES-3000M**

- 30-port IES-3000M M, 30-port IES-3000M ST